HEALTH IS WHERE WE

Live, Learn, Work & Play

MAT-SU HEALTH FOUNDATION

MAT-SU REGIONAL MEDICAL CENTER

2016 Community Health Needs Assessment Supplemental Data Resource

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Appendix A: CHNA Purpose and Approach

A Community Health Needs Assessment (CHNA) helps to gauge a community's health status and guide strategic implementation strategies and plans to improve overall health. The CHNA process also promotes collaboration among local agencies and provides data to evaluate outcomes and impact of efforts to improve the health of a population.

To guide and provide input into the process, a diverse group of community leaders was invited to serve on the Mat-Su Health Foundation (MSHF) CHNA Steering Committee. Steering Committee members included:

Katie Baldwin-Johnson	Alaska Mental Health Trust
Traci Boyle	Wasilla Chamber of Commerce
Melissa Caswell	Southcentral Foundation
Bert Cottle	Mayor of Wasilla
Pastor Daulton Morock	Church on the Rock
Maggie Humm	Alaska Legal Services Corporation
DeLena Johnson	Mayor of Palmer
Sam Jones	Mat-Su Regional Medical Center
Shelis Jorgensen	Sunshine Community Health Center
Philip Licht	Set Free Alaska
Shanda Lohse	Southcentral Foundation
Fran Lynch	Willow Food Bank
Jim McCall	Mat-Su Council on Aging
Andy Miller	Lazy Mountain Bible Church/YAK
Kevin Munson	Mat-Su Health Services, Inc.
Kirsten Nelson	Mat-Su Regional Medical Center
Crystal Nygard	Mat-Su Business Alliance
Drew Phoenix	Identity, Inc.
Denise Plano	Mat-Su Regional Medical Center
Sammye Pokryfki	Rasmuson Foundation
Richard Porter	Knik Tribal Council
Debbie Robinson	Alaska Family Services
Dave Rose	Mat-Su Coalition on Housing & Homelessness
Jeanine Sparks	Mat-Su Borough School District
Shelley Stuber	Southcentral Foundation
Jerry Troshynski	Alaska Department of Health and Human Services
Lisa Wade	Chickaloon Village Traditional Council
Janice Weiss	Prisoner Re-Entry Coalition

The Steering Committee met three times over the course of the project. The Steering Committee meeting dates and topics included:

Friday, April 15, 2016: Project Kickoff and Methodology Overview /Direction Meeting
Thursday, May 26, 2016: Data Collection Status Report Meeting

Tuesday, September 20, 2016: Review Findings/Input on Implementation Strategies

As illustrated in **Figure 1**, the CHNA process supports the commitment of a cross section of community agencies and organizations working together to achieve healthier communities. Facilitated by Strategy Solutions, Inc., the Mat-Su CHNA follows best practices as outlined by the Association of Community Health Improvement, a division of the American Hospital Association, and ensures compliance with Internal Revenue Service (IRS) guidelines (IRS Notice 2011-52) for charitable 501(c)(3) tax-exempt hospitals that was published in December 2014. The process has taken into account input from those who represent the broad interests of the communities served by MSHF, including those with knowledge of public health, the medically underserved, and populations with chronic disease. The foundation's and hospital's implementation strategies address the top priority needs within the service area and, when appropriate, provide an explanation of why all of the needs identified are not being addressed.

Figure 1 - Community Health Needs Assessment Approach

Source: Adapted from HRET

For this assessment, the community is defined as the Matanuska-Susitna (Mat-Su) Borough, which represents the primary service area of the MSHF. Over the past few years, hospitals

and health systems have been encouraged to "move upstream" and look at the Social Determinants of Health to identify those preventative interventions that will achieve the most impact to improve community health. However, when the typical CHNA data collection process focuses on the incidence and prevalence of disease, it is difficult to pinpoint which social determinants are impacting the most people and how they are truly affecting health outcomes community-wide.

To address this challenge, the MSHF has "redefined" how to collect and analyze public health and community data through the lens of the Robert Wood Johnson framework: "Health is where we live, learn, work and play." As a result, this study is intentionally designed to explore the "factors that impact health" in the Mat-Su region in addition to the typical metrics of health status, to better inform the community as we seek to leverage resources and investments that will improve the health of the community.

Where We Live – In America, a person's health is influenced as much by the zip code they live in as the health insurance coverage they have. No environment is more influential on health than the home. By "home," we mean the type of housing, the safety of the neighborhood, a family's access to transportation, food security, the age of family members, culture, etc. Only solutions aimed at addressing environmental hazards, safety in the home and neighborhood, and basic needs such as housing, transportation and food will truly address health.

Where We Learn – We all know that better education leads to better career opportunities, but it also can lead to a longer and healthier life. If a person does not graduate from high school, they are likely to earn less money and struggle to make ends meet. They are also likely to work longer hours and maybe even two jobs just to feed their family, and live in a compromised neighborhood without access to healthy food. They are not likely to be as healthy as a college educated professional. Education is also linked to health literacy which is a person's ability to obtain, process, and understand basic health information and services to make appropriate health decisions. Other factors that impact how people learn are their access to internet/broadband service and computers.

Where We Work – People work to make money, and use the money to buy shelter, food and clothing, and stay healthy. Work is an essential means to an end. For the vast majority of Americans, employment is still the primary source of income, and therefore critical to their life and livelihood. One's type of employment often dictates their benefits and wages. Health status is directly related to having a living wage and health insurance.

Where We Play – Play is a basic need. It is a biological requirement for normal growth and development. Play shapes our brain and makes us smarter and more adaptable. It fosters empathy and makes it possible for us to live with friends and

relatives who can support us. It lies at the core of creativity and innovation. It prompts us to be continually, joyously, physically active, combating obesity and enhancing overall health and well-being. It can interrupt the damage done by chronic stress, and even gives the immune system a bounce.[1] "Play" includes opportunities for physical activity and recreation, civic engagement (like voting), social support, volunteering, and social acceptance (living without discrimination).

To support the study, the MSHF staff, Steering Committee members and consulting team made significant efforts to ensure that the entire community was represented to the extent possible, given the resource restraints of the study. This included gathering data and input from all areas of the community, including those representing under-represented and under-served populations.

The CHNA includes three documents: (1) the overall summary report of the CHNA findings and priority areas, (2) this supplemental data resource guide that includes additional data on the indicators and (3) an implementation strategy document which outlines the goals and objectives that the MSHF and Mat-Su Regional Medical Center (MSRMC) will pursue over the next three years to improve the health of the Mat-Su community.

The data for this CHNA was obtained from the following research tasks:

- Demographic and socio-economic analysis
- Identification of key secondary health indicators and data analysis;
- Analysis of primary data available from the State of Alaska Behavioral Risk Factor Surveillance System (BRFSS) and Alaska Trauma Registry (ATR) data
- Data collection and analysis from the 2012 and 2016 Mat-Su Household Survey conducted by the McDowell Group
- Data collection and analysis from community partners including CCS Early Learning, Federally Qualified Health Centers and Alaska Family Services
- Qualitative data obtained from three Steering Committee meetings, 25 community focus groups and eight stakeholder interviews

Complete results for the various surveys and reports referenced can be found in this Supplemental Data Resource and other individual reports available on the MSHF website at: www.healthymatsu.org.

[1] http://www.rwjf.org/en/library/research/2010/10/health-starts-where-we-live.html

Data Analysis Methodology

This assessment is intentionally designed to frame health status in the context of "factors that impact health" to better inform the community as we seek to leverage resources and investments that will improve the health of the community.

To support this assessment, data from numerous qualitative and quantitative sources were used to validate the findings, using a method called "triangulation" outlined in **Figure 2.** Three main types of data were used for this assessment:

- *Secondary Data* from the Alaska Department of Health and numerous other secondary sources identified as indicators related to health status, health equity, social equity, and sustainable communities in addition to disease incidence and prevalence as well as other secondary data from local partners pertaining to health-related services provided in the region.
- *Primary Quantitative Data*: Community and statewide surveys that have large enough sample sizes to be representative of the borough population.
- *Qualitative Data* from interviews and focus groups to provide a voice to Mat-Su residents, professionals and leaders on their views and suggestions about the needs and issues facing the community.

This blend of data creates a full and vibrant picture of the health and wellness of the Mat-Su community, the issues residents are struggling with and what they have accomplished. Full details on data sources and methodology, as well as additional data findings can be found in the CHNA Supplemental Data Resource, which is posted at http://www.healthymatsu.org/health-resources/health-resources

Figure 2 - Data Triangulation Method

The following is an overview of the specific methodologies for each task.

Demographic and Socio-Economic Analysis

The demographic and socioeconomic profile provides a description of the demographic, education and economic summary of Mat-Su Borough, Palmer, Talkeetna, Wasilla, Willow and Anchorage. Demographic and socioeconomic data was obtained from Nielsen/Claritas (www.answers.nielsen.com). Additional data was obtained from the U.S. Census Bureau, the American Community Survey, the Alaska Department of Labor & Workforce Development (ADOLWD) (http://live.laborstats.alaska.gov/pop/) and the Mat-Su Coalition on Housing and Homelessness.

Identification of Key Secondary Health Indicators and Data Analysis

Secondary data for this CHNA came from many different sources. At the beginning of the CHNA process, it was hoped that this analysis would be able to include health equity analysis following an approach similar to the Health Equity Index created by the Connecticut Association of the Directors of Health (CADH). However, the lack of community-specific disease incidence and prevalence data prevented the health equity approach from being followed. As a result, after conducting an extensive literature review on the social

determinants of health and the factors that affect health as well as the social equity and sustainable communities literature, the data and variables that were included in the CHNA were very carefully selected based on indicators suggested in these approaches:

- Disease incidence and demographic variables from the CADH Health Equity Index (http://www.cadh.org/health-equity.html)
- Social equity indicators identified by the International City and County Management Association (ICMA) as related to sustainable communities (http://icma.org/en/icma/knowledge_network/documents/kn/Document/306328/Advancing_Social_Equity_Goals_to_Achieve_Sustainability_Local_Governments_Social_Equity_and_Sustaina)
- King County Washington Determinants of Equity report (http://www.kingcounty.gov/~/media/elected/executive/equity-social-justice/2015/The_Determinants_of_Equity_Report.ashx?la=en)
- The STAR Community rating system (http://www.starcommunities.org/rating-system/)

Secondary data came from the following sources:

- Disease incidence and prevalence data obtained from the Alaska Center for Health Data and Statistics
- The Centers for Disease Control and Prevention (CDC) and the Alaska Behavioral Risk Factor Surveillance Survey (BRFSS) data
    - Each year, the CDC along with Departments of Public Health, complete a BRFSS Survey. The BRFSS is conducted by telephone and includes questions regarding health risk behaviors, preventive health practices and health care access primarily related to chronic disease and injury.
    - The health-related indicators included in this report for Alaska are BRFSS data collected by the Alaska Department of Health and Human Services, Division of Public Health
- CDC Chronic Disease information from the Chronic Disease calculator, available at http://cdc.gov/chronicdisease/resources/calculator/index.htm
- Healthy People 2020: In 1979, the Surgeon General began a program to set goals for a healthier nation. Since then, Healthy People have set 10-year science-based objectives for the purpose of moving the nation toward better health. When available for a given health indicator, Healthy People 2020 goals are included in this report (http://www.lhealthypeople.gov/2020/default.aspx). When available for a given indicator, Healthy People 2020 (HP 2020) goals and state and national rates were included.
- U.S. incidence and mortality rate comparisons taken from www.statehealthfacts.org.
- County Health Rankings, a collaboration of the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, www.countyhealthrankings.org.
- A variety of other secondary research studies and statistics were included, and the sources are cited within the text, including:
    - The Center for Neighborhood Technology
    - Housing and Transportation (H+T®) Affordability Index

- CDC's Division of Nutrition, Physical Activity and Obesity, Children's Food Environment State Indicator Report, 2011
- Point in Time Homeless Count, HUD 2015
- Justice Center, University of Alaska Anchorage
- State of the Air, American Lung Association 2016
- Alaska DPS – Uniform Crime Report and FBI Uniform Crime Report
- DHSS Bureau of Vital Statistics and Death Certificate Data
- Department of Corrections
- National Center for Education Statistics
- Alaska Department of Early Education and Early Development
- Living Wage Calculator, MIT
- www.matsugov.us/shapefiles
- Division of Elections
- Youth Risk Behavior Survey, 2015
- Mat-Su Coalition on Housing and Homelessness
- Alaska Department of Labor & Workforce Development
- Anchorage Coalition to End Homelessness

Data presented are the most recent published by the source at the time of the data collection.

MSHF and Strategy Solutions also requested and received data that was collected and/or analyzed by:

- McDowell Group
- Peter Holck, PhD, MPH, Biostatistician/Epidemiologist

Data Collection from Community Partners

MSHF also reached out to various community agencies to gauge interest and support for partnering on the 2016 CHNA. All agencies contacted were willing to be partners and collaborate on this CHNA, and supplied information and data on the areas that they represent in the community. The list of partners who participated in the data collection and provided input and data is as follows:

- Alaska Family Services
- Alaska Mental Health Trust Authority
- Identity, Inc.
- CCS Early Learning
- Chickaloon Village Traditional Council
- Knik Tribe
- Mat-Su Health Services, Inc.
- Mat-Su Regional Medical Center
- Sunshine Community Health Center*

*The data does not include UDS (Universal Data System) utilization data for the Sunshine Clinic, as they combine their data that represents multiple clinics; some outside of the Mat-Su region.

Quantitative Primary Data: Household Survey

MSHF contracted with the McDowell Group to conduct a survey of households in the Mat-Su Borough as part of its 2016 Mat-Su Borough Community Health Needs Assessment. The purpose of the survey was to capture perceptions of individual and community health, information about health needs and priorities that were not available from secondary data sources, social connectivity, and relationships with the natural environment.

The questions were designed to replicate selected portions of the 2013 Household Survey where trend data was desired. Additional questions and variables were chosen to measure specific aspects of social connectedness and other variables that were found in the literature review as potentially impacting health status and/or a healthy community.

The telephone survey of 700 Mat-Su households included both land-lines and cellphones. The survey was designed with input from the MSHF, Strategies Solutions, Identity, Inc., Chickaloon Tribal Council, Mat-Su Mental Health Services, and other service providers in the Mat-Su Borough. McDowell Group also conducted a Household Survey in 2012 to support the 2013 CHNA; several questions asked in this survey were repeated to benchmark response trends.

The sample was designed to yield results representative of the Mat-Su population and permit sub-group analysis. The maximum margin of error at the 95 percent confidence level is +/- 3.6 percent for the full sample. As the sample size decreases among sub-samples (such as age group, household income levels, gender, etc.), the potential margin of error increases.

The survey results were weighted for age and gender to provide a highly representative sample of borough households. Responses were analyzed by household location, gender, household income, educational attainment, perceptions of health status and quality of life, employment status, health insurance coverage, household size, children in the household, and ethnicity/race. A copy of the survey is included in Appendix E.

Qualitative Primary Data

In addition to the household survey, the primary data collection process involved stakeholder interviews and focus groups.

A total of 25 focus groups were conducted by the Strategy Solutions consulting team and staff of the MSHF to gather information directly from various groups that represent a particular interest group or area. A total of 433 individuals participated in the focus groups. Focus groups were selected to represent both community members, as well as provider/professional

perspectives. Focus group participants represented the broad interests of the communities served by MSHF, as well as the broadest cross-section of special interest groups and topics possible within the resource constraints of the project. The focus group topic guide can be found in Appendix F.

Because of the nature of the population(s) included in some of the focus groups, the discussions were conducted as "intercept surveys" by the consulting team and/or MSHF staff members. The groups from which input was gathered via intercept surveys are highlighted below in bold/italics. The Sunshine Clinic client intercept interviews were conducted by the staff members of the Sunshine Clinic. The intercept survey interview guide can be found in Appendix G.

Table 1 outlines the focus groups that were conducted for this report. The qualitative information from the focus groups is included with the input from stakeholders.

Table 1 - Focus Groups Conducted

Date	Group Name	Representing	# Participants
5/6/2016	Mat-Su School District School Nurses	Mat-Su K-12 Students	25
5/17/2016	Mat-Su School District School Counselors	Mat-Su K-12 Students	10
5/23/2016	Mat-Su Senior Services	Senior Residents	42
5/23/2016	Community Meeting	Wasilla Residents	17
5/24/2016	Wasilla Sunrise Rotary	Business Professionals-Wasilla	19
5/24/2016	Mat-Su Public Health Nurses	Low-income Residents	7
5/24/2016	Providers	Mat-Su Residents	21
5/24/2016	Community Meeting	Palmer Residents	14
5/24/2016	CCS Early Learning	Families and Young Children	9
5/25/2016	Alaska Family Services Case Managers	Low-income Residents	15
5/25/2016	Mat-Su Health Services	FQHC Patients	10
5/25/2016	Office of Children Services	Children and Families	28
5/25/2016	Talkeetna Sunshine Clinic	Rural FQHC Residents	10
5/25/2016	Community Meeting	Talkeetna Residents	7
5/26/2016	Community Meeting	Willow Residents	11
5/26/2016	MSHF CHNA Steering Committee	Social Service Agencies, Local Government	20
5/27/2016	Frontline Food Bank	Food Bank Recipients	21
5/27/2016	MYHouse	Homeless Youth	13
6/11/2016	The Gathering	Alaska Native People	20

Date	Group Name	Representing	# Participants
6/13/2016	Annual Meeting	MSHF Members	55
6/28/2016	Nutaqsaviik Providers	Alaska Native Mothers and Children	3
6/29/2016	LGBT Youth Group	LGBT Youth	3
6-7/2016	Sunshine Clinic Clients	FQHC Patients	21
7/14/2016	Chickaloon Elders	Alaska Native Elders	25
7/27/2016	Hispanic Community	Hispanic Residents	7
Total Focus Group Participants			433

Attempts were made to hold focus groups or to conduct intercept surveys with other underrepresented groups as well. Unfortunately, for a variety of factors and reasons, focus groups or intercept surveys were not completed during the course of the study. Reasons included:

- It was the wrong time of year to try to talk to people who live "off the grid."
- There was not enough staff or consultant time or resources.
- Difficulty identifying a contact person or organization who could convene residents fitting this criteria.

The groups that were not able to be reached included:

- Residents who commute to Anchorage and use the shared ride van service
- Residents who live in areas "off the grid"
- Active military personnel
- Millennials (it should be noted that numerous participants fitting this age criteria participated in other focus groups) – there was not a dedicated focus group for this population.

Most of the focus groups were conducted using the OptionFinder audience response polling system to allow participants to anonymously answer specific questions. Not all groups were able to use the technology due to timing and logistical issues.

The focus group questions were designed to be exploratory in nature and intended to capture the opinions of the individuals participating in the group. Focus groups were selected with particular groups of providers because they are considered content experts on a topic, may be able to speak for a subset of the population, or are themselves members of a specific group and/or underrepresented population.

Regardless, the information presented in the focus group data represents the opinions of the individuals who participated in a focus group or intercept survey, are qualitative in nature and therefore not necessarily representative of the opinions of the broader community.

Please note that not every group/stakeholder was asked every question due to time constraints and meeting logistics.

Additionally, many (but not all) of the focus group participants were asked to complete a short survey that included demographic information and several questions regarding the health status of and goals for the community. A copy of the Focus Group Participant Survey is included in **Appendix H**.

A total of eight individual stakeholder interviews with a total of 21 participants were conducted by members of the consulting team with key stakeholders who were not able to participate in a focus group. Interviewees were selected to gather a professional perspective from those who have insight into the health of a specific population group or issue, the community or the region from a particular perspective. This was done to ensure representation of the broad interests of the communities served by MSHF, where persons who could bring insight to these particular perspectives were not expected to attend or be included in the focus groups. The interview guide used with stakeholders can be found in **Appendix I.**

Stakeholders interviewed responded to a series of questions that were exploratory in nature and intended to capture the opinions of the individuals being interviewed. Individuals were selected because they are considered content experts on a topic or understood the needs for a particular subset of the population. The qualitative information from stakeholders is combined with the input from the focus group participants. The input represents the opinions of those interviewed and is not necessarily representative of the opinions of the broader community served by MSHF. **Table 2** has a listing of stakeholders interviewed.

Table 2 - Stakeholders Interviewed

Date	Name	Representing	# Stakeholders
5/23/2016	High Utilizer Workgroup	Emergency Department Patients	5
5/23/2016	Mayor of Mat-Su Borough and Director of Public Relations	Mat-Su Borough Government	2
5/23/2016	MSRMC Social Workers	Hospital Patients	2
5/23/2016	Families in Transition Coordinator	Mat-Su Children and Families	1
5/24/2016	Mat-Su Borough Judges	Mat-Su Children and Families	4
5/27/2016	Mat-Su Planning Department	Mat-Su Borough Government	4
8/16	Local Clergy	Faith-Based Organizations	2
9/6/2016	Army One Source	Military Residents	1
Total Stakeholders Interviewed			**21**

Fourteen patients who have visited the Emergency Department (ED) five or more times in the last year were interviewed during August and September 2016 to support the CHNA. Patients who qualified as "high utilizers" (more than five emergency department visits within the past year) were identified by MSRHC staff and offered a $25 gift card for participating. The emergency department staff member would call Strategy Solutions at that time (24/7) and the Strategy Solutions' staff member would conduct the interview immediately while they were still in the Emergency Department. The ED High Utilizer Interview guide can be found in Appendix J.

Interviews were conducted on the following dates:

- 08/11/2016
- 08/13/2016 (3)
- 08/15/2016 (3)
- 08/17/2016 (3)
- 08/18/2016 (2)
- 08/19/2016
- 09/06/2016

After the CHNA was completed, the Steering Committee reviewed the overall findings of the needs assessment at their third meeting, held on Tuesday, September 20, 2016. At that meeting, the participants discussed potential implementation strategies that the Foundation and the community could focus on in response to the high priority need areas. The summary of that discussion is outlined in Appendix K.

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Appendix B: What We Accomplished Since the 2013 Community Health Needs Assessment

2013 CHNA Focus Areas

In 2013 when the MSHF conducted its previous CHNA, several high priorities were identified that became the drivers for the Foundation's strategic efforts to positively impact the community in these areas. High priorities included:

- Alcohol and Substance Abuse
- Children experiencing trauma and violence
- Depression and Suicide
- Domestic Violence and Sexual Assault
- Behavioral Health Care System in Need of Repair

As a result of identifying these priority areas, the MSHF adopted a number of implementation strategies to address the top priorities needs. These strategies included:

- Statewide systems change: Behavioral Health Issues
- Local systems change: Behavioral Health Issues
- Screening and Treatment: Behavioral Health Issues
- Prevention: Behavioral Health Issues
- Local Systems Change: Access to Health Care
- Decrease barriers to access to mental, behavioral and physical health care locally
- Local Systems Change: Obesity and Overweight
- Promotion of Physical Activity
- Promotion of Healthy Nutrition

Outcomes and Impact of the 2013 CHNA Report

Since its completion, the use of the 2013 Mat-Su CHNA included:

- Online version of the 2013 Mat-Su CHNA report had 1,890 page views and 1,647 unique views
- An online survey conducted by the MSHF in July, 2016 as part of the evaluation of the 2013 CHNA implementation strategies found that 102 local and statewide entities used the information for writing grants (43%); program planning (36%); program evaluation (11%); education and training (34%); report writing (20%); or for another purpose (10%). "Other uses" included: to discuss with legislators, to inform a recruiting plan, to use in a speech for fundraising, to identify unmet needs, for a feasibility study and business planning for health and social services, for advocacy, to discuss emergency department high utilizers for the state, and to focus clinic programs and outreach efforts. One nonlocal user stated "I used the report and the work of Mat-Su as an example for other communities to see what a community can do around issues."
- Other quotes from the survey included:

- "MSHF continues to provide pertinent data that helps to improve awareness of healthy lifestyles and improvement of valuable services in the Mat-Su. Please continue to keep us informed. I appreciate your dedication to a healthy Mat-Su."
- "Thanks for all your hard work to provide and compile data about the Mat-Su. This has been a huge gap in knowledge for many, many, years and now you are closing the gap!"
- "I appreciate the quality data and information that MSHF has provided to assist us in planning our program!"

Outcomes and Impact of the 2013 CHNA Implementation Strategies

Activities and accomplishments that resulted from the Implementation Plan included:

Behavioral Health Related Accomplishments

- Provided support to the Recover Alaska which opened a Statewide Resource Recovery Center that provides telephone and web-based information and referral for Alaskans with substance abuse needs
- 40 Mat-Su residents were trained to be Adverse Childhood Experience (ACEs) interface trainers. They have held over 30 trainings in the community and 41% of community residents report being familiar with the term ACEs.
- Mat-Su was selected to be part of the State of Alaska Early Childhood Comprehensive System with $105K in funding coming to the borough to promote healthy behavioral health development for 0-3 year olds.
- SBIRT (Screening and Brief Intervention, and Treatment) has been integrated in three primary care practices in Mat-Su.
- MSHF is sponsoring and participating in a pilot group of five local organizations who are becoming trauma-informed.
- Behavioral Health integration with primary care is proceeding in two Mat-Su Federally Qualified Health Centers (Sunshine Health Clinic and Mat-Su Health Services) and a hospital owned family practice (Solstice Family Care).
- MSRMC provides ongoing support to a fully staffed 24/7 Sexual Assault Response Team, along with a paid Medical Director position.
- The first two reports in the Mat-Su Behavioral Health Environmental Scan were completed. These Reports can be found at: http://www.healthymatsu.org/focus-areas/BHES
- MSRMC has hired a full time social worker to assist physicians with Behavioral Health patients in the Emergency Department and they provide yearly training for all hospital staff on behavioral health issues.
- Behavioral health-related community groups with MSHF/MSRMC representation that have been established since Scan reports released to address gaps:
    - Crisis Intervention Team Coalition
    - High Utilizer Workgroup included Multidisciplinary Team Initiative
    - Mat-Su Coordinated Care Pilot Project

Access to Health Care Accomplishments

- Supported Medicaid Expansion which was passed and has been implemented
- Mat-Su Transit Assessment and Plan has been completed and is being implemented
- Aging and Disability Resource Center, which provides information and referrals for seniors and individuals with disabilities is now up and running and receiving federal and state funding
- Funded rural health clinic construction and sliding fee scale dental health project
- Supported creation of the Mat-Su Council on Aging which is up and running
- Supported local health fairs with more than $62K in funding

Obesity and Overweight Prevention Accomplishments

- School grants were provided to 44 schools focused on obesity prevention and social emotional learning totaled over $535K from 2013 – 2016.
- Assisted with the creation of the Mat-Su Trails and Parks Foundation and provided three years of funding totaling $825K.
- Funded community initiatives that promote exercise, wellness, and healthy lifestyle choices.

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Appendix C: Literature Review

Introduction

The American Public Health Association (APHA) defines a ***healthy community*** as one "that:

- Meets everyone's basic needs such as safe, affordable and accessible food, water, housing education, health care and places to play;
- Provides supportive levels of economic and social development through living wage, safe and healthy job opportunities, a thriving economy and healthy development of children and adolescents;
- Promotes quality and sustainability of the environment through tobacco and smoke-free spaces, clean air, soil and water, green and open spaces and sustainable energy use; and
- Places high value on positive social relationships through supportive and cohesive families and neighborhoods, honoring culture and tradition, robust social and civic engagement and violence prevention."[2]

In many communities, many residents do not enjoy the same health, resources, and opportunities because of their race and/or where they live. In July of 2014, Melody Goodman, an assistant professor at Washington University in St. Louis, spoke to a Harvard School of Public Health (HSPH) audience about the links between segregation and poor health. Her statement *"Your zip code is a better predictor of your health than your genetic code,"*[3] has since been quoted many times in numerous publications describing the disparities that exist in many communities that result in poor health and quality of life.

To describe these situations, terms such as social and health equity have emerged. Social equity implies fair access to livelihood, education, and resources; full participation in the political and cultural life of the community; and self-determination in meeting fundamental needs.[4] Health equity means that everyone has the opportunity to attain their highest level of health.[5]

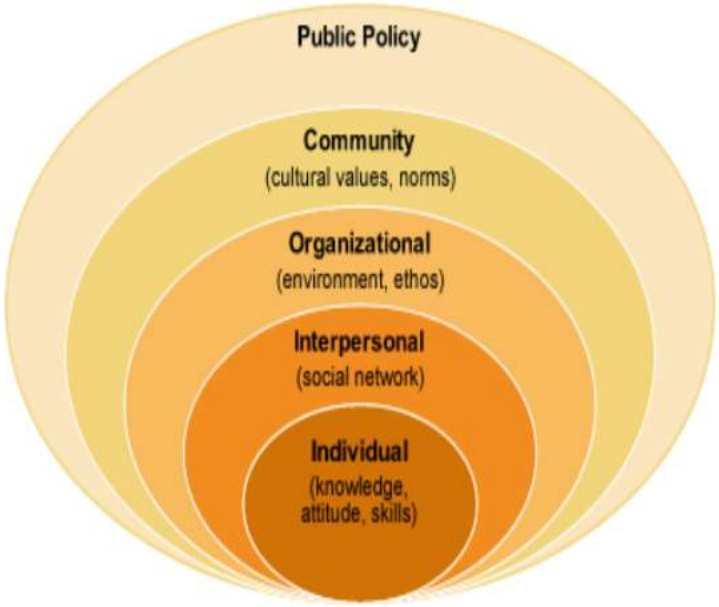
To create healthy communities, APHA promotes programs and strategies that impact social and health equity through the social determinants of health — the social, economic, environmental and psychological factors that influence individual and community health.[6] The social determinants include a number of factors including housing, employment, social support, safety, food security, education, environment, transportation, health care access, cultural characteristics and life stages.

[2] http://www.apha.org/topics-and-issues/healthy-communities?gclid=CIL2qNfMhMwCFQ8vaQod_cYAag
[3] http://www.hsph.harvard.edu/news/features/zip-code-better-predictor-of-health-than-genetic-code/
[4] http://www.reliableprosperity.net/social_equity.html
[5] https://www.apha.org/topics-and-issues/health-equity
[6] http://www.apha.org/topics-and-issues/healthy-communities?gclid=CIL2qNfMhMwCFQ8vaQod_cYAag

Over the past 30 years, public health officials and human development theorists have used Bronfenbrenner's social-ecological framework to describe the context that affects health status to help identify appropriate intervention strategies and programs to address disparities in the social determinants of health. "In his original theory, Bronfenbrenner postulated that in order to understand human development, the entire ecological system in which growth occurs needs to be taken into account. This system is composed of five socially organized subsystems that support and guide human development. Each system depends on the contextual nature of the person's life and offers an ever growing diversity of options and sources of growth. Furthermore, within and between each system are bi-directional influences. These bi-directional influences imply that relationships have impact in two directions, both away from the individual and towards the individual."[7]

The National Association of City and County Health Officials (NACCHO's) approach to depicting the five levels is illustrated in Figure 3.

Figure 3 - NACCHO Social-Ecological Framework



Source: National Association of City and County Health Officials

Over the years, public health professionals have worked on intervention strategies at the various levels within this framework resulting in the following areas that APHA is encouraging communities to use in their planning and community improvement efforts:

- "Environmental Health: Emphasizing the impact the environments in which people are born, live, work and play have on their health. Content areas include built

[7] https://en.wikipedia.org/wiki/Social_ecological_model

environment, chemical exposure & prevention, climate change, food systems and workforce development.

- Health in All Policies: Promoting incorporation of health considerations in decisions across all sectors, including planning, housing, transportation and education.
- Health Equity: Advancing attainment of the highest level of health for all people. Achieving health equity requires elimination of health disparities and addressing inequalities in access and opportunities.
- Health Reform: Following implementation of the Affordable Care Act with a focus on promoting and protecting the critical public health and health system transformation provisions that increase access to quality care, support prevention and wellness and expand the public health workforce.
- Injury and Violence Prevention: Raising attention to the burden of injury and violence and promoting policy strategies for its prevention and control.
- Leading Health Indicators for Healthy People 2020: Current high-priority health issues and actions that can be taken to improve the health of the U.S. population.
- School, Health and Education: Focusing on the health and social factors that influence educational success and decrease school dropout. Efforts promote school-based health centers as uniquely positioned to eliminate or reduce barriers to learning (and ultimately graduation) by improving access to physical and mental health care.
- Transportation and Health: Elevating the connections between public health, equity and transportation and promoting transportation decisions that support health."[8]

Concurrently and independently over the past several decades, the community planning sector has been moving in a similar direction. The Institute for Sustainable Communities (ISC) defines a ***sustainable community*** as one that is "economically, environmentally, and socially healthy and resilient. It meets challenges through integrated solutions rather than through fragmented approaches that meet one of those goals at the expense of the others. And it takes a long-term perspective – one that's focused on both the present and future, well beyond the next budget or election cycle."[9]

A sustainable community's success depends upon its members' commitment and involvement through:

- Active, organized, and informed citizenship
- Inspiring, effective, and responsive leadership
- Responsible, caring, and healthy community institutions, services, and businesses

As a result, a sustainable community manages its human, natural, and financial resources to meet current needs while ensuring that adequate resources are equitably available for future generations.

[8] http://www.apha.org/topics-and-issues/healthy-communities
[9] http://www.iscvt.org/impact/definition-sustainable-community/

It seeks:

- A better quality of life
- A better quality of life for the whole community without compromising the wellbeing of other communities.
- Healthy ecosystems
- Effective governance supported by meaningful and broad-based citizen participation.
- Economic security

ISC views the concept of a sustainable community as a framework to guide action that includes but is not necessarily limited to:

A Healthy Climate and Environment

- Protection and enhancement of local and regional ecosystems and biological diversity.
- Conservation of water, land, energy, and nonrenewable resources.
- Utilization of prevention strategies and appropriate technology to minimize pollution.
- Use of renewable resources no faster than their rate of renewal.
- Infrastructure that improves access to services and markets without damaging the environment.

Social Wellbeing

- Satisfaction of basic human needs for clean air and water and locally sourced nutritious, uncontaminated food.
- Affordable provision of quality health prevention, care, and treatment services for all community members.
- Safe and healthy housing accessible to all.
- Equitable access to quality education services, formal and informal.
- The basic human rights of all community members are respected and defended against injustices including exploitation and psychological and physical harm.
- Protection, enhancement, and appreciation of community manifestations of cultural diversity, treasures, customs, and traditions.

Economic Security

- Community members equitably benefit from of a strong and healthy community-centered economy.
- Diverse and financially viable economic base.
- Reinvestment of resources in the local economy.
- Maximization of local ownership of businesses.
- Meaningful employment opportunities for all citizens.
- Responsive and accessible job training and education programs that enable the workforce adjust to future needs.
- Businesses that enhance community sustainability.[10]

[10] http://www.iscvt.org/impact/definition-sustainable-community/

In communities all across the US, leaders in various sectors are conducting a variety of different types of community needs assessment activities to support a variety of types of community-level planning and intervention efforts. In Alaska, municipalities are required to develop and periodically update a Comprehensive Plan: a compilation of policy statements, goals, standards, and maps for guiding the physical, social, and economic development, both private and public, of the first- or second-class borough. Numerous health and social service agencies and sectors are required to conduct needs assessments every 3-5 years.

In order to appropriately assess the current environment to identify health disparities, and health and social equity issues, as well as to measure the outcomes and impact of intervention efforts, communities are designing their community needs assessments to include elements of the social determinants of health, along with health and social equity indices.

Social Determinants of Health: Variables that Affect Health Outcomes and the Impact on Health

"Social determinants of health are life-enhancing resources whose distribution across populations effectively determine length and quality of life."[11] These resources or variables have a huge impact on the health of the population and the community. This section will address the SDOH variables that affect health outcomes, as well as the impact on health. These SDOH variables will look at the challenges faced, as well as any positive actions being taken on the Mat-Su community, and the Alaska Native population. The variables that will be discussed in this section include: financial stability, housing, employment, social support, community safety, food security, education, environment, health care access, life stages, natural environment, and social acceptance and self-determination. As identified by Healthy People 2020, Figure 4 illustrates the five determinant areas that a number of the critical components/key issues fall under to make up the underlying factors in the arena of SDOH.

[11] Brennan Ramirez LK, Baker EA, Metlzer M. Promoting Healthy Equity: A Resource to Help Communities Address social Determinants of Health. Atlanta; U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2008.

Figure 4 - Five Determinant Areas of SDOH[12]

Source: Healthy People 2020

Financial Stability

"Financial stability can mean different things to different people. In part, the way a person feels about money may affect their comfort level of financial stability. Their personal experiences will shape their thoughts on what they consider to be financially stable."[13] When looking at financial stability as it relates to health, if a person doesn't feel that they are financially stable to have money to pay for insurance copays, deductibles, medication or medical bills, they will forego the necessary treatment they need. When looking at the people who fall below the poverty line (low financial stability), there is a direct correlation between low financial stability and poor health. As the World Health Organization reports, "Poverty [low financial stability] is associated with the undermining of a range of key human attributes, including health. The poor are exposed to greater personal and environmental health risks, are less well nourished, have less information and are less able to access health care; they thus have a higher risk of illness and disability. Conversely, illness can reduce household savings, lower learning ability, reduce productivity, and lead to a diminished quality of life, thereby perpetuating or even increasing poverty."[14] When looking at the Mat-Su Borough, it was reported in the Mat-Su Primary Health Care Plan 2005-2015 that the 2000 Census shows the percent of people living in poverty for the Mat-Su Borough was higher (11.0%) than the state (9.4%).[15]

[12] "Social Determinants of Health | Healthy People 2020." https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health.
[13] Dinesen, Andia. "Pillars of Personal Financial Success – Tips to Achieve Financial Stability." http://www.ambahq.org/index.php/blog-quick-link/item/157-pillars-of-personal-financial-success-tips-to-achieve-financial-stability.
[14] "WHO | Poverty." Accessed April 12, 2016. http://www.who.int/topics/poverty/en/.
[15] Information Insights, Inc. "Mat-Su Borough Primary Healthcare Plan 2005-2015." January 2006.

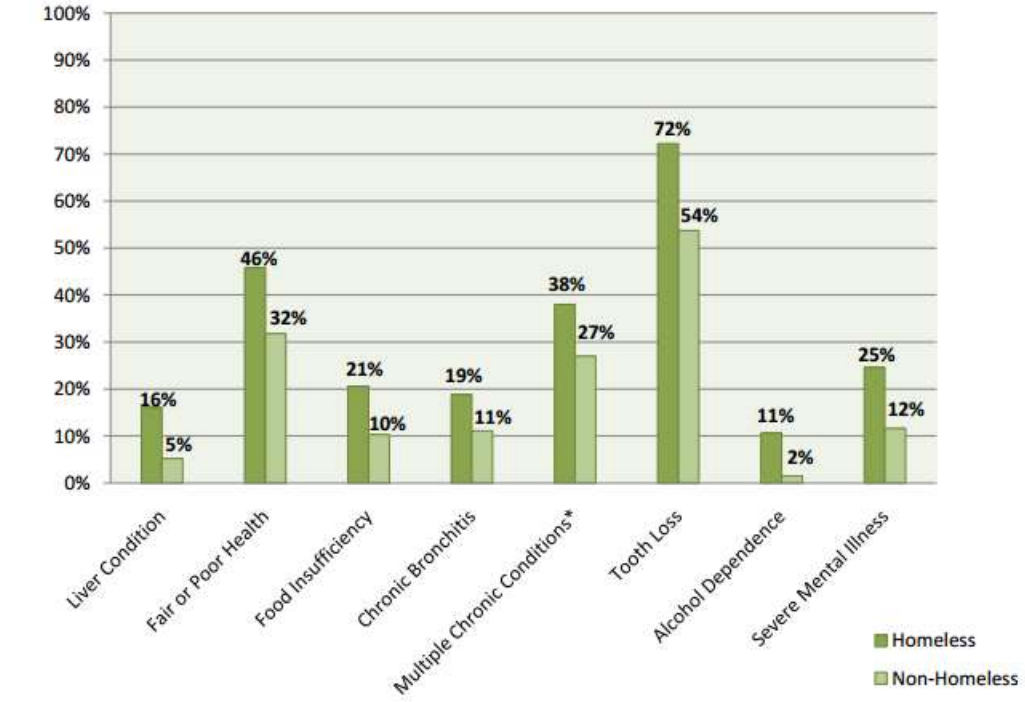
Housing

"Housing is healthcare." This statement was the theme of several sessions at the 2016 Association for Community Health Improvement conference. Similar to financial stability, housing is an integral part of a person's health as having financial means. In fact, an abstract published by the National Institute for Biotechnology Information states that "the well-established links between poor housing and poor health indicate that housing improvement may be an important mechanism through which public investment can lead to health improvement."[16]

Those persons who are homeless either don't seek the medical attention they need, or if they do, have nowhere to go once discharged to recuperate. Conversely, poor health is a major cause of homelessness. The National Health Care for the Homeless Council (NHCHC) in their July 2011 fact sheet states that "an injury or illness can start out as a health condition, but quickly lead to an employment problem due to missing too much time from work; exhausting sick leave; and/or not being able to maintain a regular schedule or perform work functions. Losing employment often means getting disconnected from employer-sponsored health insurance. The lack of both income and health insurance in the face of injury or illness then becomes a downward spiral; without funds to pay for health care (treatment, medications, surgery, etc.), one cannot heal to work again. Common conditions such as high blood pressure, diabetes, and asthma become worse because there is no safe place to store medications or syringes properly. Maintaining a healthy diet is difficult in soup kitchens and shelters as the meals are usually high in salt, sugars, and starch (making for cheap, filling meals but lacking nutritional content)."[17] The fact sheet goes on to mention that "whether a primary or contributing factor to losing housing, or a condition acquired or made worse afterwards, individuals who are homeless have disproportionately high rates of health problems,"[18] as seen in Figure 5.

[16] "Housing Improvements for Health and Associated Socio-Economic Outcomes. - PubMed - NCBI." http://www.ncbi.nlm.nih.gov/pubmed/23450585. February 28, 2013.
[17] "Homelessness and Health: What's the Connection?" The National Health Care for the Homeless Council. July 2011.
[18] Ibid.

Figure 5 -Health Status of Health Center Users



ote: Multiple chronic conditions include (2 or more of the following): hypertension, diabetes, asthma, emphysema, chronic bronchitis, heart oblems, stroke, liver condition, weak/failing kidneys, cancer, and HIV/AIDS.

Source: The National Health Care for the Homeless Council (NHCHC)

"Stable housing not only provides privacy and safety, it is also a place to rest and recuperate from surgery, illness, and other ailments without worry about where to sleep, find a meal the following day, or how to balance these needs with obtaining health care and social services. The best, most coordinated medical services are not very effective if the patient's health is continually compromised by street and shelter conditions. Even inpatient hospitalization or residential drug treatment and mental health care (when available), do not have lasting impacts if a client has to return to the streets upon discharge. No amount of health care can substitute for stable housing."[19]

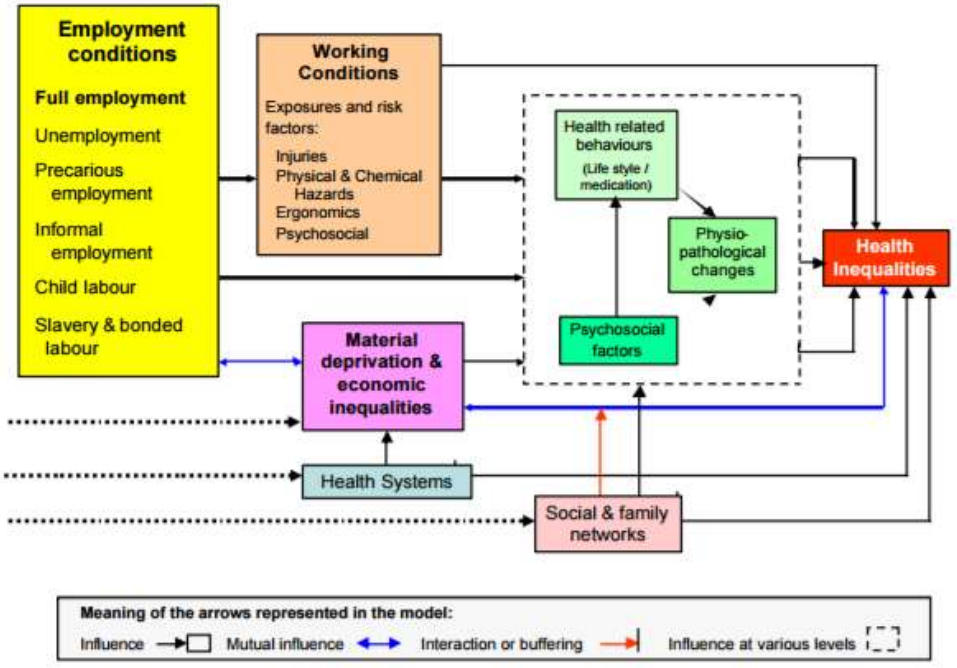
Employment

The Consortium of Universities for Global Health has identified the fact that there is a direct link between a person's "employment conditions and health inequities through three different pathways: behavioral, psychosocial, and physio-pathological. Potential exposures and risk factors are classified in four main categories: physical, chemical, ergonomic, and psychosocial."[20] As illustrated in **Figure 6**, a person who is unemployed or working a sub-par

[19] Ibid.
[20] Lee, Jennifer H. and Sadana, Ritu. "Improving Equity in Health by Addressing Social Determinants." World Health Organization. 2011.

job is more at risk for health inequities and higher chronic disease issues than those employees who are working full time.

Figure 6 - Micro-Conceptual Framework of Employment Conditions and Health Inequities



Source: The National Health Care for the Homeless Council (NHCHC)

A study by Gordon Waddell and A. Kim Burton entitled *"Is Work Good for Your Health and Well-Being*," found that if a person is working, then:

- "Employment is generally the most important means of obtaining adequate economic resources, which are essential for material well-being and full participation in today's society;
- Work meets important psychosocial needs in societies where employment is the norm;
- Work is central to individual identity, social roles and social status; and
- Employment and socio-economic status are the main drivers of social gradients in physical and mental health and mortality."[21]

"Conversely, there is a strong association between worklessness and poor health. This may be partly a health selection effect, but it is also to a large extent cause and effect. There is strong evidence that unemployment is generally harmful to health, including:

- Higher mortality;
- Poorer general health, long-standing illness, limiting longstanding illness;
- Poorer mental health, psychological distress, minor psychological/psychiatric morbidity; and

[21] Waddell Gordon and Burton Kim A. "Is Work Good for Your Health and Well-Being." TSO. 2006.

- Higher medical consultation, medication consumption and hospital admission rates."[22]

Social Support

When looking at social support and its relationship to a person's health, there is quite a bit of information published, all pointing to the fact that if a person does not have a strong social network (family or friends), their health suffers when compared to a person who has strong social support. The National Institute for Biotechnology Information published an abstract entitled *"Health-related quality of life and health behaviors by social and emotional support; their relevance to psychiatry and medicine"* that says, in part, "social and emotional support is an important construct, which has been associated with a reduced risk of mental illness, physical illness, and mortality. As the level of social and emotional support decreased, the prevalence of fair/poor general health, dissatisfaction with life, and disability increased, as did the mean number of days of physical distress, mental distress, activity limitation, depressive symptoms, anxiety symptoms, insufficient sleep, and pain. Moreover, the prevalence of smoking, obesity, physical inactivity, and heavy drinking increased with decreasing level of social and emotional support. Additionally, the mean number of days of vitality slightly decreased with decreasing level of social and emotional support; particularly between those who always/usually received social and emotional support and those who sometimes received support."[23]

In another abstract entitled *"Social and Emotional Support and its Implication for Health,"* it was found that those with high quality or quantity of social networks have a decreased risk of mortality in comparison to those who have low quantity or quality of social relationships … In fact, social isolation itself was identified as an independent major risk factor for all-cause mortality."[24]

Community Safety

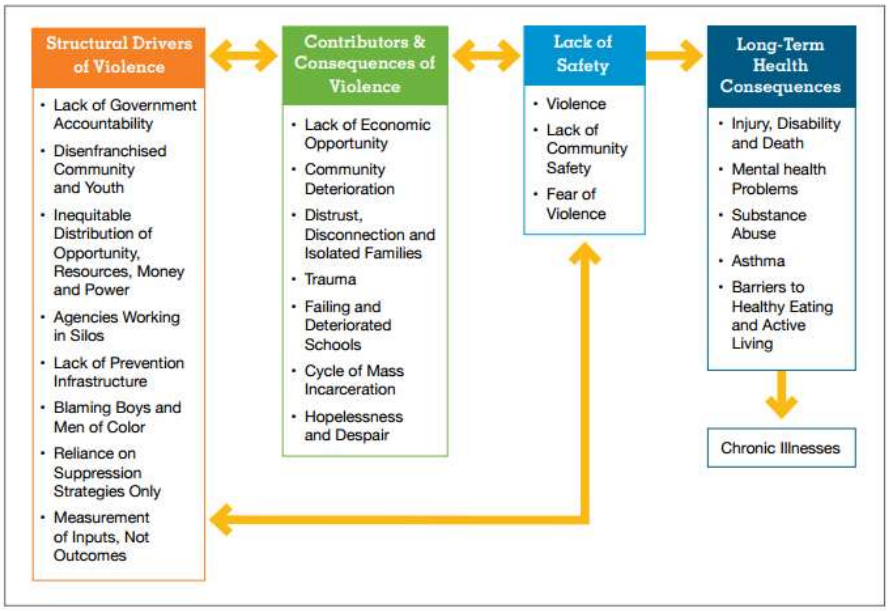
The County Health Rankings states that "community safety reflects not only violent acts in neighborhoods and homes, but also injuries caused unintentionally through accidents. Children in unsafe circumstances can suffer post-traumatic stress disorder and exhibit more aggressive behavior, alcohol and tobacco use, and sexual risk-taking than peers in safer environments. The chronic stress associated with living in unsafe neighborhoods can accelerate aging and harm health. Unsafe neighborhoods can cause anxiety, depression, and stress, and are linked to higher rates of pre-term births and low birthweight babies, even when income is accounted for. Fear of violence can keep people indoors, away from

[22] Ibid.
[23] "Health-Related Quality of Life and Health Behaviors by Social and Emotional Support. Their Relevance to Psychiatry and Medicine. - PubMed - NCBI." http://www.ncbi.nlm.nih.gov/pubmed/17962895. February 2008.
[24] "Social and Emotional Support and Its Implication for Health." http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2729718/. August 20, 2009.

neighbors, exercise, and healthy foods. Companies may be less willing to invest in unsafe neighborhoods, making jobs harder to find."[25]

The Building Healthy Communities initiative in California mentions that "communities cannot thrive or enjoy good health unless they are safe. Violence and fear of violence increase the risk of poor health outcomes and also undermine the community supports and conditions that would otherwise promote health and wellbeing."[26] The initiative goes on to say that "there is no 'one size fits all' community safety solution; each community has its own history, assets, and capacities. Safety strategies must also take into account the physical places people live, work, play and learn, because the look and feel of a neighborhood can affect safety and perceptions of safety. Communities of color and low-income areas typically receive less public and private investment and, as a result, can appear more disordered and may be perceived as unsafe. Large numbers of pawn shops, check-cashing store fronts, and convenience and liquor stores contribute to this. Strategies that affect land use, the built environment, and zoning can improve safety. Good community design can also strengthen community networks and trust by encouraging interactions among neighbors. The circumstances that give rise to violence are also made worse by violence, feeding a cycle of poor community health. Figure 7 depicts this process in which a lack of safety worsens the risk factors for violence, thus perpetuating violence. "[27]

Figure 7 - The Causes of Unsafe, Unhealthy Communities



Source: Community Safety: A Building Block for Healthy Communities

[25] "Community Safety | County Health Rankings & Roadmaps." http://www.countyhealthrankings.org/our-approach/health-factors/community-safety. 2016.
[26] "Community Safety: A Building Block for Healthy Communities." Prevention Institute Advancement Project. January 2015.
[27] Ibid.

Food Security

The County Health Rankings defines food insecurity as "the percentage of the population who did not have access to a reliable source of food during the past year."[28] The County Health Rankings also describes limited access to healthy foods as "the percentage of the population who are low income and do not live close to a grocery store. Living close to a grocery store is defined differently in rural and non-rural areas; in rural areas, it means living less than 10 miles from a grocery store; in non-rural areas, less than 1 mile. Low income is defined as having an annual family income of less than or equal to 200 percent of the federal poverty threshold for the family size."[29]

According to Randy Oostra, President and Chief Executive Officer of ProMedica, "nutritious food is a basic need, and hunger is a health issue. With more than 17.5 million U.S. households facing hunger — or one in every seven households nationwide — healthcare systems and leaders must recognize that lacking nutritious food to eat is a dire public health concern. Food insecurity and its results, including true hunger, are a health issue causing distress in communities nationwide by taking an incalculable toll on unborn babies, youngsters, parents, middle-aged people, and the elderly. Malnutrition also causes financial burdens for healthcare systems, governments, insurance carriers, and taxpayers, especially as more people become insured under healthcare reform."[30] Table 3 below shows the cost of hunger-induced illnesses for 2007 and 2010 in billions of dollars.

[28] "Food Insecurity* | County Health Rankings & Roadmaps." http://www.countyhealthrankings.org/measure/food-insecurity. 2016.
[29] "Limited Access to Healthy Foods* | County Health Rankings & Roadmaps." http://www.countyhealthrankings.org/measure/limited-access-healthy-foods. 2016
[30] Oostra, Randy DM, FACHE. "A Case for Becoming True Care Integrators to Improve Population Health." ProMedica. 2015.

Table 3 - Breaking Out the Health Care Costs of Hunger

HUNGER IS A HEALTH ISSUE

Breaking out the health care costs of hunger

Costs of hunger-induced illnesses, 2007 and 2010, in billions of 2010 dollars

Adverse health condition	2007	2010	Increased cost over three years
Poor health (excluding items below)	$28.7	$38.9	$10.2
Depression	$2.2	$29.2	$7.1
Suicide	$15.8	$19.7	$3.9
Anxiety	$12.9	$17.4	$4.5
Hospitalizations	$12.1	$16.1	$4.0
Upper gastrointestinal disorders	$4.2	$5.7	$1.4
Colds, migraines, and iron deficiency	$2.5	$3.5	$1.0
Total illness costs caused by hunger	$98.4	$130.5	$32.1

Breaking educational costs from hunger

Costs of poor educational outcomes due to food insecurity, 2007 and 2010, in billions of 2010 dollars

Component	2007	2010	Increase
Drop out due to grade retenion	$5.1	$6.0	$1.9
Drop out due to absenteeism	$4.2	$5.8	$1.6
Special education	$4.6	$6.4	$1.8
Total cost of poor educational outcomes and annual value of reduced lifetime earnings	$13.9	$19.2	$5.3

Source: Oostra, Randy DM, FACHE. "A Case for Becoming True Care Integrators to Improve Population Health." ProMedica. 2015

Oostra goes on to say that "food is medicine. Hunger is a problem healthcare providers see every day among patients of all ages in emergency rooms, clinics, offices, and hospital beds. Babies born to malnourished mothers may be underweight or overweight, have developmental delays and continue to have health problems throughout life. Children experiencing food insecurity, meaning they live in households that at times are unable to acquire adequate food, are more likely to have behavioral health issues such as anxiety and depression. These children may also be at higher risk for developing chronic health conditions, including anemia and asthma. Among the elderly, another particularly vulnerable group, malnutrition increases disability and decreases resistance to infection. Both not only harm quality of life, but they extend hospital stays. People who are food insecure often have irregular eating patterns, which can lead to being overweight and obese. Additionally, people facing food insecurity typically consume food with fewer nutrients, so they have dietary shortfalls linked to the development of hypertension, diabetes and other chronic diseases."[31]

[31] ibid

A Harvard Law School Center for Health Law & Policy Innovation paper succinctly presents the case for nutritional counseling and medically-tailored, home-delivered meals. "For critically and chronically ill people, food is medicine," the paper opens. "With adequate amounts of nutritious food, people who are sick have a better response to medication, maintain and gain strength, and have improved chances of recovery. Ultimately, access to healthy food leads to improved health outcomes and lower healthcare costs."[32]

Education

As is the case in the SDOH listed above, education also plays a role in the health and well-being of a population. The Centers for Disease Control (CDC) reported in their Health, United States, 2011 annual report that "people with higher levels of education and higher income have lower rates of many chronic diseases compared to those with less education and lower income levels."[33] In looking at the years 2007-2010, the CDC found the following direct correlations between the education level and health:

- "In 2007-2010, higher levels of education among the head of household resulted in lower rates of obesity among boys and girls 2-19 years of age. In households where the head of household had less than a high school education, 24 percent of boys and 22 percent of girls were obese. In households where the head had a bachelor's degree or higher, obesity prevalence was 11 percent for males aged 2-19 years and 7 percent for females.
- In 2007-2010, women 25 years of age and older with less than a bachelor's degree were more likely to be obese (39 percent-43 percent) than those with a bachelor's degree or higher (25 percent). Obesity prevalence among adult males did not vary consistently with level of education.
- In 2010, 31 percent of adults 25-64 years of age with a high school diploma or less education were current smokers, compared with 24 percent of adults with some college and 9 percent of adults with a bachelor's degree or higher. Overall, in the same year, 19 percent of U.S. adults age 18 and over were current cigarette smokers, a decline from 21 percent in 2009.
- Between 1996-2006, the gap in life expectancy at age 25 between those with less than a high school education and those with a bachelor's degree or higher increased by 1.9 years for men and 2.8 years for women. On average in 2006, 25-year-old men without a high school diploma had a life expectancy of 9.3 years less than those with a Bachelor's degree or higher. Women without a high school diploma had a life expectancy of 8.6 years less than those with a bachelor's degree or higher."[34]

[32] Ellwood, M., Downer, S., Broad Leib, E., Greenwald, R., Farthing-Nichol, D., Luk, E., and Mendle, A. Food Is Medicine:
Opportunities in Public and Private Health Care for Supporting Nutritional Counseling and Medically-Tailored, HomeDelivered Meals, Harvard Law School, Center For Health Law & Policy Innovation, 2014.
[33] "CDC Online Newsroom - Press Release - Higher Education and Income Levels Keys to Better Health, according to Annual Report on Nation's Health May 16, 2012."
http://www.cdc.gov/media/releases/2012/p0516_higher_education.html. May 16, 2012.
[34] Ibid.

The CDC also covered the educational health disparities in its 2015 DASH report that "health disparities are also related to inequities in education. Dropping out of school is associated with multiple social and health problems. Overall, individuals with less education are more likely to experience a number of health risks, such as obesity, substance abuse, and intentional and unintentional injury, compared with individuals with more education. Higher levels of education are associated with a longer life and an increased likelihood of obtaining or understanding basic health information and services needed to make appropriate health decisions.

At the same time, good health is associated with academic success. Health risks such as teenage pregnancy, poor dietary choices, inadequate physical activity, physical and emotional abuse, substance abuse, and gang involvement have a significant impact on how well students perform in school."[35]

The American Academy for Pediatrics also completed an abstract that is in line with what the CDC reported. The American Academy for Pediatrics found that not only is the United States not making great strides in meeting the Healthy People 2020 goals, but that "academic achievement and education seem to be critical determinants of health across the life span, and disparities in one contribute to disparities in the other."[36]

Health literacy is also a contributing factor when looking at the health of a person. A review in the Annals of Internal Medicine defines health literacy as "a set of skills that people need to function effectively in the health care environment. These skills include the ability to read and understand text and to locate and interpret information in documents (print literacy); use quantitative information for tasks, such as interpreting food labels, measuring blood glucose levels, and adhering to medication regimens (numeracy); and speak and listen effectively (oral literacy).[37] The review goes on to state that "approximately 80 million Americans have limited health literacy, which puts them at greater risk for poorer access to care and poorer health outcomes."[38]

According to the U.S. Department of Health and Human Services, poor health literacy equates to poor health. It further defines six areas where there is a relationship between poor health literacy and poor health. These six areas include:

1. "Use of preventive services - According to research studies, persons with limited health literacy skills are more likely to skip important preventive measures such as

[35] "Disparities | Adolescent and School Health | CDC." http://www.cdc.gov/healthyyouth/disparities/. September 1, 2015.
[36] "Disparities in Academic Achievement and Health: The Intersection of Child Education and Health Policy | Special Articles | Pediatrics." http://pediatrics.aappublications.org/content/123/3/1073.short. July 3, 2008.
[37] Berkman Nancy D., PhD; Sheridan Stacey L., MD, MPH; Donahue Katrina E., MD, MPH; Halpern David J., MD, MPH; and Crotty Karen, PhD, MPH. "Low Health Literacy and Health Outcomes: An Updated Systematic Review." Annals of Internal Medicine. 2011.
[38] Ibid.

mammograms, Pap smears, and flu shots. When compared to those with adequate health literacy skills, studies have shown that patients with limited health literacy skills enter the healthcare system when they are sicker.

2. Knowledge about medical conditions and treatment - Persons with limited health literacy skills are more likely to have chronic conditions and are less able to manage them effectively. Studies have found that patients with high blood pressure, diabetes, asthma, or HIV/AIDS who have limited health literacy skills have less knowledge of their illness and its management.
3. Rates of hospitalization - Limited health literacy skills are associated with an increase in preventable hospital visits and admissions. Studies have demonstrated a higher rate of hospitalization and use of emergency services among patients with limited literacy skills.
4. Health status - Studies demonstrate that persons with limited health literacy skills are significantly more likely than persons with adequate health literacy skills to report their health as poor.
5. Healthcare costs - Persons with limited health literacy skills make greater use of services designed to treat complications of disease and less use of services designed to prevent complications. Studies demonstrate a higher rate of hospitalization and use of emergency services among patients with limited health literacy skills. This higher use is associated with higher healthcare costs.
6. Stigma and shame - Low health literacy may also have negative psychological effects. One study found that those with limited health literacy skills reported a sense of shame about their skill level. As a result, they may hide reading or vocabulary difficulties to maintain their dignity."[39]

Environment

Dr. Richard Mitchell, PhD and Frank Popham, PhD conducted a study entitled *Effect of exposure to natural environment on health inequalities: an observational population study*, which "studies have shown that exposure to the natural environment, or so-called green space, has an independent effect on health and health-related behaviors."[40] The results of the findings showed that "Populations that are exposed to the greenest environments also have lowest levels of health inequality related to income deprivation. Physical environments that promote good health might be important to reduce socioeconomic health inequalities."[41]

The Hastings Center shared a chapter (*Environment and Health*) from its book "From Birth to Death and Bench to Clinic: The Hastings Center Bioethics Briefing Book for Journalists, Policymakers, and Campaigns. This chapter focuses specifically on the how "the environment

[39] "Health Literacy and Health Outcomes." U.S. Department of Health and Human Services. http://health.gov/communication/literacy/quickguide/factsliteracy.htm. nd
[40] Mitchell, Dr Richard, PhD, Popham, Frank, PhD. "Effect of Exposure to Natural Environment on Health Inequalities: An Observational Population Study. The Lancet, Volume 372, Issue 9650, 8–14. November 2008, pages 1614-1615.
[41] Ibid.

can affect human health and that human health care can affect the environment."[42] The authors identified ten Environmental Risk Factors for Disease. They are:

1. Pollution
2. Microbes in air, water, or soil
3. Contaminants in food
4. Weather conditions (droughts, heat waves)
5. Natural disasters (hurricanes, earthquakes, floods)
6. Pesticides and other chemicals
7. Pests and parasites
8. Radiation
9. Poverty
10. Lack of access to health care"[43]

When looking at the information published through Healthy People 2020, they mentioned that "humans interact with the environment constantly. These interactions affect quality of life, years of healthy life lived, and health disparities. The World Health Organization (WHO) defines environment, as it relates to health, as "all the physical, chemical, and biological factors external to a person, and all the related behaviors." Environmental health consists of preventing or controlling disease, injury, and disability related to the interactions between people and their environment."[44] As seen in the listing of the ten environmental risk factors for disease, Healthy People 2020 came up with their own list of six themes, each having their own impact on a healthy environment. The six themes are:

1. "Outdoor air quality - Poor air quality is linked to premature death, cancer, and long-term damage to respiratory and cardiovascular systems. Decreasing air pollution is an important step in creating a healthy environment.
2. Surface and ground water quality - Surface and ground water quality applies to both drinking water and recreational waters. Contamination by infectious agents or chemicals can cause mild to severe illness. Protecting water sources and minimizing exposure to contaminated water sources are important parts of environmental health.
3. Toxic substances and hazardous wastes - The health effects of toxic substances and hazardous wastes are not yet fully understood. Research to better understand how these exposures may impact health is ongoing. Meanwhile, efforts to reduce exposures continue. Reducing exposure to toxic substances and hazardous wastes is fundamental to environmental health.
4. Homes and communities - People spend most of their time at home, work, or school. Some of these environments may expose people to: indoor air pollution, inadequate heating and sanitation, structural problems, electrical and fire hazards, and lead-

[42] David B. Resnik and Christopher J. Portier, "Environment and Health," in From Birth to Death and Bench to Clinic: The Hastings Center Bioethics Briefing Book for Journalists, Policymakers, and Campaigns, ed. Mary Crowley (Garrison, NY: The Hastings Center, 2008), 59-62.
[43] Ibid.
[44] "Environmental Health | Healthy People 2020."https://www.healthypeople.gov/2020/topics-objectives/topic/environmental-health. April 18, 2016

based paint hazards. These hazards can impact health and safety. Maintaining healthy homes and communities is essential to environmental health.

5. Infrastructure and surveillance - Prevention of exposure to environmental hazards relies on many partners, including State and local health departments. Personnel, surveillance systems, and education are important resources for investigating and responding to disease, monitoring for hazards, and educating the public. Additional methods and greater capacity to measure and respond to environmental hazards are needed.
6. Global environmental health - Water quality is an important global challenge. Diseases can be reduced by improving water quality and sanitation and increasing access to adequate water and sanitation facilities."[45]

Transportation

As seen in all of the SDOH variables talked about above regarding the impact of health on a person, transportation is no different. Lili Farhang and Rajiv Bhatia wrote a paper entitled *Transportation for Health* to discuss how transportation affects the health of a person and a community. They reported that the "transportation system has direct and unequivocal effects on morbidity and mortality. Motor vehicle emissions are the largest and fastest growing source of air pollution and greenhouse gases. Exposure to air pollution causes respiratory illness and cardiovascular disease, and motor vehicles are also the most important source of environmental noise, interfering with sleep, work performance, and childhood brain development. Pedestrian injuries result from street designs that favor cars rather than people. Urban sprawl has made us less physically active, and populations in low-density communities experience higher rates of obesity than populations in higher-density areas."[46] The report goes on to say that "transportation clearly affects health by determining access to daily necessities."[47] The report also mentions that a "lack of transit access can have severe consequences. For instance, hospitalizations for many chronic diseases can be prevented with effective, regular, and timely care. Transit barriers—mainly cost and inadequate service—make healthcare even more unavailable to those who need it most."[48]

As reported in the American Journal of Public Health, "in exploring the impact of the built environment on public health, research indicates that the burden of illness is greater among minorities and low income communities. Lower–socioeconomic status communities usually have limited access to quality housing stock and live in neighborhoods that do not facilitate outdoor activities or provide many healthy food options. Inequities in construction and maintenance of low-income housing, especially for Blacks, older persons, persons with disabilities, and immigrants, have resulted in insufficient housing, poor quality housing, overcrowding, and higher levels of population density and health problems. Consequently,

[45] Ibid.
[46] Farhang, Lili and Bhatia, Rajiv. "Transportation for Health." Race, poverty and the environment. Winter 2005-2006.
[47] Ibid.
[48] Ibid.

these communities may experience greater rates of respiratory disease, developmental disorders, obesity, chronic illnesses, and mental illness."[49]

Health Care Access

Ananya Mandal, MD reported in News Medical that "differences in access to healthcare across different populations is the main reason for existing disparities in healthcare provision." Dr. Mandal noticed that there were eight main reasons why there are differences in health access, which are described below:

1. "Lack of health insurance – Several racial, ethnic, socioeconomic and other minority groups lack adequate health insurance compared with the majority population. These individuals are more likely to delay healthcare and to go without the necessary healthcare or medication they should have been prescribed.
2. Lack of financial resources – Lack of available finance is a barrier to healthcare for many Americans, but access to healthcare is reduced most among minority populations. Racial and ethnic minorities are often given a health insurance plan that limits the amount of services available to them, as well as the number of providers they can use.
3. Irregular source of care – Compared to white individuals, ethnic or racial minorities are less likely to be able to visit the same doctor on a regular basis and tend to rely more on clinics and emergency rooms. Without a regular healthcare source, people have more difficulty obtaining their prescriptions and attending necessary appointments.
4. Legal obstacles – Low-income immigrant groups are more likely to experience legal barriers. For example, insurance coverage through Medicaid is not available to immigrants who have been resident in the U.S for less than five years.
5. Structural barriers – Examples of structural barriers include lack of transport to healthcare providers, inability to obtain convenient appointment times, and lengthy waiting room times. All of these factors reduce the likelihood of a person successfully making and keeping their healthcare appointment.
6. Lack of healthcare providers – In areas where minority populations are concentrated such as inner cities and rural areas, the number of health practitioners and diagnostic facilities is often inadequate.
7. Language barriers – Poor English language skills can make it difficult for people to understand basic information about health conditions or when they should visit their doctor.
8. Age – Older patients are often living on a fixed income and cannot afford to pay for their healthcare. Older people are also more likely to experience transport problems or suffer from a lack of mobility, factors that can impact on their access to healthcare. With 15% of the older adults in the U.S not having access to the internet, these

[49] Srinivasan, S., O'Fallon, L. R., & Dearry, A. (2003). Creating Healthy Communities, Healthy Homes, Healthy People: Initiating a Research Agenda on the Built Environment and Public Health. *American Journal of Public Health*,*93*(9), 1446–1450.

individuals are also less likely to benefit from the valuable health information that can now be found on the internet."[50]

The Henry J. Kaiser Family Foundation reported that "the Affordable Care Act (ACA) advances efforts to reduce disparities and to improve health and health care for vulnerable populations. The ACA health coverage expansions will significantly increase coverage options for low- and moderate-income populations and particularly benefit vulnerable populations. The ACA also includes provisions to strengthen the safety-net delivery system, improve access to providers, promote greater workforce diversity and increase cultural competence, strengthen data collection and research efforts, and implement an array of prevention and public health initiatives."[51]

Cultural Characteristics

According to MedU, "A person's culture, ethnicity, religion, and other affiliations all influence health beliefs and practices. In addition, acculturation to the dominant society modifies culturally-based beliefs and practices."[52] The article goes on to define culture as "the shared beliefs, values, behaviors, social forms and material traits of a group. The group may be based on country of origin, ethnicity, race, religion, or another trait. Most discussions of culture include all of these characteristics in the definition. Each culture has a set of health beliefs to which the majority adheres. Although broad generalizations can be made about a particular culture's beliefs, it is essential to recognize that every individual has a unique personal history, belief system, communication style, and health status. Generalization can lead to stereotyping, which in turn often results in misconceptions that lead to poor health care outcomes… In order to care optimally for persons from different cultures, it is important that the provider be aware of her/his own culture and of the "culture of medicine" within which she/he practices."[53]

The Canadian Paediatric Society published a paper in its health resource for professionals – Caring for Kids New to Canada – where they listed out the different characteristics of culture. They include:

- "Ethnicity
- Language
- Religion and spiritual beliefs
- Gender
- Socio-economic class

[50] "Disparities in Access to Health Care."http://www.news-medical.net/health/Disparities-in-Access-to-Health-Care.aspx. August 6, 2014.
[51] "Disparities in Health and Health Care: Five Key Questions and Answers | The Henry J. Kaiser Family Foundation." http://kff.org/disparities-policy/issue-brief/disparities-in-health-and-health-care-five-key-questions-and-answers/.
[52] "Health Beliefs." http://www.med-u.org/the-library/health-beliefs. 2013.

[53] Ibid.

- Age
- Sexual orientation
- Geographic origin
- Group history
- Education
- Upbringing
- Life experience"[54]

The paper goes on to mention that "culture has been described as an iceberg, with its most powerful features hidden under the ocean surface, as illustrated in **Figure 8**. Explicit cultural elements are often obvious but possibly less influential than the unrecognized or subconscious elements providing ballast below."[55]

Figure 8 - Elements of Culture[56]

Source: Centre for Innovation & Excellence in Family Centered Care at SickKids Hospital

The Canadian Paediatric Society also discussed the impact of culture on health. "Health is a cultural concept because culture frames and shapes how we perceive the world and our experiences. Along with other determinants of health and disease, culture helps to define:

- How patients and health care providers view health and illness.
- What patients and health care providers believe about the causes of disease. For example, some patients are unaware of germ theory and may instead believe in fatalism, a *djinn* (in rural Afghanistan, an evil spirit that seizes infants and is responsible for tetanus-like illness), the 'evil eye', or a demon. They may not accept a

[54] "How Culture Influences Health |Culture & Health |Caring for Kids New to Canada." http://www.kidsnewtocanada.ca/culture/influence. 2016.
[55] Ibid.
[56] Slide 6, Introduction to clinical cultural competence. Clinical Cultural Competency Series. Courtesy of the Centre for Innovation & Excellence in Child & Family Centred Care at SickKids Hospital. - See more at: http://www.kidsnewtocanada.ca/culture/influence#sthash.84E1qWKM.dpuf.

diagnosis and may even believe they cannot change the course of events. Instead, they can only accept circumstances as they unfold.

- Which diseases or conditions are stigmatized and why. In many cultures, depression is a common stigma and seeing a psychiatrist means a person is "crazy".
- What types of health promotion activities are practiced, recommended or insured. In some cultures being "strong" (or what Canadians would consider "overweight") means having a store of energy against famine, and "strong" women are desirable and healthy.
- How illness and pain are experienced and expressed. In some cultures, stoicism is the norm, even in the face of severe pain. In other cultures, people openly express moderately painful feelings. The degree to which pain should be investigated or treated may differ.
- Where patients seek help, how they ask for help and, perhaps, when they make their first approach. Some cultures tend to consult allied health care providers first, saving a visit to the doctor for when a problem becomes severe.
- Patient interaction with health care providers. For example, not making direct eye contact is a sign of respect in many cultures, but a care provider may wonder if the same behavior means her patient is depressed.
- The degree of understanding and compliance with treatment options recommended by health care providers who do not share their cultural beliefs. Some patients believe that a physician who doesn't give an injection may not be taking their symptoms seriously.
- How patients and providers perceive chronic disease and various treatment options.

Culture also affects health in other ways, such as:

- Acceptance of a diagnosis, including who should be told, when, and how.
- Acceptance of preventive or health promotion measures (e.g., vaccines, prenatal care, birth control, screening tests, etc.).
- Perception of the amount of control individuals have in preventing and controlling disease.
- Perceptions of death, dying, and who should be involved.
- Use of direct versus indirect communication. Making or avoiding eye contact can be viewed as rude or polite, depending on culture.
- Willingness to discuss symptoms with a health care provider, or with an interpreter being present.
- Influence of family dynamics, including traditional gender roles, filial responsibilities, and patterns of support among family members.
- Perceptions of youth and aging.
- How accessible the health system is, as well as how well it functions."[57]

[57] "How Culture Influences Health |Culture & Health |Caring for Kids New to Canada." http://www.kidsnewtocanada.ca/culture/influence. 2016.

The article goes on to mention nine suggestions that the health professionals can do to bridge the culture gap as it relates to providing healthcare. They include:

1. Consider how your own cultural beliefs, values, and behaviors may affect interactions with patients. If you suspect an interaction has been adversely affected by cultural bias – your own or your patient's – consider seeking help.
2. Respect, understand, and work with differing cultural perceptions of effective or appropriate treatment.
3. Ask about and record how your patients like to receive health care and treatment information.
4. Where needed, arrange for an appropriate interpreter.
5. Listen carefully to your patients and confirm that you have understood their messages.
6. Make sure you understand how the patient understands his or her own health or illness.
7. Recognize that families may use complementary and alternative therapies. For appropriate, specific conditions, remind them that complementary and alternative medicine use can delay biomedical testing or treatment and potentially cause harm.
8. Try to 'locate' the patient in the process of adapting to [a] culture. Assess their support system. What are their language skills?
9. Negotiate a treatment plan based on shared understanding and agreement.
10. Health information is typically print-based. Find out whether a patient or family would benefit from spoken or visual messaging for reasons of culture or limited literacy.

Paul Ongtooguk, who wrote an article on Alaska Natives and Health, found that "Over thousands of years, different Alaska Native cultures in distinct regions of the practiced a variety of ways to promote health, reduce pain and meet the challenges of life. For example, natural medicines from many different plants were harvested. Various parts of plants were prepared by drying. These medicines were used as poultices or teas. Many of these medicines are now lost. Disease and other changes wiped out traditional healers and others who had knowledge of old health systems.

Some traditional plants, mixtures, teas, and hot springs continue today, but there are few people who know and understand traditional practices. In a few Alaska Native controlled health care organizations, there is an attempt to combine the best of both traditional and Western medicine. One example is that traditional doctors often administered not only healing, but also encouraged patients to learn how to keep themselves healthy, mentally active and positive in their outlook as a part of their own healing. The medical profession today is returning more and more to an emphasis on holistic health. Alaska Native health organizations represent a wider effort on the part of Alaska Native communities to try to create a new direction that combines the strengths of both traditional and modern approaches to form a new and better future direction."[58]

[58] "Alaska History and Cultural Studies - Alaska's Cultures - Alaska Natives and Health - Paul Ongtooguk." http://www.akhistorycourse.org/articles/article.php?artID=282. 2016.

Looking at one of the cultural characteristics mentioned above – age – and the Alaska Native Peoples elder population, there are specific services that the elders want that are reflective of their cultural values. They include:

- "In the past, care for the elderly was the responsibility of the entire community and their family.
- Elders want to live with their family members or independently.
- The process of removing elders from their villages has had negative consequences on the elders, families, and the community.
- Native food is essential for the elder's health and well-being.
- Elders want health care workers who understand their culture, language, and customs.
- Wellness of the community, families, and Elders will be enhanced through utilization of the contributions and worldview of the Elders.
- Need to clearly delineate between Elder and elderly.
- Elders are living longer lives but not necessarily healthier lives/ increased the need for senior services.
- When Elders disengage from their role and function in their communities, there can be a negative impact on the elders, communities, and families.
- Elders living in institutions may experience increased levels of mental, social, and physical wellness if they maintain their traditional role and activities.
- Health care workers need to become aware and sensitive to non-verbal communication patterns, English as a second language, and silence.
- Tribal, community and family healing will be enhanced when Elders are returned to a position of respect and authority"[59]

Life Stages

Encountering barriers to health (poverty, lack of transportation, health illiteracy, etc.) can negatively impact a person's development throughout each of their stages of life. The World Health Organization states that "key stages in people's lives have particular relevance for their health. Ensuring that children have the best start in life – through good nutrition, immunization against vaccine-preventable diseases, and environments that enable them to be safe and physically active – establishes a solid base for good health and contributes to healthy behavior for years to come. As young people approach adulthood and their sexually active years, they confront new choices and dangers to their health. These dangers include alcohol consumption, illicit drug and tobacco use, risky sexual behavior, violence and injuries (including those from road traffic accidents). Pregnancy can be a particularly vulnerable time in a woman's life, when access to high quality, skilled health care, is of the utmost importance. A healthy lifestyle helps people maintain good health into old age."[60]

[59] Rosich, Rosellen M., Ph.D. "A Report on the Health and Cultural Status of Alaska Native Elders." Alaska Geriatric Education Center. Summer 2008.
[60] "WHO/Europe | Life Stages." http://www.euro.who.int/en/health-topics/Life-stages/pages/Life-stages. 2016.

Natural Environment

Dr. Nancy Wells, an environmental psychologist in the Department of Design and Environmental Analysis at Cornell University, conducted research on the natural and built environments impact on health. Dr. Wells suggests from her research that "having natural areas nearby promotes well-being. Access to or views of the natural environment improve cognitive functioning and improve recovery from surgery and illness. People who live near parks and open space are more physically active. Land-use planning, such as zoning, often influences community attributes such as soil contamination, safety of drinking water, traffic density, and water, air, noise, and light pollution. For example, studies show that noise affects reading skills in children, elevates blood pressure, and increases stress hormones. Residents who live in neighborhoods where they must depend on cars for transportation have reduced physical activity and increased obesity rates.[61]

Unfortunately, natural environment can also have an adverse affect on the population it surrounds and serves, especially as it relates to being damaged or altered by industry. Case in point is the Chickaloon Tribe in the Mat-Su Borough. The Chickaloon Tribe is currently challenging the coal mining companies because they want to reopen coal mines on and near their land. Pollution and salmon killing from coal mining nearly decimated the Tribe decades ago. The coal mining companies damned up the rivers that the salmon used to spawn in, creating a loss of food source for the Alaska Native people. Once the coal mines shut down, the Chickaloon Tribe spent years bringing the rivers back to their original flow so that the salmon could once again spawn upstream. Presently, however, the Alaskan Government has issued permits for the coal mines to be reopened, once again jeopardizing the food source and way of life for the Chickaloon Tribe.[62]

"The connection between protecting the natural environment and safeguarding human health has been recognized for some time. In recent decades the focus of research and legislation has been identifying and regulating environmental toxics to reduce harmful human exposures. The effect of various environmental exposures, such as toxic chemicals, air pollution, and biological agents on the human body, is commonly perceived as the central problem in environmental health." [63]

Social Acceptance and Self-Determination

Healthy People 2020 reports that "lesbian, gay, bisexual, and transgender (LGBT) individuals encompass all races and ethnicities, religions, and social classes. Sexual orientation and

[61] Wells, Dr. Nancy. "How Natural and Built Environments Impact Human Health." Department of Design and Environmental Analysis, Cornell University. Nd.
[62] "Alaska, Chickaloon Indian Tribe - YouTube." https://www.youtube.com/watch?v=8rf4xF83C_o. December 27, 2012.
[63] "4 Human Health and the Natural Environment." Institute of Medicine. *Health and the Environment in the Southeastern United States: Rebuilding Unity: Workshop Summary*. Washington, DC: The National Academies Press, 2002. doi:10.17226/10535.

gender identity questions are not asked on most national or state surveys, making it difficult to estimate the number of LGBT individuals and their health needs. Research suggests that LGBT individuals face health disparities linked to societal stigma, discrimination, and denial of their civil and human rights. Discrimination against LGBT persons has been associated with high rates of psychiatric disorders, substance abuse, and suicide. Experiences of violence and victimization are frequent for LGBT individuals, and have long-lasting effects on the individual and the community. Personal, family, and social acceptance of sexual orientation and gender identity affects the mental health and personal safety of LGBT individuals. Efforts to improve LGBT health include:

- Collecting sexual orientation and gender identity (SOGI) data in health-related surveys and health records in order to identify LGBT health disparities.
- Appropriately inquiring about and being supportive of a patient's sexual orientation and gender identity to enhance the patient-provider interaction and regular use of care.
- Providing medical students with training to increase provision of culturally competent care.
- Implementing anti-bullying policies in schools.
- Providing supportive social services to reduce suicide and homelessness among youth.
- Curbing human immunodeficiency virus (HIV)/sexually transmitted infections (STIs) with interventions that work."[64]

Healthy People 2020 also states that "LGBT health requires specific attention from health care and public health professionals to address a number of disparities, including:

- LGBT youth are 2 to 3 times more likely to attempt suicide.
- LGBT youth are more likely to be homeless.
- Lesbians are less likely to get preventive services for cancer.
- Gay men are at higher risk of HIV and other STDs, especially among communities of color.
- Lesbians and bisexual females are more likely to be overweight or obese.
- Transgender individuals have a high prevalence of HIV/STDs, victimization, mental health issues, and suicide and are less likely to have health insurance than heterosexual or LGB individuals.
- Elderly LGBT individuals face additional barriers to health because of isolation and a lack of social services and culturally competent providers.
- LGBT populations have the highest rates of tobacco, alcohol, and other drug use."[65]

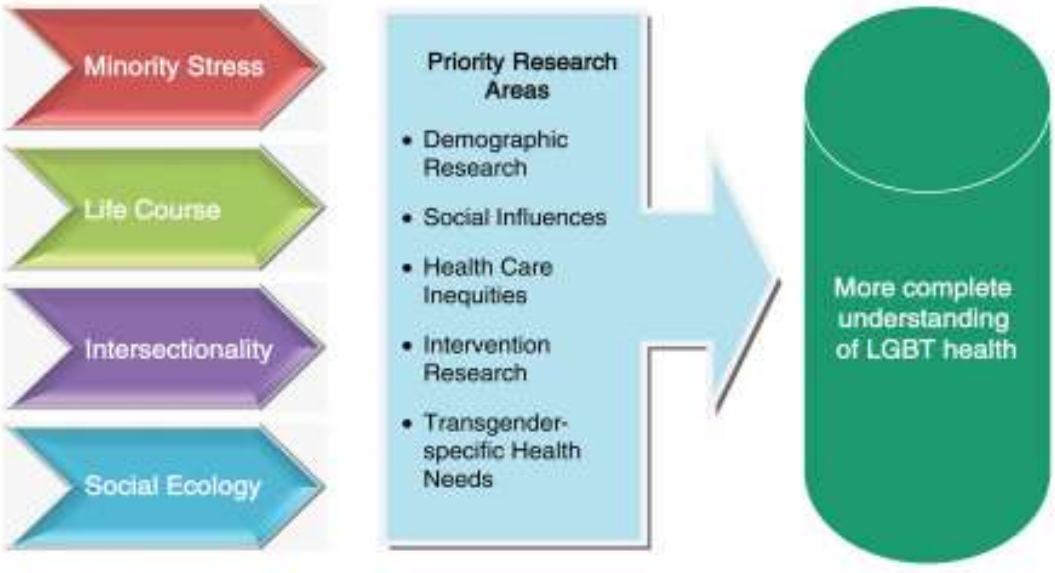
A study by the Institute of Medicine reported that "lesbian, gay, bisexual, and transgender (LGBT) individuals experience unique health disparities. Although the acronym LGBT is used as an umbrella term, and the health needs of this community are often grouped together,

[64] "4 Human Health and the Natural Environment | Health and the Environment in the Southeastern United States: Rebuilding Unity: Workshop Summary | The National Academies Press." http://www.nap.edu/read/10535/chapter/6. 2016.
[65] Ibid.

each of these letters represents a distinct population with its own health concerns. Furthermore, among lesbians, gay men, bisexual men and women, and transgender people, there are subpopulations based on race, ethnicity, socioeconomic status, geographic location, age, and other factors. Although a modest body of knowledge on LGBT health has been developed, these populations, stigmatized as sexual and gender minorities, have been the subject of relatively little health research."[66]

The Institute of Medicine concluded the study by offering recommendations including "the committee believes that building the evidence base on LGBT health issues will not only benefit LGBT individuals but also provide new research on topics that affect heterosexual and non-gender-variant individuals as well. Given the large number of areas in LGBT health in which research is needed, the committee formulated a research agenda that reflects those areas of highest priority. Within each of those areas, the conceptual frameworks identified above are evident as cross-cutting perspectives that should be considered. Figure 9 illustrates the interactions between the priority research areas identified by the committee and these cross-cutting perspectives. As noted above, although lesbians, gay men, bisexual men and women, and transgender people each are separate populations, they frequently are considered as a group. The primary driving force behind combining these populations is that they are non-heterosexual or gender nonconforming and are frequently stigmatized as a consequence."[67]

Figure 9 - Priority Research Area



Source: Institute of Medicine

[66] IOM (Institute of Medicine). 2011. The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding. Washington, DC: The National Academies Press.
[67] Ibid.

Best Practice Methods to Assess Social and Health Equity and SDOH

Healthy People 2020, the nation's health objectives for the current decade, defines health equity as the "attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities." Such goals aren't unfamiliar to public health practitioners—the field has a long and storied tradition of serving the most vulnerable, and bringing life-saving care to communities that would have otherwise gone without. And while the nation has come a long way in identifying, acknowledging, and addressing disparities in health and health care access, it is clear that eliminating disparities cannot be accomplished without seriously addressing the underlying social determinants of health, many of which are shaped and perpetuated by bias, injustice and inequality. Across the country, state and local public health agencies are taking up this call to action in earnest, integrating a health equity framework at an organizational level and using equity values to drive community health work."[68]

The American Public Health Association has highlighted several best practices in addressing social and health equity in their publication "Better Health through Equity: Case Studies in Reframing Public Health Work." Multnomoh County, Oregon developed an Equity Impact Review Tool, which has now come to be known as the Equity and Empowerment Lens (E&E Lens). The purpose of the Lens is to improve the quality of services and policy-making within the walls of community organizations and for the communities they serve by reflecting, analyzing, and integrating key Lens questions based on inclusion and justice.

When the state of Wisconsin singled out the Menominee Indian School District for improvement, local officials began digging deeper into the reasons behind the district's poor academic achievement and high dropout rates. A closer analysis revealed that the dropout crisis was actually a public health crisis. Poor health outcomes and risky health behaviors, such as teen pregnancy, obesity and alcohol use, were making it difficult for Menominee youth to excel and stay in school. On the flip side, not having a high school diploma dramatically increased tribal members' chances of a lifetime of disease and disability, as well as premature mortality. In fact, the scientific literature is increasingly pointing to educational attainment as a key factor in good health across the lifespan and one of the most promising levers available to public health professionals and their community partners.[69]

Using strategies from their Bridges out of Poverty training, the Community Engagement Workgroup created a "grid" that matched the County Health Ranking data with agencies that were working on initiatives related to specific indicators. Promoting accountability with individual initiatives, the workgroup looked at how efforts are based on seven principles: (i) promoting patient- and client-centered care; (ii) self-management of health conditions or

[68] American Public Health Association (2015). "Better Health Through Equity: Case Studies in Reframing Public Health Work." Introduction.
[69] Ibid. p. 14

health behaviors; (iii) linking community resources; (iv) breaking down barriers to support and use of resources; (v) improving access to community resources; (vi) promoting traditional beliefs and values; and (vii) integrating trauma-informed principles. Their cross-sector approach has resulted in graduation rates increasing from 68 percent to 93 percent.

The Virginia Department of Public Health has created a "Health Opportunity Index" (HOI) in order to implement a health equity perspective across the state. The HOI is a tool designed to identify and analyze the social and economic factors associated with life expectancy and pinpoint policy levers that can be instrumental in expanding health opportunities and moving toward health equity. The HOI consists of 10 indicators:

1. Education
2. Environmental hazards (as designated by the U.S. Environmental Protection Agency)
3. Affordability of transportation and housing
4. Household income diversity
5. Job participation
6. Population density
7. Racial diversity
8. Population churning (people moving in and out of a community)
9. Material deprivation
10. Local commuting patterns

The indicators are used to generate statewide color-coded maps that show the geographic distribution of communities with high health opportunities and those with low health opportunities.

The HOI is used in conjunction with a community engagement strategy using the community-based participatory approach. When used in communities, an asset mapping activity is used to identify community strengths as well as a "visioning" session to help residents "get excited about what the community could be and to help those who felt hopeless realize there was still hope for the community." Soon after, work includes developing a survey to gather information on what residents believed to be the community's priority health issues.

The Mosby Community Health Connection also launched a "photovoice" project to address the issue of youth engagement. During the project, local middle school students took photos of what they believed to be barriers to good health. Their photos captured images such as a rundown house, a convenience store where the only healthy foods were canned vegetables, and a recreational facility for young children that had little to offer to adolescents. The photovoice project was a success and eventually led to the launch of the Youth Health Equity Leadership Institute, which engages youth in developing leadership skills and in creating or improving health opportunities in Mosby Court. Its curriculum covers not only health equity and social determinants but racism, conflict resolution, advocacy, community organizing and assessment, critical thinking, and much more.

The shift toward health equity at the Colorado State Health Department began in the late 2000s within the department's tobacco use prevention unit. At the time, tobacco prevention staff members were taking a deeper look into why the state's progress in narrowing tobacco-related disparities seemed to be at a standstill. The analysis led to the formation of the Social Determinants of Health Workgroup and to study and pull from successful equity models already in action, with the eventual goal of building an equity model of their own. The result of the workgroup's efforts is the Colorado Health Equity Model: An Explanatory Model for Conceptualizing the Social Determinants of Health, which is now being used to guide the agency's overall health equity work.

A key component of the model is the Maternal Child Health (MCH)-inspired life course perspective, which maintains that during critical periods of a person's life, such as infancy, childhood, adolescence, the childbearing period, and the elderly years, specific determinants, experiences or exposures can have long-term implications. According to this perspective, it is during these particular times that intervening with education, support and resources can be especially pivotal and can set a course toward a healthier lifelong trajectory.

The conceptual model, designed to better illustrate the connection between the social determinants of health and health disparities, comprises five interconnected components:

1. National influences, such as government policies and cultural norms
2. The life course perspective, which spans the period from pregnancy to older age
3. The social determinants of health, such as income, education, air quality, political influence and racism
4. Health factors, such as nutrition, tobacco use, substance abuse and insurance coverage
5. Population outcomes, such as quality of life, mortality and life expectancy.

The model is designed to help public health practitioners broaden their perspective—regardless of their programmatic area—from conventional health risk factors to the more encompassing social and economic conditions of communities. In other words, the model compels practitioners to not only examine disparate health behaviors and risk factors, but to ask why certain populations are more vulnerable to those behaviors and factors in the first place.

Also among the Colorado State Health Department's new equity tools is its Equity and Empowerment Lens, which is used for measuring internal inequities in services, policies, practices, and procedures. The lens is a modified version of one developed by the Multnomah County Health Department in Oregon in 2010. Like the Multnomah County lens, the Colorado lens is based on principles of social justice and helps expose how histories of racism, oppression, and bias contribute to poor health; it also assists in determining whether public health activities will negatively or positively impact communities already struggling with health inequities.

Using the equity approach, the Colorado State Health Department also created the Colorado Health Indicators tool, which offers a variety of information at the county, regional, and state levels. The tool is used in Colorado's Health Assessment and Planning System, in which a standardized process is used to help local public health agencies meet mandated assessment and planning requirements. Navigating the indicators system, users can view and compare data on a number of social and economic indicators such as poverty, education, housing, access to recreation and healthy food, political influence (as defined by the numbers of registered and active voters in a given community), and violence.

After receiving a Community Transformation Grant from the Centers for Disease Control and Prevention, the Texas Department of State Health Services learned that after people received training on health equity, that their perspectives toward racism and inequality changed dramatically. The first day of the two-day training included education, awareness building and creating a common language for health equity. The second day focused on operationalizing health equity goals and building the capacity to sustain equity work after the grant was over and how to apply an equity lens to public health work.

Post-training, the number of respondents who agreed that racism and discrimination were major problems affecting a person's health rose by more than 10 percentage points. More respondents agreed that the health care system treated patients unfairly based on their race, ethnicity, gender, education level or income, and prejudice and discrimination were the reasons most often cited for differences in life expectancy. The percentage of respondents who believed that a person's skin color affects the quality of the health care he or she receives rose from 47 percent pre-training to 74 percent post-training.[70]

The Connecticut Health Equity Index is a community based electronic tool that profiles and measures the social determinants (including the social, political, and environmental conditions) that affect health and their correlations with specific health outcomes. The index also generates community-specific scores and GIS maps. Moreover, the index provides direction for collecting additional qualitative – the narrative of those experiencing or witnessing health inequities. The narrative may be collected from interviews or recorded through media using photos, video and audiotaping.[71]

The index provides community-specific scores on seven social determinants of health and thirteen health outcomes, the correlations between them, and GIS maps that illustrate community-specific scores. Scores range from one to ten, with a 10 being the best possible score. Each social determinant of health and each health outcome score is calculated by considering several types of data. A sample listing of the social determinants and health outcomes for a given Connecticut municipality is included below in Table 4:

[70] American Public Health Association (2015). "Better Health Through Equity: Case Studies in Reframing Public Health Work."
[71] http://www.cadh.org/health-equity/health-equity-index.html

Table 4 -Health Index, Sample Connecticut Municipality

Social Determinant Score

2 LOW

1 = LOW 10 = HIGH

Social Determinant	Score
Civic Involvement	1
Community Safety	1
Economic Security	2
Education	2
Employment	3
Housing	3
Environmental Quality	4

Health Outcome Score

3 LOW

1 = LOW 10 = HIGH

Health Outcome	Score
Infectious Disease	1
Childhood Illness	1
Renal Disease	2
Mental Health	2
Health Care Access	2
Liver Disease	2
Life Expectancy	3
Perinatal Care	3
Accidents/Violence	3
Diabetes	3
Cardiovascular	3
Respiratory Illness	4
Cancer	5

Source: Connecticut Health Equity Index

King County, Washington has a rich history of dedication to equity and social justice, dating back to the early 1990s. In light of this history, and building on previous work to measure equity and social justice, the Determinants of Equity Baseline Project commenced in July 2014 with the intent of using measurement to deepen the understanding of equity across King County. Originally, the research team sought to establish a baseline of community equity conditions across King County by which future performance could be measured. However, the research team realized that first a compendium of indicators and data sources that could measure the determinants of equity was needed. Therefore, the project centered on identifying potential measures and underlying data that could be used to understand the landscape of 13 out of 14 determinants. Research on the determinant *"Equity in County Practices"* was omitted from this project. The steering committee agreed this determinant was outside the project scope because there are several other parts of the county organization already working to advance internal equity and social justice, including a group specifically focused on addressing equity in workforce and workplace issues.

The methods used to identify the Determinants of Equity included: interviewing data informants; researching peer jurisdictions & practitioners; gathering and analyzing data; convening a steering committee; and vetting the determinant indicators and collecting and analyzing data with county equity and social justice and measurement experts. The study identified and measured 67 equity and social justice indicators of which 21 were identified as "top tier" indicators, suggesting that they are drivers of other indicators and outcomes.

The findings of the study echoed previous research findings that race, place, and income impact quality of life in King County. People of color and those who are low-income persistently face inequities in key educational, economic, and health outcomes. The study strongly recommended creating a theory of change (TOC) to guide the intervention work in King County. King County uses a visual "stream" metaphor to frame its work on equity and social justice. The stream is a visual reminder that inequities in outcomes have their start in "upstream" policies and practices that influence people's access to power and resources. The stream can be used to help illustrate a theory of change with measureable indicators. The basic premise of a TOC is established in the stream by defining the flow of outcomes, from upstream societal level, to mid-stream community-level and down to the individual/family level. The TOC implicit to this model is that working on equity and social justice at the uppermost part of the stream (societal level) impacts downstream outcomes (individual and family level). Figure 10 illustrates the "Health Stream" concept.

Figure 10 - King County Healthy Stream Social Equity Model

Source: King County Determinants of Equity Project

Recommended by the Centers for Disease Control, Figure 11 outlines the phases of a Social Determinants of Health Initiative.[72]

[72] Centers for Disease Control (Atlanta) 2008. "Promoting Health Equity A Resource to Help Communities Address Social Determinants of Health." P. 33

Figure 11 - Phases of a Social Determinants of Health Initiative

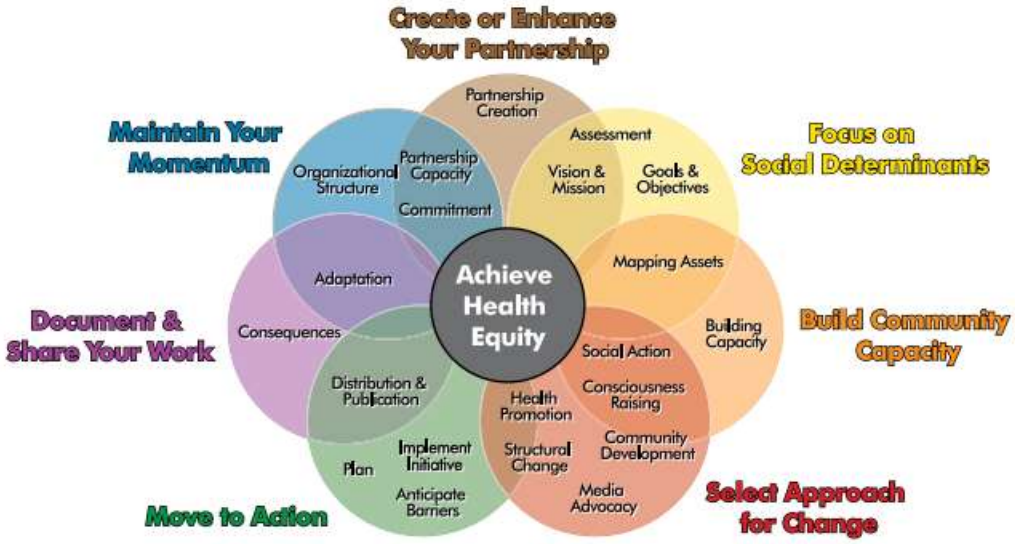


Figure adapted from Brownson et al, 2003 and Green et al, 1991.

Source: Centers for Disease Control

The phases of partnership development include:

1. Create or enhance your partnership - The first step toward creating a successful partnership is to assemble a group of interested community members and organizations to discuss ideas and concerns for the community. You might wish to invite others to join your efforts, particularly those who have insight into or experience harm from the political, social, economic, and environmental conditions in your community, outside of your traditional networks. This should include developing partnership principles to create commitment that all members will seek, as a partnership, to create initiatives that build on the unique strengths and assets of the local community. To do so, all partners agree to respect the beliefs and cultural norms of others and to build trust and mutual respect to ensure that programs will be maintained and enhanced over time.[73]

2. Focus on Social Determinants - this includes deciding what to assess including mortality/morbidity data, behavioral factors, and social indicator data. Table 5 illustrates the CDC suggested methods of gathering information to support a social determinants analysis.[74]

[73] http://ctb.ku.edu/en/table-of-contents/overview/models-for-community-health-and-development/social-determinants-of-health/main
[74] Ibid.

Table 5 - Applying Assessments to Different Types of Social Determinants[75]

Method	Context	Example measures
Review of existing data	**Social**	> Crime rates. > Housing patterns. > Law enforcement policies.
	Economic	> Poverty rates. > Local tax dollars spent on health, education, transportation, etc. > Policies on government spending.
	Environment	> Land-use policies (e.g., commercial, residential, parks). > Industry standards (e.g., pollutants). > Maintenance policies and procedures (e.g., trash, playground equipment).
Surveys, qualitative interviews, focus groups, appreciative inquiry, concept mapping	**Social**	> Perception of racism and discrimination. > Perception of a sense of community. > Feeling safe from interpersonal crime.
	Economic	> Perception of job availability. > Perception of local businesses' financial contributions to the community. > Attitude toward policies on public spending.
	Environment	> Knowledge of environmental hazards in the community (e.g., pollution, illegal dumping). > Perception of access to places and resources to maintain health. > Attitude toward policies related to the environment (e.g., pollutants).
Brainstorming	**Social** **Economic** **Environment**	> Community list of priority concerns. > Perception of strengths and weaknesses of previous efforts to address concerns. > Identification of innovative ways to address concerns.
Photovoice	**Social** **Economic** **Environment**	> Pictures of people, places, or events that can be used to describe or tell a story about the community, such as: • People talking or greeting one another; people arguing or acting hostile to one another. • Closed schools or businesses, building remodeling, or construction. • Trees, art or cultural decoration; abandoned cars or litter.
Community audits	**Social** **Economic** **Environment**	> Documentation (e.g., checklists, inventories) of observations of people, places, equipment, maintenance, or aesthetics in the community environment, such as: • People engaging in physical activities; people driving in cars. • Absence of grocery stores, supermarkets, and produce markets; presence of fast food restaurants and convience stores. • Parks with paved, marked, multi-use trails; playgrounds with broken swings or rusty equipment.
Health impact assessment	**Social** **Economic** **Environment**	> Existing evidence: published reviews, gray literature, and views and opinions of people and organizations affected by the issue. > Identification of health relevance of a policy or project of interest. > Estimation of the size of health impact of the policy or project of interest. > Identification of key health issues and concerns.

[75] http://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/tools/pdf/sdoh-workbook.pdf

3. Build Community Capacity – It is important to take an inventory of the individual, organizational and structural resources that influence your partnership's capacity to carry out its activities. The partnership should identify a vision and mission for the partnership. This also includes creating an asset map of all community assets and resources that exist in the community and a shared language of how social determinants impact health in the community. Once people have a common understanding, they can work together to make changes that will impact health.[76]

4. Selecting Your Approach to Create Change – There are six approaches to changing community conditions that others have found useful: consciousness raising, community development, social action, health promotion, media advocacy, and policy change. The best approach depends on what your partnership wants to accomplish and your comfort level with the strategies used in each approach. Your partnership may feel overwhelmed by the wide range of ways to address the social determinants of health inequities in your community. Consider this an asset rather than a barrier, because it allows you to try a variety of approaches to find out what works best for your partnership and your community. If possible, use multiple approaches to increase the likelihood of reaching different groups in your community. Document your decision-making process to develop support for the selected approach. Remember to consider new partners who can support your use of different approaches. Be willing to modify your approach as you track your successes and challenges.

5. Moving to Action - An action plan is important not only to keep your partnership on track toward meeting its goals but also to demonstrate to community members and other stakeholders that you are making tangible progress toward improving social, economic, and environmental conditions. Keep in mind, however, that you may need to modify your action plan to meet changing conditions in your community over time. An action plan should not be viewed as a static document. To be effective, an action plan should include the following key elements:
    - Your partnership's goals and objectives.
    - Who is responsible for the completion of activities.
    - The time frame for completion of activities.
    - How you will assess progress.
    - How you will assess impacts and outcomes.[77]

6. Evaluating Your Progress - Evaluation questions, tools, and methods help you track your progress and organize the information you collect. Identifying and organizing the evaluation at the beginning of your initiative can ensure that the right questions are asked and the answers are documented along the way. The nature and complexity of your

[76] http://ctb.ku.edu/en/table-of-contents/overview/models-for-community-health-and-development/social-determinants-of-health/main
[77] Ibid.

initiative will help determine the types of evaluation your partnership chooses. it is important to link your evaluation activities to the specific data collected as part of your community assessment, including indicators of behavior; health; and economic, environmental, and social status in your community. To track changes in your activities as well as social determinants of health, you can include aggregate assessments of individuals (e.g., community-based surveys, existing surveillance data) and systemic social, economic, and environmental assessments.[78]

7. Maintaining Momentum - Eliminating inequities in the social determinants of health will likely require long-term commitment and the use of several approaches. With a variety of approaches, community partnerships allow their individual members to become involved in ways that work best for them. In addition, by mixing and phasing in various approaches, different partners can be engaged and energized at different times. Your partnership should consider flexibility one of the most important characteristics of its process. A willingness to adapt (e.g., to abandon strategies that don't work and to try new unconventional strategies) will help your group sustain its work over time and ultimately accomplish its goals.[79]

The National Research Council defines Health Impact Assessment (HIA) as "a systematic process that uses an array of data sources and analytic methods, and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects."[80]

HIA is different from a public health assessment, a health risk assessment, and an environmental impact assessment. HIAs are intended to inform deliberations on a specific proposal—legislation, proposed rulemaking, and project permitting, for example. They systematically assess the multiple influences on health that can occur as a result of social, economic, and environmental changes. HIAs also use a broad definition of health that includes physical and psychological health and general well-being. HIA is usually voluntary, though several local and state laws, including those in Alaska, support the examination of health impacts in decision-making, and a few explicitly require the use of the HIA.

An Environmental Impact Assessment (EIA) is both a decision-making process and a document that provides a systematic, reproducible, and interdisciplinary evaluation of the potential physical, biological, cultural, and socioeconomic effects of a proposed action and its practical alternatives. Proposed actions may include projects, programs, policies, or plans. In the United States, an EIA is called an Environmental Impact Statement or EIS.[81] The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental

[78] Ibid.
[79] Ibid.
[80] http://www.cdc.gov/healthyplaces/hia.htm
[81] http://energy.gov/nepa/downloads/citizens-guide-nepa-having-your-voice-heard

impacts of their proposed actions and reasonable alternatives to those actions. To meet NEPA requirements, federal agencies prepare an EIS.[82] EIA is a regulatory process, while HIA is a voluntary or a regulatory process that focuses on such health outcomes as obesity, physical inactivity, asthma, injuries, and social equity. HIA has been used within EIA processes to assess potential impacts on the human environment.

STAR (Sustainability Tools for Assessing and Rating Communities) is a Community Rating System built by and for local governments and the communities they serve. The STAR Community Rating System (STAR) is the first national certification program to recognize sustainable communities. Local leaders use STAR to assess their sustainability, set targets for moving forward, and measure progress along the way.

Released in October 2012, STAR represents a milestone in the national movement to create more livable communities for all. The rating system's evaluation measures collectively define community-scale sustainability, and present a vision of how communities can become more healthy, inclusive, and prosperous across seven goal areas. The system's goals and objectives provide a much-needed vocabulary that local governments and their communities can use to more effectively strategize and define their sustainability planning efforts. The intent of the rating system is to help communities identify, validate, and support implementation of best practices to improve sustainable community conditions. The STAR approach has seven goal areas:

1. Built Environment: *Achieve livability, choice, and access for all where people live, work, and play*
2. Climate & Energy: *Reduce climate impacts through adaptation and mitigation efforts and increase resource efficiency*
3. Economy & Jobs: *Create equitably shared prosperity and access to quality jobs*
4. Education, Arts & Community: *Empower vibrant, educated, connected, and diverse communities*
5. Equity & Empowerment: *Ensure equity, inclusion, and access to opportunity for all citizens*
6. Health & Safety: *Strengthen communities to be healthy, resilient and safe places for residents and businesses*
7. Natural Systems: *Protect and restore the natural resource base upon which life depends*

An eighth category, Innovation & Process, supports the evolution of sustainability practice by recognizing best practices and processes, exemplary performance, innovation, and collaboration in areas of regional priority. Each of the categories has a number of clear and objective outcomes designed to move a community toward a broader sustainability goal.[83] The categories of a sustainable community are outlined in Table 6.

[82] http://www.epa.gov/compliance/nepa/
[83] STAR Community Rating System Version 1.2 (2015)

Table 6 - Categories of a Sustainable Community

Built Environment	Climate & Energy	Economy & Jobs	Education, Arts & Community	Equity & Empowerment	Health & Safety	Natural Systems
Ambient Noise & Light	Climate Adaptation	Business Retention & Development	Arts & Culture	Civic Engagement	Active Living	Green Infrastructure
Community Water Systems	Greenhouse Gas Mitigation	Green Market Development	Community Cohesion	Civil & Human Rights	Community Health & Health System	Invasive Species
Compact & Complete Communities	Greening the Energy Supply	Local Economy	Educational Opportunity & Attainment	Environmental Justice	Emergency Prevention & Response	Natural Resource Protection
Housing Affordability	Industrial Sector Resource Efficiency	Quality Jobs & Living Wages	Historic Preservation	Equitable Services & Access	Food Access & Nutrition	Outdoor Air Quality
Infill & Redevelopment	Resource Efficient Buildings	Targeted Industry Development	Social & Cultural Diversity	Human Services	Indoor Air Quality	Water in the Environment
Public Spaces	Resource Efficient Public Infrastructure	Workforce Readiness		Poverty Prevention & Alleviation	Natural & Human Hazards	Working Lands
Transportation Choices	Waste Minimization				Safe Communities	

Source: STAR Community Rating System

Community Leadership Role(s) to Address Health/Social Equity and Disparities

The International City and County Management Association (ICMA) has found that without a strong commitment to social equity, local governments have moved only part of the way toward achieving true sustainability. The experience of American urban areas shows that inequality and social exclusion are not sustainable practices because they undermine the viability of communities. Thus, communities might have programs that protect the natural environment, reduce energy use, and address other aspects of sustainability, but without programs to promote social equity, they are not strengthening their social foundation for long-term viability.[84]

From their research, ICMA has identified several critical success factors to achieving sustainability. These include:

[84] Svara, James H., Watt, Tanya, and Takai, Katherine. Washington, DC. International City and County Management Association. (2011) "Local Governments, Social Equity, and Sustainable Communities Advancing Social Equity Goals to Achieve Sustainability."

1. Inclusive citizen engagement has played a critical role in improving the quality of public projects, improving relationships between the public and city government, and increasing the overall quality of life for community residents.
2. Formal and informal networks of service providers and stakeholders are needed to advance social equity goals.
3. Clearly articulating the importance of social equity in local government mobilizes support and resources.
4. A holistic approach to comprehensively serving the needs of the most marginalized groups in a community is critical to achieving social equity.
5. In local governments that are truly pursuing a holistic approach to sustainability, sustainability activities are dispersed throughout a number of departments in local governments. Formal sustainability offices rarely encapsulate all sustainability activities undertaken by the local government as a whole.
6. There are a number of organizing themes by which the objectives of sustainability and social equity can be achieved. In cases where there is a tradition of supporting other goals or where sustainability, climate change, or equity is a particularly politically sensitive topic, other organizing strategies can be successful in achieving desired outcomes.
7. Local governments can encourage the acceptance of certain initiatives (for example, affordable housing or housing that is universally accessible, green building, or an increased number of healthy food outlets in the community) by well-designed incentives that avoid unintended barriers to desired projects.
8. Targeted outreach and assistance are required to involve low-income households in energy conservation projects and other sustainability projects, thereby extending the benefits of these programs to persons in need.
9. The support of elected leadership for sustainability and social equity initiatives is crucial for the long-term commitment necessary to achieve positive results. In the absence of such leadership, resources may be redistributed to address other priorities, thereby diminishing the positive impact that sustainability programs might otherwise achieve.
10. Leadership on social equity–related initiatives can come from staff members in all areas of local government, and social service–oriented staff is required for success. Such initiatives can be pursued laterally and vertically.
11. Restoring the physical assets of the past in the downtown and neighborhoods to preserve history and cultural traditions provides a foundation for revitalization and new development in distressed neighborhoods.
12. Current performance metrics in social equity leave a considerable amount to be desired, and measures that integrate social equity with environmental and economic indicators in sustainability plans are often largely absent. Public health seems to be the area of social equity in which indicators are most developed.

The ICMA has also identified seven common elements of SMART growth, environmental justice and equitable development. These include:

1. Meaningful Community Engagement in Planning and Land Use Decisions

2. Promote Public Health and a Clean and Safe Environment
3. Strengthen Existing Communities
4. Provide Housing Choices
5. Provide Transportation Options
6. Improve Access to Opportunities and Daily Necessities
7. Preserve and Build on the Features that Make a Community Distinctive

In 2011, the Stanford Social Innovation Review published its first article on "Collective Impact," noting that large-scale social change requires broad cross-sector coordination, yet the social sector remains focused on the isolated intervention of individual organizations.[85] The authors found the nonprofit sector most frequently operates using an approach that they call *isolated impact*. It is an approach oriented toward finding and funding a solution embodied within a single organization, combined with the hope that the most effective organizations will grow or replicate to extend their impact more widely. Despite the dominance of this approach, there is little evidence that isolated initiatives are the best way to solve many social problems in today's complex and interdependent world. No single organization is responsible for any major social problem, nor can any single organization cure it. The problem with relying on the isolated impact of individual organizations is further compounded by the isolation of the nonprofit sector. Social problems arise from the interplay of governmental and commercial activities, not only from the behavior of social sector organizations.

As a result, they conclude that complex problems that are adaptive in nature can be solved only by cross-sector coalitions that engage those outside the nonprofit sector. On the other hand, some social problems that are technical in nature, where the problem is well-defined, the answer is known in advance, and one or a few organizations have the ability to implement the solution.

Shifting from isolated impact to collective impact is not merely a matter of encouraging more collaboration or public-private partnerships. It requires a systemic approach to social impact that focuses on the relationships between organizations and the progress toward shared objectives. And it requires the creation of a new set of nonprofit management organizations that have the skills and resources to assemble and coordinate the specific elements necessary for collective action to succeed.

The critical success factors for collective impact to succeed include:

1. *Common Agenda* - Collective impact requires all participants to have a shared vision for change, one that includes a common understanding of the problem and a joint approach to solving it through agreed upon actions.
2. *Shared Measurement Systems* - Developing a shared measurement system is essential to collective impact.

[85] Kania, John and Kramer, Mark. Stanford Social Innovation Review (2011). "Collective Impact."

3. *Mutually Reinforcing Activities* - Collective impact initiatives depend on a diverse group of stakeholders working together, not by requiring that all participants do the same thing, but by encouraging each participant to undertake the specific set of activities at which it excels in a way that supports and is coordinated with the actions of others.
4. *Continuous Communication* -Developing trust among nonprofits, corporations, and government agencies is a monumental challenge. Participants need several years of regular meetings to build up enough experience with each other to recognize and appreciate the common motivation behind their different efforts.
5. *Backbone Support Organizations* - Creating and managing collective impact requires a separate organization and staff with a very specific set of skills to serve as the backbone for the entire initiative. Coordination takes time, and none of the participating organizations has any to spare. The expectation that collaboration can occur without a supporting infrastructure is one of the most frequent reasons why it fails. The backbone organization requires a dedicated staff separate from the participating organizations who can plan, manage, and support the initiative through ongoing facilitation, technology and communications support, data collection and reporting, and handling the myriad logistical and administrative details needed for the initiative to function smoothly. Collective impact also requires a highly structured process that leads to effective decision making.

Three conditions must be in place before launching a collective impact initiative: an *influential champion*, *adequate financial resources*, and a sense of *urgency for change*. Together, these preconditions create the opportunity and motivation necessary to bring people who have never before worked together into a collective impact initiative and hold them in place until the initiative's own momentum takes over.

The most critical factor by far is an *influential champion* (or small group of champions) who commands the respect necessary to bring CEO-level cross-sector leaders together and keep their active engagement over time. It requires a very special type of leader, however, one who is passionately focused on solving a problem but willing to let the participants figure out the answers for themselves, rather than promoting his or her particular point of view.

Second, there must be adequate *financial resources* to last for at least two to three years, generally in the form of at least one anchor funder who is engaged from the beginning and can support and mobilize other resources to pay for the needed infrastructure and planning processes. The final factor is the *urgency for change* around an issue. Has a crisis created a breaking point to convince people that an entirely new approach is needed? Is there the potential for substantial funding that might entice people to work together? Is there a fundamentally new approach, such as using the production, distribution, and demand creation capacities of the private sector to reach millions of people efficiently and sustainably? Conducting research and publicizing a report that captures media attention and highlights the severity of the problem is another way to create the necessary sense of urgency to persuade people to come together.

Once the preconditions are in place, research suggests that there are three distinct phases of getting a collective impact effort up and running. Phase I, *Initiate Action*, requires an understanding of the landscape of key players and the existing work underway, baseline case for change, and an initial governance structure that includes strong and credible champions. Phase II, *Organize for Impact*, requires that stakeholders work together to establish common goals and shared measures, create a supporting backbone infrastructure, and begin the process of aligning the many organizations involved against the shared goals and measures. Phase III, *Sustain Action and Impact*, requires that stakeholders pursue prioritized areas for action in a coordinated way, systematically collect data, and put in place sustainable processes that enable active learning and course correcting as they track progress toward their common goals.[86]

[86] Hanleybrown, Fay., Kania John and Kramer, Mark. Stanford Social Innovation Review (2012). "Channeling Change: Making Collective Impact Work"

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Appendix D: Health Starts Where We Live, Learn, Work and Play (General Findings)

Vision of a Healthy Community

Citizens of Mat-Su who participated in the CHNA process, described their vision of a healthy community:

*A "healthy community" is connected, where people feel a sense of belonging, resulting in strong relationships that support one another and the community overall. A "**Healthy Mat-Su**" would be thoughtfully planned, offering all residents access to a full continuum of physical and mental health services, including safe parks and recreational opportunities, transportation, affordable housing, as well as healthy food and nutrition. Early education and high graduation rates would also contribute to low unemployment. Drugs would disappear, replaced by a desire to maintain a healthy lifestyle focused on prevention.*

In order to improve health and create a healthy community, we must not only focus on health status, we must also look at those things that impact health.

A ***healthy community***:

- Meets everyone's basic needs such as safe, affordable and accessible food, water, housing, education, health care, and places to play;
- Provides supportive levels of economic and social development through living wage, safe and healthy job opportunities, a thriving economy, and healthy development of children and adolescents;
- Promotes quality and sustainability of the environment through tobacco and smoke-free spaces, clean air, soil and water, green and open spaces, and sustainable energy use; and
- Places high value on positive social relationships through supportive and cohesive families and neighborhoods, honoring culture and tradition, robust social and civic engagement, and violence prevention."[87]

These factors that create a healthy community have a big impact on a person's ability to be healthy. If individuals and organizations work together to make changes, we can improve the quality of our lives.

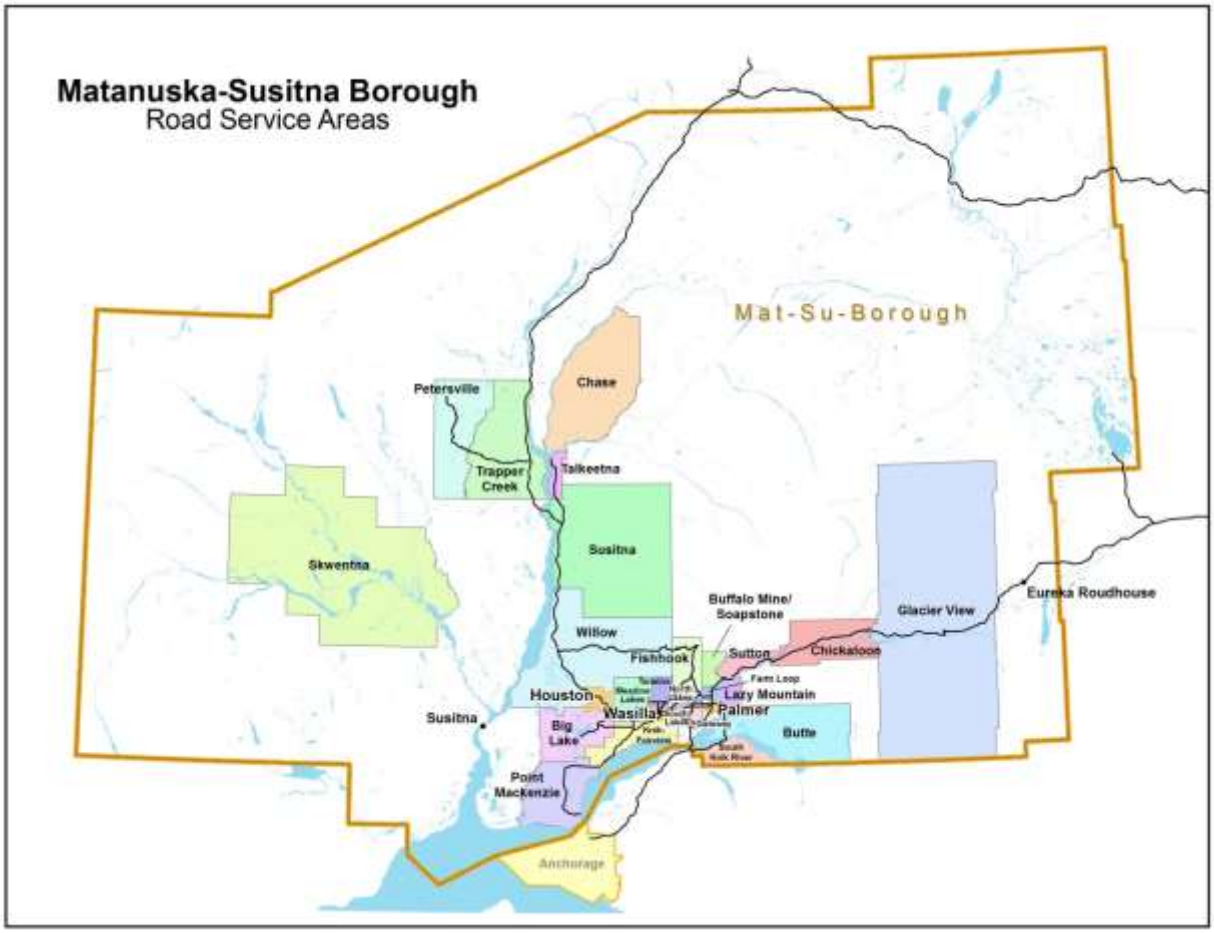
[87] http://www.apha.org/topics-and-issues/healthy-communities?gclid=CIL2qNfMhMwCFQ8vaQod_cYAag

Who We Are and Where We Live

Demographic Snapshot

With 27 individual communities, the Matanuska-Suskina Borough (Mat-Su) is located about 40 miles northeast of Anchorage and illustrated in Figure 12. Encompassing 24,682 square miles of land and 578 miles of water, the region is approximately the size of the state of West Virginia. Three incorporated cities comprise the core area: Wasilla, Palmer and Houston. The majority of the remaining Census Designated Places are located within 30 miles of Palmer or Wasilla. Talkeetna and Trapper Creek are the most distant communities from the economic center of the borough, 55 to 75 miles north of Wasilla.

Figure 12 - Mat-Su Borough Road Service Areas Map



Source: MSHF 2013 Community Health Needs Assessment

Regarding the demographic data that is interspersed throughout this report, there are six geographic clusters represented, along with Mat-Su Borough, Anchorage and Alaska. The six clusters and their sub-regions are listed in Table 7:

Table 7 - Demographic Area and Sub-Region Listing

Area	Sub-Regions
Alaska	• Entire state demographics
Anchorage	• Entire city demographics
Glenn Highway	• Buffalo/Soapstone • Chickaloon • Eureka Roadhouse • Glacier View • Lake Louise • Sutton Alpine
Knik Goosebay Road	• Knik/Fairview • Point MacKenzie
Mat-Su Borough	• Entire borough demographics
Palmer Area	• Butte • Farm Loop • Fishhook • Gateway • Knik River • Lazy Mountain • Palmer
Parks Highway	• Big Lake • Houston • Meadow Lakes
Upper Susitna Valley (including off road)	• Chase • Petersville • Skwentna • Susitna • Susitna North • Talkeetna • Trapper Creek • Willow
Wasilla Area	• Lakes • Tanaina • Wasilla

This demographic snapshot as outlined in **Table 8** provides a quick overview of demographic indicators for the Mat-Su Borough as it relates to Anchorage and Alaska.

Table 8 - Demographic Snapshot

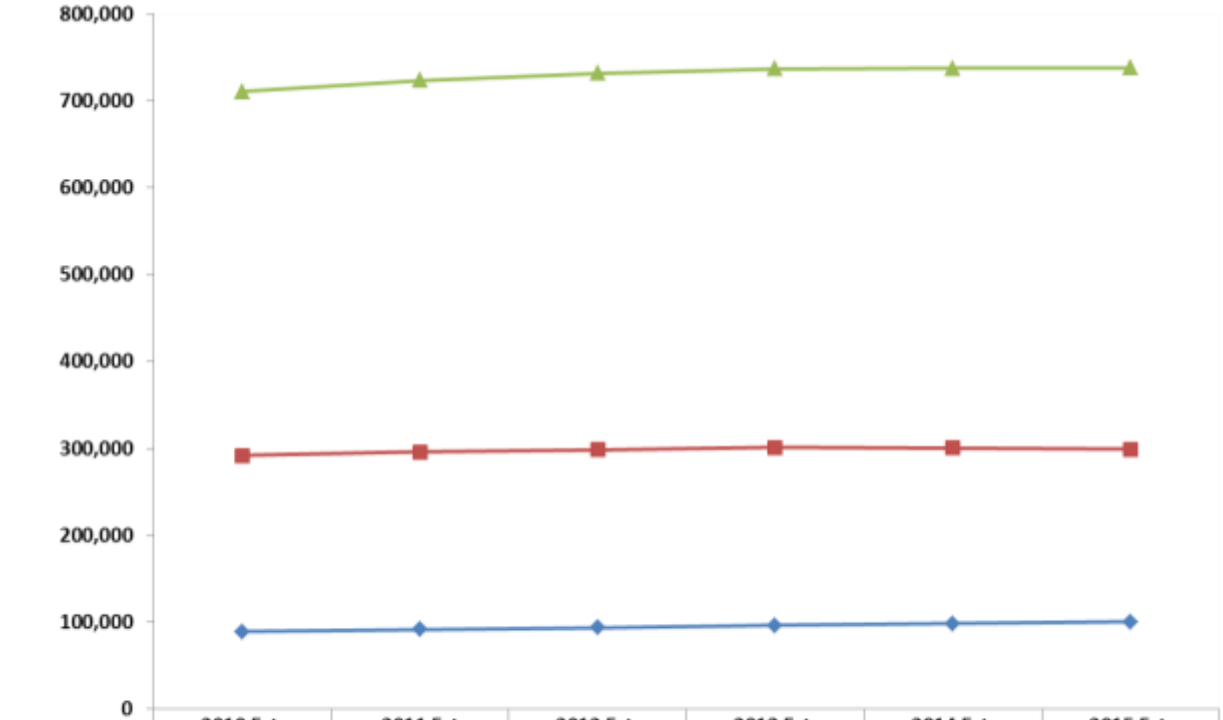
Indicator	Mat-Su	Anchorage	Alaska
Alaska Department of Labor and Workforce Development Population Estimate, 2015*	100,178	298,908	737,625
Population Change Since 2010 (%)*	12.57%	2.43%	3.86%
Median Age (years), 2015 Est.*	35.1	33.7	34.5
Number of Households, 2016 Est.**	33,891	93,874	271,691
Average Household Size, 2016 Est.**	2.73	2.59	2.62
Average Family Size, 2010-2014**	3.47	3.32	3.36
Total Population Living in Poverty (%), 2014 Est.**	10.7%	8.3%	11.2%
Unemployment Rate (seasonally adjusted) (%), 2015**	8.5%	5.3%	6.7%
Number of homeless, 2015***			1,956
Individuals with a Physical Disability (%), 2010-2014**	11.4%	9.9%	10.8%

Sources:
*Alaska Department of Labor and Workforce Development;
**U.S. Census;
***Mat-Su Coalition on Housing and Homelessness

Population

Figure 13 illustrates the population change for the Mat-Su Borough, Anchorage and Alaska, for the years 2010 through 2015, as reported by the State of Alaska Department of Labor and Workforce Development. As reported in the 2013 MSHF CHNA, Mat-Su Borough is the state's fastest-growing area and, as seen in the chart below, was estimated to surpass 100,000 residents in 2015. Between 2000 and 2015, Mat-Su Borough gained a little over 11,000 residents. Anchorage and Alaska also show positive population growth from 2010-2015, with Anchorage's estimated population increasing by approximately 7,000 or 2.4% and Alaska's population increasing by approximately 27,000 or 3.9%.

Figure 13 - 2010-2015 Estimated Population Trend by Mat-Su Borough, Anchorage and Alaska

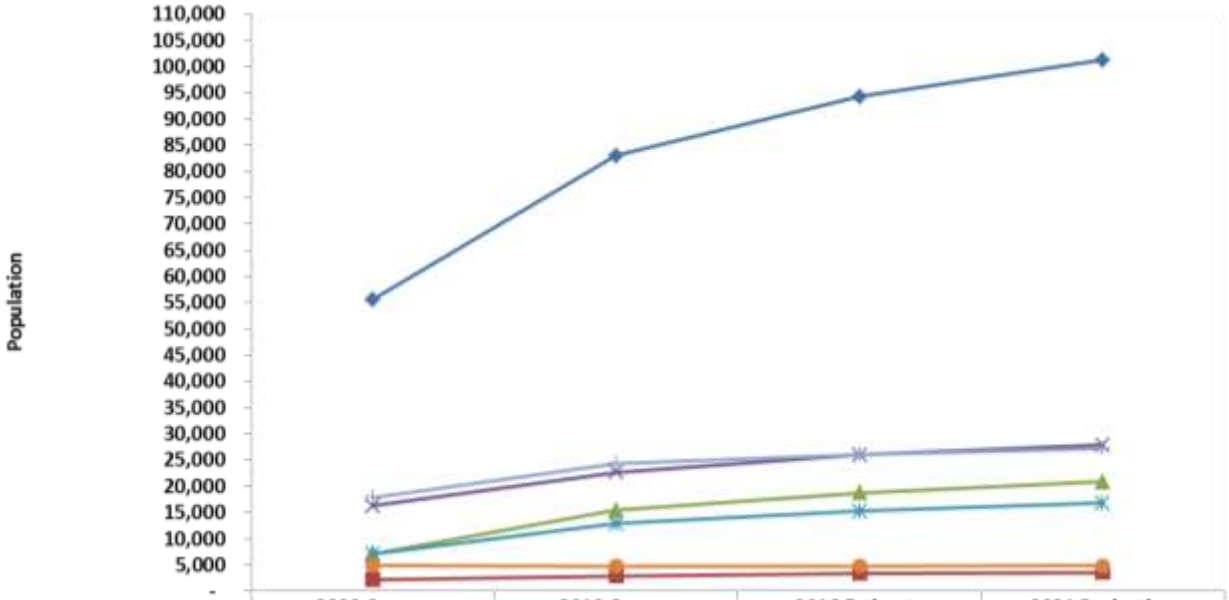


	2010 Est.	2011 Est	2012 Est.	2013 Est.	2014 Est.	2015 Est.
Mat-Su	88,995	91,721	93,685	96,022	98,377	100,178
Anchorage	291,826	295,908	298,373	301,046	300,366	298,908
Alaska	710,231	723,133	731,630	736,616	737,354	737,625

Source: State of Alaska Department of Labor and Workforce Development, Research & Analysis Section; U.S. Census Bureau

As reported by the Census Bureau, **Figure 14** illustrates the population change for the Mat-Su Borough as well as for cluster areas within the borough, namely Glenn Highway, Knik Goosebay Road, Palmer, Parks Highway, Upper Susitna Valley, and Wasilla for 2000-2021, as reported by the U.S. Census Bureau. Between 2000 and 2016, Mat-Su Borough gained almost 40,000 residents. Glenn Highway, Knik Goosebay Road, Palmer, Parks Highway, and Wasilla all show positive population growth from 2000-2021, with the largest percentage increase seen in Knik Goosebay Road (114.4%) for the years 2000-2010. Upper Susitna Valley had a loss of population when looking at the years 2010-2016 (-0.2%) and 2016-2021 (-2.4%).

Figure 14 - Population Trend by Mat-Su Borough, Borough Clusters, Anchorage and Alaska*



	2000 Census	2010 Census	2016 Estimate	2021 Projection
Mat-Su	55,581	83,036	94,259	101,252
Glenn Highway	2,227	2,883	3,427	3,608
Knik Goosebay Road	7,206	15,452	18,754	20,881
Palmer	16,288	22,655	26,008	27,863
Parks Highway	7,049	12,832	15,227	16,760
Upper Susitna Valley	4,931	4,812	4,801	4,835
Wasilla	17,880	24,392	26,042	27,305

Source: U.S. Census

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

As illustrated in **Table 9** with information from the U.S. Census Bureau, in 2016, there were an estimated 94,259 people living in Mat-Su Borough, with slightly less than one in ten residing in Palmer (7.8%) and Wasilla (9.0%). Between 2000 and 2010, the Mat-Su Borough, the cluster areas of Glenn Highway, Knik Goosebay Road, Palmer, Parks Highway, and Wasilla, along with Anchorage and Alaska saw the largest population growth, ranging from 11.1% in Anchorage to 114.4% in the Knik Goosebay Road cluster. Upper Susitna Valley cluster was the only area depicted in the table that showed a negative growth (-0.2% in 2010-2016 and -2.4% in 2016-2021), although it is showing a positive growth projection of 0.7% for 2016-2021.

Table 9 - Population and Population Change by Select Areas, Mat-Su Borough and Anchorage

2016 POPULATION	MAT-SU	GLENN HIGHWAY	KNIK GOOSEBAY ROAD	PALMER	PARKS HIGHWAY	UPPER SUSITNA VALLEY	WASILLA	ANCHORAGE	ALASKA
2000 Census	55,581	2,227	7,206	16,288	7,049	4,931	17,880	217,012	626,927
2010 Census	3,036	2,883	15,452	22,655	12,832	4,812	24,392	241,019	710,231
2016 Estimate	94,259	3,427	18,754	26,008	15,227	4,801	26,042	248,418	741,725
2021 Projection	101,252	3,608	20,881	27,863	16,760	4,835	27,305	254,924	766,660
Growth 2000-2010	49.4%	29.5%	114.4%	39.2%	82.0%	-2.4%	36.4%	11.1%	13.29%
Growth 2010-2016	13.5%	18.9%	21.4%	14.8%	18.7%	-0.2%	6.8%	3.1%	4.43%
Growth 2016-2021	7.4%	5.3%	11.3%	7.1%	10.1%	0.7%	4.9%	2.6%	3.36%

Source: U.S. Census

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

Most of the Mat-Su region is growing as shown in **Table 10** below.

Table 10 - Population Growth in Mat-Su and Sub-Regions

MAT-SU REGIONS	GROWTH 2000-2010	GROWTH 2010-2016	GROWTH 2016-2021
Mat-Su Borough	49.4%	13.5%	7.4%
Glenn Highway	29.5%	18.9%	5.3%
Knik Goosebay Road	114.4%	21.4%	11.3%
Palmer Area	39.2%	14.8%	7.1%
South Park Highway	82.0%	18.7%	10.1%
Upper Susitna Valley	-2.4%	-0.2%	0.7%
Wasilla Area	36.4%	6.8%	4.9%
Anchorage	11.1%	3.1%	2.6%
Alaska	13.3%	4.4%	3.4%

Source: U.S. Census Bureau, 2016
Note: Red signifies a decrease in population

As cited in the Mat-Su Borough Housing Needs Assessment, **Table 11** shows the Mat-Su population by generation based on the U.S. Census five year estimates. The highest percentage of the population are Millennials (28.8%) followed by Gen-X (27.9%) and Baby Boomers (23.2%).

Table 11 - Mat-Su Population by Generation

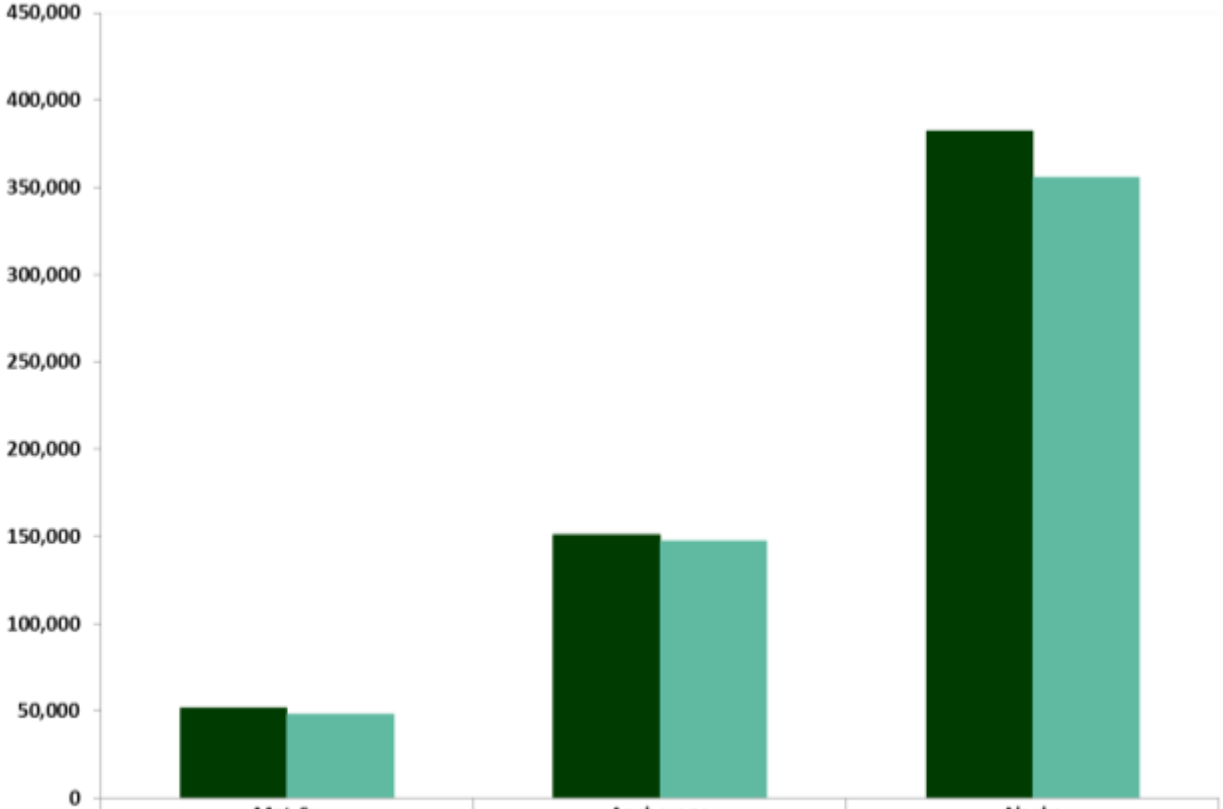
Silent Generation (70yrs or older)	Baby Boomers (50-69yrs)	Gen X (30-49yrs)	Millennial (10-29yrs)	Gen Z (9yrs or younger)
4,510 (5%)	20,736 (23.2%)	24,994 (27.9%)	25,803 (28.8%)	13,276 (14.8%)

Source: Mat-Su Borough Housing Needs Assessment, 2014

Gender

As reported in the State of Alaska Department of Labor and Workforce Development, **Figure 15** outlines the estimated 2015 breakdown of males and females for the Mat-Su Borough, Anchorage and Alaska. The Mat-Su Borough, Anchorage and Alaska all have slightly more males than females.

Figure 15 - 2015 Estimated Gender by Mat-Su Borough, Anchorage and Alaska

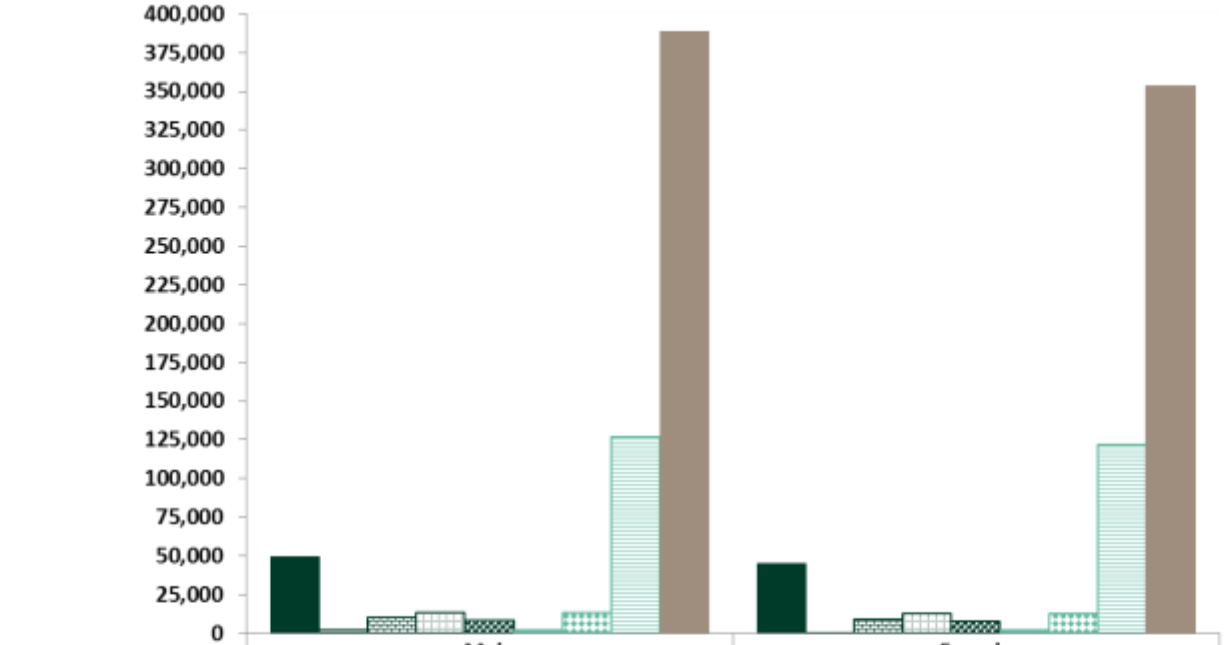


	Mat-Su	Anchorage	Alaska
Male	51,799	151,216	382,127
Female	48,379	147,692	355,498

Source: State of Alaska, Department of Labor and Workforce Development, Research & Analysis Section; U.S. Census Bureau

According to the U.S. Census Bureau, **Figure 16** illustrates the estimated 2016 breakdown of males and females for the Mat-Su Borough, as well as the select borough clusters of Glenn Highway, Knik Goosebay Road, Palmer, Parks Highway, Upper Susitna Valley and Wasilla. The Mat-Su Borough and select clusters within the borough all have slightly more males than females, ranging from a 327 difference between males and females in Upper Susitna Valley to a 3,945 difference between males and females in Mat-Su Borough overall.

Figure 16 - Gender by Select Areas, Mat-Su Borough and Anchorage*



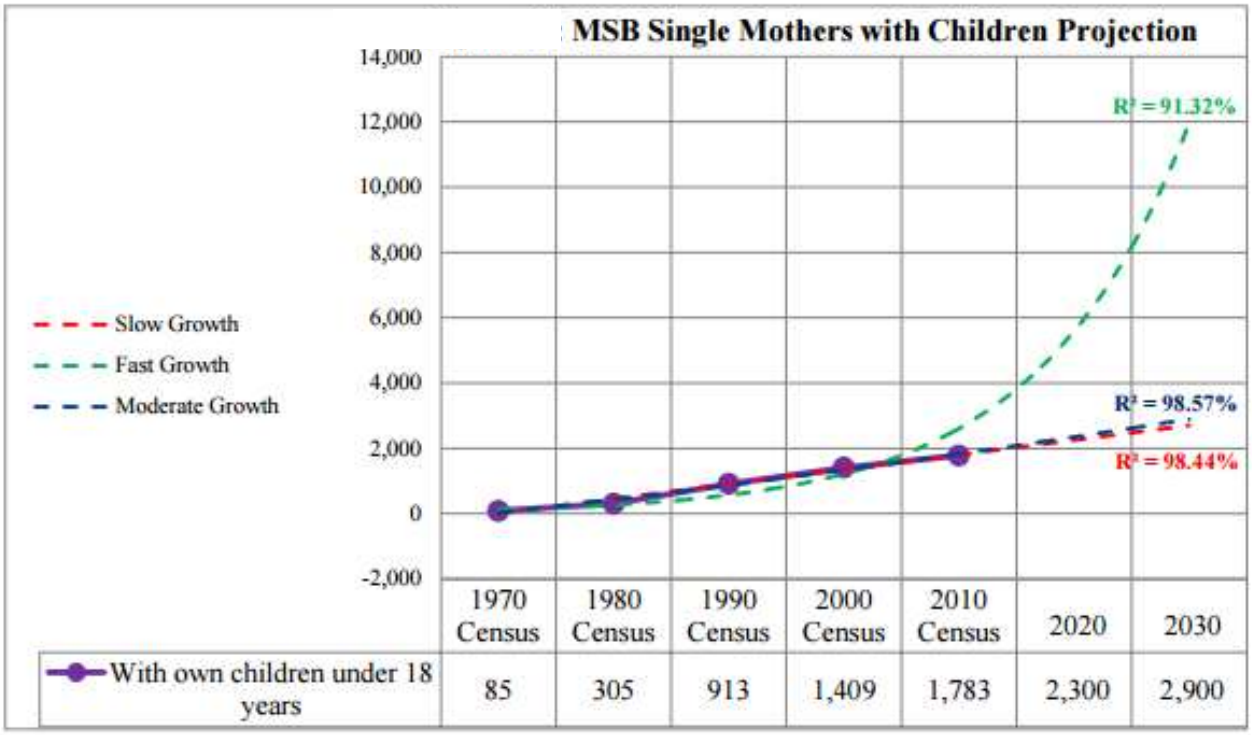
	Male	Female
Mat-Su	49,102	45,157
Glenn Highway	2,143	1,284
Knik Goosebay Road	9,853	8,901
Palmer	13,262	12,746
Parks Highway	7,998	7,229
Upper Susitna Valley	2,564	2,237
Wasilla	13,282	12,760
Anchorage	126,630	121,788
Alaska	388,492	353,233

Source: U.S. Census Bureau

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

As reported in the Mat-Su Borough Housing Needs Assessment, **Figure 17** illustrates the total number of single mothers with children from the 1970, 1980, 1990, 2000 and 2010 Census with projections for 2020 and 2030. The percentage of single mothers has been steadily increasing in the borough, and is projected to continue to increase in upcoming years.

Figure 17 - Mat-Su Single Mothers with Children Projection



Source: Mat-Su Borough Housing Needs Assessment, 2014

Almost half (49.1%) of Mat-Su residents are Male; 50.9% are female.

As reported by the US Census Bureau, **Table 12** shows that in Mat-Su, there are 1,148 more female headed households with one or more children under the age of 18 present than male headed households. These families are more likely to have incomes below the poverty level.

Table 12 - Single Parent Families by Poverty Level

	Number of Households	% of Households with Income in the Last 12 Months Below the Poverty Level
Male headed households with 1 or more children under 18 years present	1,106	17.2%
Female headed households with 1 or more children under 18 years present	2,254	44.0%

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-year Estimates

How Gender Impacts Health

As reported in the Alaska Behavioral Risk Factor Surveillance System Data, **Table 13** illustrates the demographic factors where a significant difference was observed for respondents who self-reported how gender impacts health for 2010-2014. For the majority of indicators, male respondents are less likely to have these selected chronic health conditions compared to females. However, female respondents are more likely to have a primary health care provider, as well as forgo medical care due to cost.

Table 13 - How Gender Impacts Health, 2010-2014

How Gender Impacts Health		
Where We Live	Male	Female
Access to doctor was not limited due to cost, past 12 months (2010-2014)	86.7%	79.5%
Have primary health care provider (2010-2014)	62.5%	73.8%
Health Status Impact (2010-2014)	Male	Female
Ever told have COPD (2010-2014)	56.5%	81.4%
Ever told have diabetes(2010-2014)	91.5%	60.0%
Currently have asthma (2010-2014)	6.2%	14.4%
Ever told have depression (2010-2014)	12.3%	24.0%
Positive mental health outlook (2010-2014)	73.4%	58.3%

Source: Alaska Behavioral Risk Factor Surveillance System Data

Gender and Being a Released Offender

There are more male offenders compared to female. This can be a challenge if a male has the primary income in a household and if a released offender is a single parent. Released offenders face challenges when seeking employment and housing after release. The Department of Corrections information in **Table 14** below illustrates the male and female offender population for Mat-Su, Palmer, Wasilla and Alaska for 2015.

Table 14 - Offender Population by Community, 2015

	Mat-Su	Palmer	Wasilla	Alaska
Male	1,734	390	1,344	4,405
Female	12	12	0	614
Total	1,746	402	1,344	5,019

Source: Department of Corrections

Gender and Health: Community Input

Focus group and interview participants identified a number of challenges for women including:

- Domestic violence;
- Single woman who are raising children sometime make choices due to low income that impact their ability to care for themselves.
- Lack of affordable child care.
- Paying for health care.
- Low wage earners living pay check to pay check.

Many of the focus group and stakeholder interview participants did not specifically discuss the relationship between gender and health. However, participants of several focus groups noted challenges faced primarily by women. Women are more often victims of domestic violence; professionals in different groups noted stories of their clients who came to Alaska seeking refuge from domestic violence situations or those who were dealing with domestic violence. These women fear being "found," and are reluctant to reach out to access services as a result.

Additionally, single woman who are raising children face several challenges that ultimately impact their ability to care for themselves, and their health status often suffers as a result. Lack of affordable child care impacts a woman's ability to work and provide adequate income, and the ability to get health insurance. Even if they have insurance, they may face high, out-of-pocket expenses, which impact their ability to access care. Any significant expense can result in the inability to pay rent and homelessness.

LGBTQ teens spoke passionately about how gender identity affects both health care and overall health. Participants expressed that they face discrimination in school and in the streets,

although school-based support groups are a helpful resource where they exist. They also shared that health professionals are often ill-equipped to provide support and information for their health questions and concerns, and recommended education for health professionals to foster inclusion.

"Discrimination affects people's health. It affects your ability to do things, get school work done, and just operate. It also affects eating habits and your entire life without noticing it." - LGBTQ teen

How Age Impacts Health

The World Health Organization states that "key stages in people's lives have particular relevance for their health. Ensuring that children have the best start in life – through good nutrition, immunization against vaccine-preventable diseases, and environments that enable them to be safe and physically active, establishes a solid base for good health and contributes to healthy behavior for years to come. As young people approach adulthood and their sexually active years, they confront new choices and dangers to their health. These dangers include alcohol consumption, illicit drug and tobacco use, risky sexual behavior, violence, and injuries (including those from road traffic accidents).

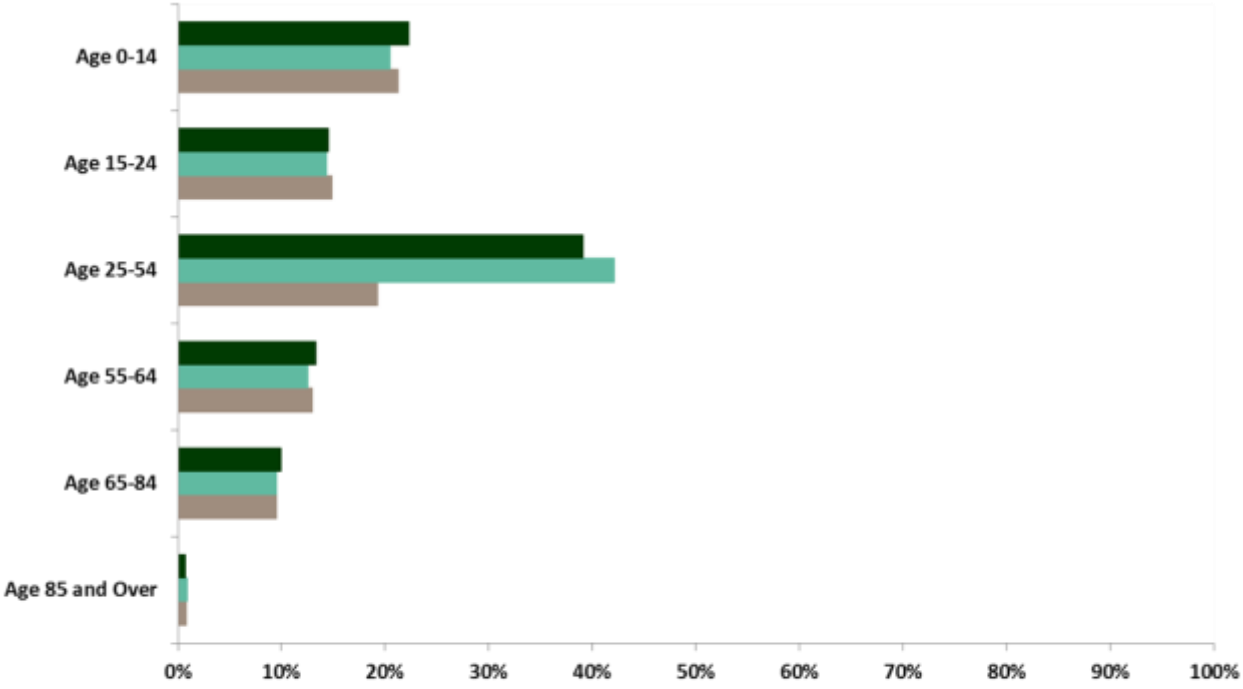
Pregnancy can be a particularly vulnerable time in a woman's life, when access to high quality, skilled health care, is of the utmost importance. A healthy lifestyle helps people maintain good health into old age."[88] This includes having a positive outlook, making healthful choices, being as active as possible both, physically and mentally, not smoking, eating nutritious food, practicing good hygiene, taking safety precautions, reducing stress and seeing a health care professional on a regular basis and following their recommendations for screening and prevention.

[88] "WHO/Europe | Life Stages." http://www.euro.who.int/en/health-topics/Life-stages/pages/Life-stages. 2016.

Age

When looking at the data from the State of Alaska Department of Labor and Workforce Development, Figure 18 illustrates that the Mat-Su Borough has a sizable middle-aged population as does Anchorage and Alaska. A little more than one-third of the population (Mat-Su 39.1%, and Anchorage 42.2%) fall within the age group 25-54. The smallest population percentage can be seen in the age group of 85 and older as less than 1.0% of the Mat-Su Borough, Anchorage and Alaska populations fall within this age group.

Figure 18 - Age by Select Areas, Mat-Su Borough and Anchorage

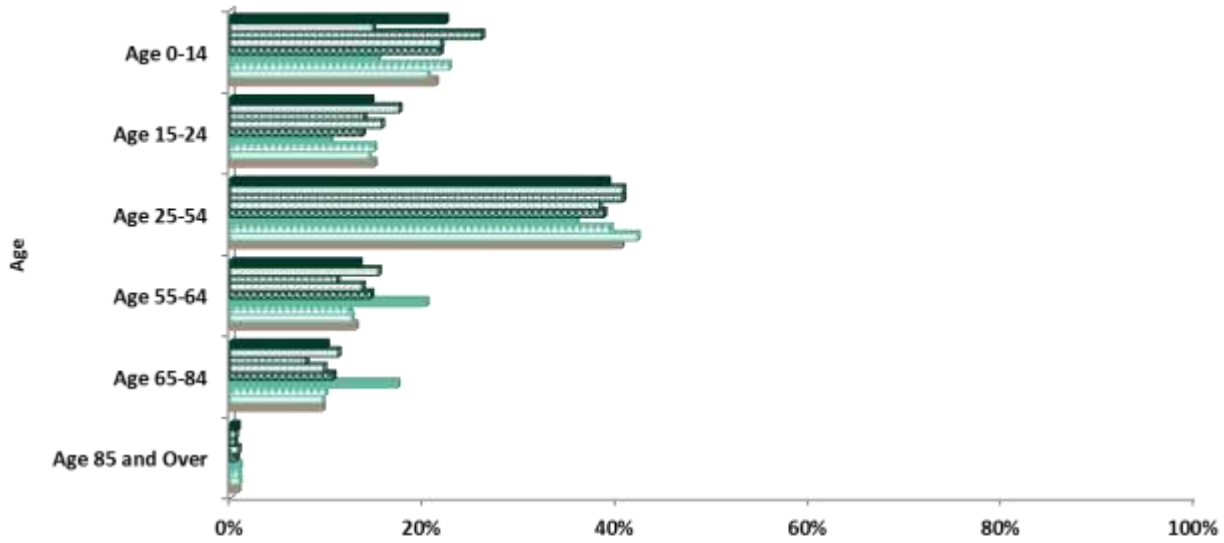


	Age 85 and Over	Age 65-84	Age 55-64	Age 25-54	Age 15-24	Age 0-14
Mat-Su	0.7%	10.0%	13.4%	39.1%	14.6%	22.3%
Anchorage	0.9%	9.5%	12.6%	42.2%	14.4%	20.5%
Alaska	0.8%	9.5%	13.0%	19.2%	14.9%	21.3%

Source: State of Alaska, Department of Labor and Workforce Development, Research & Analysis Section; U.S. Census Bureau

When looking at the data from the U.S. Census Bureau, **Figure 19** illustrates that the Mat-Su Borough has a sizable middle-aged population as seen throughout the borough as well as within the sub-regions. A little more than one-third of the population (Mat-Su-39.1%, Glenn Highway 40.7%, Knik Goosebay Road 40.7%, Palmer 38.2%, Parks Highway 38.7%, Upper Susitna Valley 35.8%, Wasilla 39.4% and Anchorage 42.2%) fall within the age group 25-54. The smallest population percentage can be seen in the age group of 85 and older as less than 1.0% of the Mat-Su Borough, borough clusters, Anchorage and Alaska populations fall within this age group.

Figure 19 - Age by Select Areas, Mat-Su Borough and Anchorage*



	Age 85 and Over	Age 65-84	Age 55-64	Age 25-54	Age 15-24	Age 0-14
Mat-Su	0.7%	10.0%	13.4%	39.1%	14.6%	22.3%
Glenn Highway	0.6%	11.2%	15.4%	40.7%	17.5%	14.8%
Knik Goosebay Road	0.5%	7.9%	11.1%	40.7%	13.9%	26.1%
Palmer	0.8%	9.7%	13.7%	38.2%	15.7%	21.9%
Parks Highway	0.6%	10.7%	14.6%	38.7%	13.7%	21.8%
Upper Susitna Valley	0.9%	17.3%	20.3%	35.8%	10.3%	15.3%
Wasilla	0.9%	9.8%	12.4%	39.4%	14.9%	22.6%
Anchorage	0.9%	9.5%	12.6%	42.2%	14.4%	20.5%
Alaska	0.8%	9.5%	13.0%	40.5%	14.9%	21.3%

Source: U.S. Census Bureau
**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

As reported in the Mat-Su Borough Housing Needs Assessment, Table 15 shows the household composition of seniors age 65 and older in Mat-Su for 1970, 1980, 1990, 2000 and 2010. The number of seniors in Mat-Su has continued to increase over the past several decades. In 2010, approximately one third (33.6%) of seniors age 65 and older were living alone, which is slightly more when compared to 2000 (32.7%).

Table 15 - Mat-Su Household Composition, Seniors (age 65+)

	1970 Census	1980 Census	% Change	1990 Census	% Change	2000 Census	% Change	2010 Census	% Change
Senior (65+) Households	189	552	192.06%	1,160	110.14%	2,587	123.02%	5,287	104.37%
In a family household	91	392	330.77%	689	75.77%	1,627	136.14%	3,257	100.18%
In a nonfamily household	98	160	63.27%	471	194.38%	960	103.82%	2,030	111.46%
Living alone	N/A	141	N/A	438	210.64%	846	93.15%	1,781	110.52%

Source: Mat-Su Borough Housing Needs Assessment, 2014

According to data reported in the Mat-Su Senior Services Environmental Scan, **Table 16** shows the current and projected senior service and infrastrucutre needs in Mat-Su. The need for home health, nursing homes, low income senior apartments, assisted living, memory care assisted living, hospice and adult day care is projected to continue to increase over the next decade.

Table 16 - Senior Service and Infrastructure Need Projections, Mat-Su

	Current	2010 Demand Estimate (2011 Report)	2015 Demand	2020 Demand	2025 Demand	2030 Demand
Medicare-Certified Home Health Care (Episodes)	490[a]	*Not Calculated*	581	821	1,072	1,245
Nursing Home Beds (Bed Need)	0	66	89	120	163	198
Skilled Nursing Care (Average Daily Census)	0	*Not Calculated*	12	12	12	12
Geriatric Care Management (Candidates)	0	1,004	1,089	1,515	2,364	3,275
Low-Income Apartments (Units) (Seniors 55+)	463 Units[b]	*Not Calculated*	720	913	1,083	1,236
Traditional Assisted Living Candidates	311 beds	318	428	579	910	1,273
Memory Care Assisted Living (Candidates)	149 beds	190	514	695	1,094	1,528
Hospice (Average Daily Census) (In-home setting)[e]	17	11	21	30	43	56
Adult Day Services (Daily Capacity)	78+ spaces	49	80	113	158	197
Primary Care (Providers)[c]	58	*Not Calculated*	53	56[d]	*Not Calculated*	*Not Calculated*

[a] The actual number of episodes is not publicly available, but CMS indicates there were 49 episodes per 1,000 beneficiaries in the Mat-Su in 2013 (all providers). Proportionally, this calculates to an estimate of 490 episodes.
[b] AHFC Senior Housing Office, Inventory List, Independent Living Homes/Facilities, 1/05/2016. Most of these units could be considered "affordable senior housing" options (not at market rate). For most properties, seniors must be at least age 55; however, some properties, require seniors to be age 62+. Seniors pay approximately 28 percent of their income toward rent. In some exceptions, HUD-202 properties (such as Sutton Annex and Sutton Manor) are geared to approximately 30 percent of income.
[c] Includes Internal Medicine, and General/Family Practitioners. Pediatricians and OB/GYN doctors not included.
[d]. 2019 estimate.
[e] Currently no hospice services are available in an institutional setting, such as a hospital, nursing home, or hospice house.

Source: Mat-Su Senior Services Environmental Scan, McDowell Group, 2016

According to data reported in the Alaska Behavioral Risk Factor Surveillance System **Table 17** shows the indicators where a statistically significant difference was observed based on age group. Younger respondents (age 18-24) are less likely to have a personal care provider, have a positive mental health outlook and are more likely to have asthma compared to older respondents. On the other hand, older respondents (age 65+) are less likely to be healthy and active and are more likely to have been told they have COPD, diabetes, high blood pressure or arthritis compared to younger respondents.

Table 17 - How Age Impacts Health, 2009, 2011, 2013 , 2014, 2010-2014, 2011 & 2013, 2011-2014, and 2013-2014

How Age Impacts Health					
Where We Live	**18-24**	**25-34**	**35-44**	**45-64**	**65+**
Have health insurance (2010-2014)	74.5%	72.4%	79.4%	80.7%	97.5%
Access to medical care not limited due to cost (2010-2014)	82.5%	80.7%	76.3%	84.1%	95.5%
Have a personal care provider (2010-2014)	47.8%	53.5%	63.7%	77.3%	86.2%
Satisfied with health care received (2013-2014)	97.4%	88.6%	95.9%	94.1%	99.3%
Where We Play	**18-24**	**25-34**	**35-44**	**45-64**	**65+**
Are a healthy weight (2010-2014)	46.3%	39.0%	30.0%	24.2%	25.0%
Health Status Impact	**18-24**	**25-34**	**35-44**	**45-64**	**65+**
Are healthy (2010-2014)	96.2%	92.0%	86.2%	79.5%	78.0%
Reports no Physical, Mental, or Emotional Limitations (2010-2014)	93.0%	82.9%	79.0%	68.5%	64.9%
Positive mental health outlook ((2010-2014)	57.8%	62.3%	64.0%	66.9%	79.1%
Thoughts of suicide or harming self (2011 & 2013)	0.1%	0.1%	4.7%	3.8%	3.7%
Ever told have asthma (2010-2014)	24.1%	6.2%	8.5%	9.0%	7.2%
Ever told had COPD (2011-2014)	2.8%	2.2%	5.6%	8.2%	15.1%
Non-Smoking Adults (2010-2014)	78.3%	69.8%	74.2%	75.7%	89.3%
Ever told had diabetes (2010-2014)	0.1%	2.5%	2.6%	10.6%	20.1%
Ever told had high blood pressure (2009, 2011, 2013, 2014)	4.3%	18.0%	18.1%	36.6%	62.8%
Ever told had arthritis	2.8%	9.4%	17.6%	38.4%	52.0%

Source: Alaska Behavioral Risk Factor Surveillance System Data

How Age Impacts Health – Millennials

A millennial is defined as a person reaching adulthood around the year 2000. For the purposes of this report, Mat-Su millennials were individuals younger than 35 years. This group showed the following differences from other generations:

- They rated their overall health status higher than older respondents.
- They rated the health status of the community significantly lower than older respondents.
- They rated the quality of life in Mat-Su lower than older respondents.
- They were less likely to be familiar with the term ACEs (Adverse Childhood Experiences).
- They were less likely to have private insurance, but more likely to have Denali KidCare or no insurance.
- They were more likely to ask a family member or friend for advice on how to handle a problem.
- They were less likely to have volunteered in the past year.
- They were less likely to be satisfied with present employment and level of education.

Source: 2016 Mat-Su Household Survey, McDowell Group, Inc.

How Early Care and Education Impacts Health

Early childhood is an important period in a child's life. Children need safe housing, food, medical care, proper educational stimulation and nurturing relationships for healthy development. The first years of life build the foundation for future cognitive, emotional, and behavioral skill development. Strong relationships with caregivers and stable, safe environments play a pivotal role in building a strong foundation for later growth and learning.

Factors that Impact the Health of Young Mat-Su Children

Income: In Mat-Su in 2014, there were an estimated 7,478 children under the age of 5 years, and approximately 12.9% lived below the poverty level (965 children).

Adverse Childhood Experiences: When significant adversity happens in the life of a child, it can significantly impact their health both as a child and adult. These adversities happen in the household or to the individual child. Adversity includes:

Household Dysfunction:

- Household member with mental illness
- Incarcerated household member
- Divorced or separated parents
- Witnessing domestic violence
- Household member addicted to substances

Child Abuse and Neglect:

- Physical neglect
- Emotional neglect
- Physical abuse
- Sexual abuse
- Emotional abuse

Young children are more likely than older children to be victims of child maltreatment.
In Mat-Su in 2015, there were 311 girls and 383 boys (total of 697) ages 0-4 with maltreatment allegations. For each population group, the number of children with maltreatment allegations remained steady between 2010 and 2014 and then rose between 2014 and 2015.

Immunizations

A key health practice during early childhood is having your child immunized. Many childhood diseases, which can lead to hospitalization, death, and lifelong consequences, only a few

decades ago are now preventable due to vaccines. Although immunizations are the single most important way parents can protect their children from serious disease, not all parents get their children immunized. According to the State of Alaska, Childhood Understanding Behaviors Survey, in 2010-14, 37.5% of Mat-Su mothers with 3-year-olds (1,650 women) had delayed or decided not to get vaccine shots or immunizations for their child.

Early Childhood Experiences: Community Input

Residents who participated in the focus groups and interviews stated that adverse childhood experiences and trauma impact both physical and mental health of Mat-Su children into adulthood. Residents also mentioned how without early care and education, children struggle to meet developmental and educational milestones, lowering high school graduation rates and literacy. They also stated that low immunization levels in Mat-Su create a situation where children are at risk for infectious diseases.

Several focus groups noted the need for:

- Additional child protection services
- Additional Head Start services
- Elementary school counselors
- "Safe routes" to school
- Safe places for kids to hang out
- Support services for families and children

How Being an Adolescent/Young Adult Impacts Health

The brain's final stage of crucial development occurs during puberty and early adulthood. During this time, young adults experience numerous transitions at school, at home, at work, and socially. Mental health problems often first present during this time, and the majority of mental, emotional, and behavioral disorders emerge before the age of 24 years. As a means of coping with prior trauma, youth may exhibit high-risk behaviors during adolescence and young adulthood. These high-risk behaviors include:

- Early initiation of alcohol use
- Use of alcohol, tobacco, non-prescribed prescription drugs, and illicit drugs
- High risk sexual behavior

Factors that Impact the Health of Mat-Su Youth and Young Adults

The following factors outlined in **Table 18** help to promote good mental and emotional health of Mat-Su Youth. This information is from the Youth Risk Behavior Survey – the percentage pertains to either traditional high schools in Mat-Su or alternative high schools such as American Charter Academy, Burchell High School, Valley Pathways, or Mat-Su Day School.

Table 18 - Protective Factors Among Mat-Su High School Students

Factor	Traditional High Schools	Alternative High Schools
Being able to seek help from an adult besides their parents	84.8%	83.8%
Feel that their teachers really care about them and give them a lot of encouragement	63.7%	80.1%
Feel that their community feels like they matter	48.5%	45.8%
Had at least one parent who talked to them about school everyday	42.3%	35.6%

Source: Alaska Youth Risk Behavior Survey, 2015

A significant number of Mat-Su youth face economic challenges that impact their physical and behavioral health. Slightly more than one-third (34.1%) of Mat-Su students are economically disadvantaged according to the Matanuska Susitna School District in 2014-2015. In 2015-2016, the School District identified 695 students who were experiencing homelessness. The School District defines homelessness as lacking a fixed, adequate, and regular nighttime residence. This may include a child who is homeless with his or her family or an unaccompanied youth who meets the eligibility criteria.

How Young Adulthood Impacts Health: Community Input

Adults and teens, as well as professionals participating in the focus groups and interviews, identified a need for the following information/services for youth and young adults:

- Information on
  - how to live a healthy lifestyle and make good choices
  - sexual identity and sexuality
  - basic health topics
  - effects of drug use
- Access supports to finish high school and move onto a career
- Foster care and both temporary and permanent housing for teens experiencing abuse and homelessness
- Access to nutritious foods
- Transportation to work and to recreational and social activities
- Access to peer support
- Affordable housing for young adults

Professionals reported that homeless youth face the following challenges to receiving physical and behavioral health care:

- Lack of transportation
- Long waiting times to get an appointment for behavioral health services
- Lack of family support or permission
- Lack of insurance coverage
- Lack of access to housing
- Lack of documents such as birth certificate, school records, etc.

How Being a Senior Impacts Health

Who are Mat-Su Seniors?

One in ten Mat-Su residents are seniors. Four out of ten Mat-Su seniors are women and six out of ten are men. As seen in **Table 19** below, the majority of seniors are in the 65-74 age range.

Table 19 - Mat-Su Seniors by Age

Age Group	Number of residents
65-74 years	6,892
75-84 years	2,430
85+ years	672
Total	9,994

Source: 2016 Mat-Su Senior Environmental Health Scan

As seen in **Table 20**, as Mat-Su seniors age their financial status decreases.

Table 20 - Mat-Su Seniors and Financial Status

Age	Median income	Home ownership	# of Residents living below the poverty level
65-74 years	$53,977	83%	8.7%
75-84 years	$32,592	79%	14.6%
85+ years	$26,875	54%	20.6%

Source: 2016 Mat-Su Senior Environmental Health Scan

The Health of Mat-Su Seniors

- 2010 life expectancy in Mat-Su: Males – 76.1 years and females 80.5 years
- 83% of Mat-Su seniors report good, very good, or excellent health
- 61% of Mat-Su seniors had no bad physical or mental health days in the past month

Factors that Impact Senior Health

According to the 2016 Mat-Su Household Survey, between 7-10% of seniors report the following barriers to seeking health care:

- Not knowing where to go for care
- Inability to get information because they had no computer
- Not being able to afford care
- Inability to get an appointment time that works
- Not having transportation

Mat-Su Seniors reported that they did not seek these services when they needed them in the last year because of cost:

- Dental services (13%)
- Healthcare services (7%)
- Prescriptions and medication (8%)

Some seniors are not getting the care they need in the community. This is evident because they are going to the emergency room for preventable conditions. Table 21 shows the leading primary diagnosis requiring emergency room care.

Table 21 - Leading Primary Diagnosis for Emergency Department Visits by Seniors

Preventable Admissions Italicized
1. Non-specific chest pain
2. *Chronic Obstructive Pulmonary Disease*
3. *Urinary tract Infection*
4. Other nervous system disorders
5. *Pneumonia*

Source: MSRMC, 2013

Senior Health Care Access and Health Status

- 97.0% have health insurance
- 4.5% unable to receive needed care due to cost
- 86.2% have a personal care provider

- 78.0% rate health as Excellent, Very Good or Good

Source: AK BRFSS, 2010-2014

Factors the Impact Senior Health: Community Input

When asked to identify the factors that impact health, seniors immediately identified where one lives and type of housing they have, along with the type of job they have and their income as important factors. Whether they have a supportive family or friends that can help them in time of need is a key factor, along with whether they feel safe in their neighborhood and have transportation. Other factors mentioned included age, whether they experience social acceptance or discrimination, have access to nature, access to information, and resources to help guide them to the resources they need. Stress also impacts health, along with having a good sense of humor and a sense of belonging.

"I wait for something that's throbbing, out of my control or my jaw is swollen before I go to a dentist anymore, because it's so cost-prohibitive." – Talkeetna Senior

How Age Impacts Health: Community Input

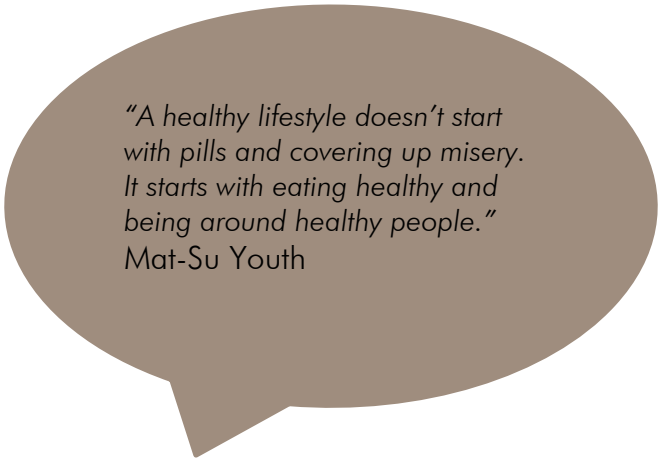
Focus group and stakeholder interview participants talked extensively about the needs of various life stages and how life stage impacts health. Children in Mat-Su are especially vulnerable; several groups described how adverse childhood experiences and trauma impact both physical and mental health status into adulthood. The need for additional child protection services was noted. Without early care and education, children struggle to meet developmental and educational milestones, lowering high school graduation rates and literacy. Low overall literacy rates make it challenging to understand how to live a healthy lifestyle, as well as access and navigate the health care system. Children who are not properly immunized are at risk for infectious diseases.

"Peer to peer support (is needed to help teens). There is nothing more valuable than the therapeutic value of someone being able to relate – someone that has been through it and can share their experience is very important. We are one of only a few states that doesn't recognize peer to peer support." – My House Teen

Obesity impacts children in families where opportunities for recreation, physical activity, and safe places to play are either unavailable or unaffordable in the local area. Several groups noted the need for additional HeadStart services, elementary school counselors, safe routes to school, safe places for kids, and support services for families and children.

Adolescence brings a different set of needs for youth. Adults and teens, as well as professionals, identified the need for information on how to live a healthy lifestyle and make good choices, understand sexual identity, sexuality, and access supports to finish high school and move onto a career. Foster care and both temporary and permanent housing for teens experiencing abuse and homelessness were identified, along with the need for additional health education, access to nutritious foods, jobs skills training, transportation to work and to recreational and social activities, education on the effects of drug use, and access to peer support when needed. Affordable housing was identified as a need for young adults, especially young professionals who are struggling financially to pay back student loans.

Seniors living in the Mat-Su have their own unique experience of health based on their life stage. The region boasts a number of excellent senior centers and services which provide social opportunities, as well as access to nutritious food and resource networks. However, seniors themselves, as well as other professional groups, noted that the senior support network in the Mat-Su has been unable to keep up with the increasing demand, due to both the aging of the population as well as the influx of new seniors who have relocated there because their children chose to move there. Focus group and interview participants noted the need for aging services overall, senior housing, home care services, transportation, support services to allow seniors to age in place, and resource/navigation services for seniors to help them understand the services and supports that are available to them to lead a healthy lifestyle.



How Culture Impacts Health

Culture is "the shared beliefs, values, behaviors, social forms and material traits of a group. The group may be based on country of origin, ethnicity, race, religion, or another trait. Most discussions of culture include all of these characteristics in the definition. Each culture has a set of health beliefs to which the majority adheres. Although broad generalizations can be made about a particular culture's beliefs, it is essential to recognize that every individual has a unique personal history, belief system, communication style, and health status. If providers generalize too much about how culture impacts individual health, this can lead to stereotyping, which in turn can result in misconceptions that impact treatment decisions and health outcomes. In order to care optimally for persons from different cultures it is important that the provider be aware of her/his own culture and of the "culture of medicine" within which she/he practices."[89]

Alaska Native People in Mat-Su and Health

Who Are Mat- Su Alaska Native People?

Alaska Native People make up 10.6% of the total population in Mat-Su. The Alaska Native People in Mat-Su come from many different tribes who have made Alaska home for hundreds of years. One of these tribes who have been located in Mat-Su since before the influx of non-Alaska Native People to Alaska is the Chickaloon Native Village.

Chickaloon Native Village

Nay'dini'aa Na', in Ahtna, meaning "the river with the two logs across it", is a vibrant, innovative, and culturally rich Ahtna Athabascan Tribe located in Sutton. Dating as far back as 1900, Chickaloon Village's ancestral territories have been subjected to large-scale resource extraction including coal, copper and gold mining, oil and gas drilling, and logging. The Glenn highway and railroad construction also negatively impacted Chickaloon's Tribal lands. Alcohol and diseases such as polio, tuberculosis, and the Spanish flu, brought in with development, almost wiped out this Tribe. During the 1930s through the 1950s, the United States government established and enforced a mandatory educational system intended to assimilate Alaska Native Peoples. Many of the Tribe's children were taken from their families and placed in boarding schools throughout the state.

As a response to the environmental and social injustice suffered by Chickaloon Village Tribal citizens, coupled with the passing of the Alaska Native Claims and Settlement Act (ANCSA) of 1971, the Chickaloon Elders re- established the Chickaloon Village Traditional Council (CVTC) in 1973, to reassert the Tribe's identity, cultural traditions, and economic self-

[89] Ibid.

sufficiency and to reunify their citizens. The mandate for the Council was: To restore our traditional worldview by rejuvenating our traditional Athabascan culture, values, oral traditions, spirituality, language, songs, and dance. Chickaloon Native Village gained federal recognition in 1973 and on November 24, 1982, according to Federal Register Vol. 58, No. 202. The Council is composed of nine-members who are tasked to reassert the Tribes identity and cultural traditions, and create economic self-sufficiency for the Tribe.

NAY'DINI'AA NA' KAYAX (Chickaloon Village Traditional Council)

CVTC has the following departments:

- Education Department including the Ya Ne Dah Ah School
- Environmental Stewardship Department
- Health and Social Services Department which provides behavioral health services, transportation, Elder's outreach program, and the Indian Child Welfare Program
- Justice department which includes a Public Safety Office and Tribal Courts
- Accounting and Administration
- Facilities & Housing (including a low-income housing development).
- Transportation, which includes road construction and improvements, Chickaloon Area Transit, and Emergency Planning.

Knik Tribal Council

The Knik Tribe has been referred to as a "melting pot" consisting of 10,000 Alaska Native and American Indian people living in the Mat-Su Valley who moved from all over remote Alaska. The community is shaped by the culture and diversity each brings becoming the strength of the Valley. This variety of background is part of what drives the Tribal Council's mission and focuses on creating opportunities for the whole community, not just the Tribal portion, because all are connected. The Knik Tribal Council is comprised of about 77 base members who are individuals who were originally recognized by the Department of Interior as

Knik Tribe and their descendants. The Council also allows membership for associate members, which is anyone who is at least one- quarter Native American blood, a U.S. citizen and a resident of the Upper Cook Inlet area.

The Knik Tribal Council offers a variety of programs and activities, from the annual fish camp, where kids learn to catch and harvest salmon, and beading and sewing classes for Elders, to job placement and training, housing, social and environmental services.

Due to its history and proximity, Knik enjoys a close relationship with the town of Wasilla, where the Tribal Council office is located. The Council recognizes opportunities for partnering with local nonprofits, other organizations, businesses and schools as crucial to improving the lives of Tribal members.

The Tribe's partners benefit from the access the Tribe has to unique streams of funding, while the Tribe builds capacity and professional development, and raises awareness for the needs of local people. Through these partnerships, the Tribal Council has begun to address issues such as homelessness, unemployment and keeping kids in school. Knik is passionate about growing community and recognizes the value of working with others to create a better tomorrow.

Medical Services for Alaska Native People in Mat- Su

Although Alaska Native people can access any medical services in Mat-Su, Southcentral Foundation, a tribal health organization, runs two clinics in Mat-Su in collaboration with the two tribal councils:

- Benteh Nuutah Valley Native Primary Care Center - Southcentral Foundation Benteh Nuutah Valley Native Primary Care Center provides primary care and behavioral health care for Alaska Native people living in Mat-Su. Southcentral Foundation opened this clinic in 2012 in partnership with the Chickaloon Village and Knik Tribal Council.
- C'eyitts' Hwnax Life House Community Health Center - This health center serves both Alaska Native and non-Native people from Palmer to Eureka, including the communities of Chickaloon, Glacier View, and Sutton/Alpine. Chickaloon Village Traditional Council and Southcentral Foundation operate this center collaboratively. The new clinic houses a wellness center with an exercise area, locker rooms with showers and space for health education classes.

Alaska Native Health Care Access and Health Status

- 89.8% have health insurance
- 13.0% were unable to receive needed care due to cost
- 67.3% had a primary care provider
- 81.7% rated their health as excellent, very good, or good

Source: AK BRFSS, 2010-2014

Alaska Native Peoples and Health: Community Input

Focus group participants mentioned how the Alaska Native people have gained increased access to care over the last few years, especially with the opening of the Life House Community Health Center and the Valley Native Primary Care Center.

The focus group participants were asked what other factors contribute to their health or help them make healthier decisions. The participants mentioned the following factors:

- Education
- Easier access to healthcare
- Money
- Self esteem
- Not doing anything out of the ordinary
- Awareness of one's personal identity
- Affiliation with organizations that promote healthy living
- Knowledge and education
- Peer pressure
- More parks in rural communities
- Sidewalks and pavements

The Tribal focus group participants went on to mention that the factors mentioned above impact the health of the community because it gives us time to bond with families and if we have access to those things, we have a healthier community that makes healthier choices. Participants of this focus group also commented that things needed in Mat-Su to help people have the opportunity to lead a healthy life include:

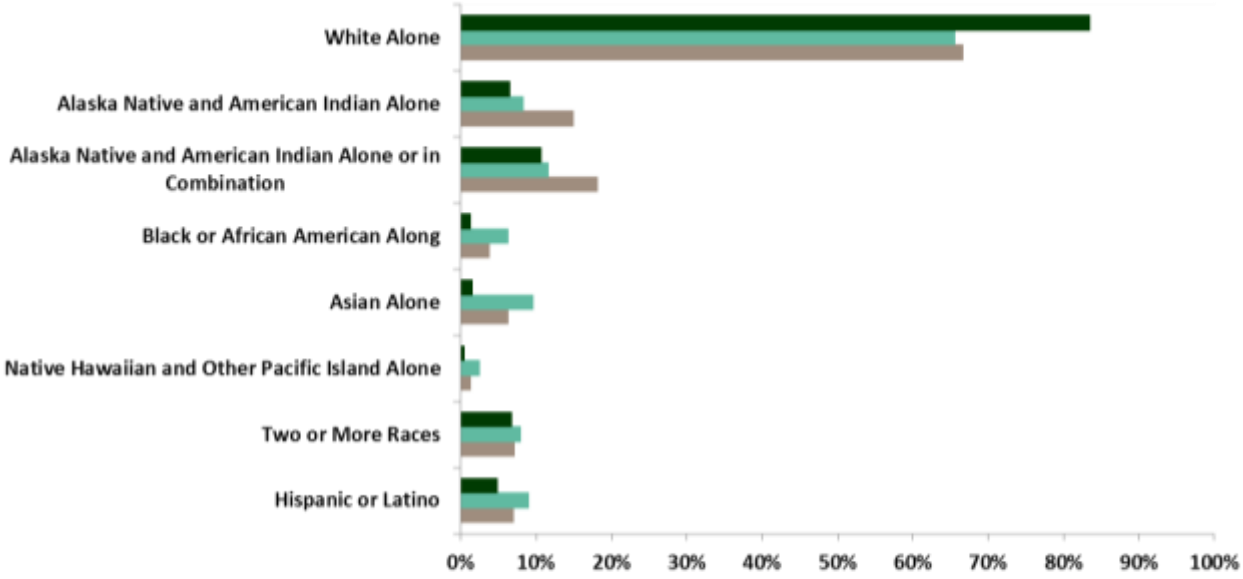
- More reliable public transportation
- Roadwork
- Some resources are only open 9am-5pm, however most of the people are working, so longer service hours would help to increase access for working people
- Emergency response team and the ability to access those services and the emergency teams can come to the rural areas
- Shorter wait time in the MSRMC ED
- More support at the hospital

How Race Impacts Health

With data from the State of Alaska Department of Labor and Workforce Development, **Figure 20** illustrates the 2015 estimated ethnicity breakdown of the service area of MSHF. The predominant race for Mat-Su Borough, Anchorage and Alaska is White Alone. However, in Anchorage (65.6%) and Alaska (66.6%), White Alone only makes up a little more than half of the population, while it reflects the majority (83.5%) of the population in Mat-Su Borough.

Alaska Native and American Indian Alone ranked second when compared to the other race categories with Alaska having the highest percentage of Alaska Native and American Indian Alone (14.9%) and Mat-Su borough (6.5%) with the smallest percentage. When looking at Alaska Native and American Indian Alone or in Combination, a little more than one in ten of the population falls within this race category. In the Mat-Su Borough, Hispanic or Latino is the second largest ethnic population, at almost 5% of the population. A slightly higher percentage (6.7%) indicated that they are of two or more races.

Figure 20 - Race by Select Areas, Mat-Su Borough and Anchorage, 2015 Estimates

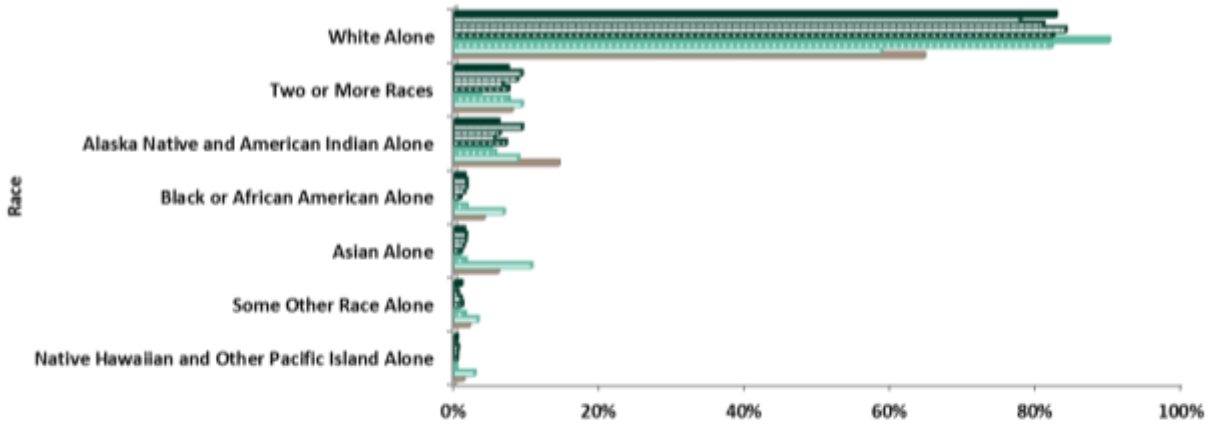


	Hispanic or Latino	Two or More Races	Native Hawaiian and Other Pacific Island Alone	Asian Alone	Black or African American Along	Alaska Native and American Indian Alone or in Combination	Alaska Native and American Indian Alone	White Alone
Mat-Su	4.8%	6.7%	0.4%	1.5%	1.3%	10.6%	6.5%	83.5%
Anchorage	9.0%	7.9%	2.4%	9.6%	6.2%	11.6%	8.3%	65.6%
Alaska	6.9%	7.1%	1.3%	6.2%	3.8%	18.1%	14.9%	66.6%

Source: State of Alaska Department of Labor and Workforce Development, Research and Analysis Section; U.S. Census Bureau

With data from the U.S. Census Bureau, **Figure 21** illustrates the 2016 estimated ethnicity breakdown of the service area of MSHF. The predominant race for Mat-Su Borough, the borough clusters, Anchorage and Alaska is White Alone. However, in Anchorage (58.6%) and Alaska (64.5%), White Alone only makes up a little more than half of the population, while white alone is the majority (80.0%-90.0%) of the population in the other areas. American Indian and Alaska Native Alone (which cannot be separated out per the U.S. Census) ranked second or third when compared to the other race categories with Anchorage having the highest prevalence of American Indian and Alaska Native Alone (8.8%) and Upper Susitna Valley (5.0%) with the smallest percentage.

Figure 21 - Race by Select Areas, Mat-Su Borough and Anchorage*



	Native Hawaiian and Other Pacific Island Alone	Some Other Race Alone	Asian Alone	Black or African American Alone	Alaska Native and American Indian Alone	Two or More Races	White Alone
Mat-Su	0.4%	1.0%	1.3%	1.4%	6.1%	7.3%	82.6%
Glenn Highway	0.3%	0.3%	1.6%	1.7%	9.3%	9.2%	77.7%
Knik Goosebay Road	0.5%	0.5%	1.6%	1.7%	6.2%	8.7%	80.8%
Palmer	0.4%	0.9%	1.3%	1.4%	5.5%	6.7%	83.9%
Parks Highway	0.4%	1.1%	1.0%	0.9%	7.1%	7.4%	82.2%
Upper Susitna Valley	0.2%	0.5%	0.7%	0.2%	5.0%	3.5%	89.8%
Wasilla	0.3%	1.5%	1.6%	1.7%	5.6%	7.5%	82.0%
Anchorage	2.8%	3.2%	10.6%	6.8%	8.8%	9.3%	58.6%
Alaska	1.3%	2.0%	6.0%	4.0%	14.3%	7.9%	64.5%

Source: U.S. Census Bureau

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

As heard through focus groups conducted within Alaska Native populations, Table 22 illustrates common factors that impact health. Both the Chickaloon Elders and Nutaqsaviik Nurses are in agreement on the following factors that impact health in their communities: access to health care, dental and vision care and poverty/income.

Table 22 – Factors That Impact Health – 2016 Tribal Focus Group Responses

Factors That Impact Health	Chickaloon Elders	Nutaqsaviik Nurses
Access to health care, dental and vision care	●	●
Availability of information and support to live a healthy lifestyle	●	
Culture of Health expectation		●
Education; there are lots of issues with kids not finishing school	●	
Lack of resources for "working" poor		●
Poverty/Income	●	●
Physical Activity /recreation	●	
Safe places and activities for children/youth	●	
Attitude/ Sense of community/ connection/ self esteem	●	
Sidewalks	●	
Adverse Childhood Experiences (ACEs)		●
Affordable/stable housing		●
Child care		●
Transportation; lack of public transportation		●

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

How Race Impacts Health: Community Input

The local "culture" of the Mat-Su region impacts health in a number of ways. On the positive side, Alaskan Native tribes and affinity groups are seen as cohesive communities where connections are strong and support services are available, and individuals and groups are working together to make health care and other services available to the community as a whole, not just their individual members. These efforts are perceived as positively impacting the community as well. The Sunshine Clinic and South Central Foundation's Life House Clinic not only provide needed access to primary care and other services, Sunshine Clinic's transportation services are highly regarded as improving access.

How Sexual Orientation and Gender Identity Impact Health

LGBTQ people are more at risk for health threats as compared to heterosexual people. The Substance Abuse and Mental Health Services Administration (SAMSHA) released a Top Health Issues for LGBTQ Populations information and Resource Kit that identifies the following issues for LGBTQ people:

- Lesbian and gay individuals and bisexuals are at an increased risk for heart disease, family and intimate partner violence, depression, anxiety, suicidal ideation and attempts, tobacco and substance abuse.
- Lesbian and bisexual women also are more likely to be obese, have breast cancer, phobias, and PTSD (Post Traumatic Stress Disorder).
- Gay and bisexual men are at higher risk for eating disorders and anal cancer.
- Although there is very limited research on Transgender individuals as a group, several studies have found that this group is at high risk for violent victimization such as physical and sexual assault, intimate partner violence, sexually transmitted diseases, substance abuse, and suicidal ideation and attempts.

LGBTQ people often experience challenges seeking health care due to:

- lack of knowledge on LGBTQ health on the part of providers
- experiences ranging from feeling unwelcome to outright mistreatment and discrimination
- lack of health insurance due to partner benefits not being offered universally

Members of the Mat-Su LGBTQ community reported that they are more likely to be dissatisfied with care received or to have been told they have depressive disorder. This is highlighted in Table 23. Additionally, when LGBTQ individuals in Mat-Su were asked if they perceived bias in the health care delivery system, 62% said they thought they received the same care as everyone else, 6% said their care was worse, and 9% said it was better than others. When this question was asked, it was not specified where the resident received care. There have been no special efforts in Mat-Su to train/educate health care providers on the needs of LGBTQ individuals.

Table 23 - How Sexual Orientation Impacts Health, 2010-2014 and 2013-2014

How Sexual Orientation Impacts Health		
Where We Live	**Heterosexual**	**LGBTQ**
Satisfied with health care received (2013-2014)	95.9%	60.5%
Health Status Impact	**Heterosexual**	**LGBTQ**
Ever told had depressive disorder (2010-2014)	17.8%	35.2%

Source: Alaska Behavioral Risk Factor Surveillance System Data

Gender Identity and Health: Community Input

LGBTQ teens spoke passionately about how gender identity impacts health including discrimination in school, as well as health professionals who are ill equipped to provide support and information to address health questions and concerns.

How Transportation Impacts Health

Transportation was mentioned more often than any other factor that impacts health in the focus groups and stakeholder interviews. It was also noted in more focus groups and interviews than any other community need. The lack of public transportation is a barrier to accessing both primary care and specialty services, many of which are located in Anchorage or other large cities. Transportation also impacts the ability to enjoy many of the existing indoor and outdoor recreational activities that help individuals lead a healthy lifestyle. Lack of transportation also creates social isolation and limits continuity of care, making it difficult to appropriately manage chronic conditions when they do occur. Because of the lack of utility infrastructure in rural areas, some even require transportation to get drinkable water and complete certain activities of daily living such as bathing and washing clothes.

Numerous transportation challenges were noted. While the existing human services transportation system has a broader service area than the public transit system which serves primarily Wasilla and Palmer, it is limited to those who qualify for Medicaid or have disabilities. Many are unaware of the transportation resources that do exist, even if they qualify for them. Some cannot afford to use them, even where they are offered. Limited hours of operation also make it difficult to schedule, especially when needing multiple health care or other appointments in the same day.

The transportation system has direct effects on morbidity and mortality in a number of ways including:

- motor vehicle emissions are the largest and fastest growing source of air pollution and greenhouse gases
- motor vehicles cause environmental noise, interfering with sleep, work performance and childhood brain development
- exposure to air pollution causes respiratory illness and cardiovascular disease
- pedestrian injuries result from street designs that favor cars rather than people
- urban sprawl has resulted in less physical activity, with populations in low-density communities experiencing higher rates of obesity than populations in higher-density areas[90]

[90] Farhang, Lili and Bhatia, Rajiv. "Transportation for Health." Race, poverty and the environment. Winter 2005-2006.

Transportation also affects health by determining access to daily necessities."[91] "Lack of transit access can have severe consequences. Transit barriers—mainly cost and inadequate service—make healthcare even more unavailable to those who need it most."[92] Studies have also found that commuting to work has an adverse effect on health status, including higher rates of diabetes, cholesterol, depression, anxiety, and high blood pressure. Longer commutes also result in lower sleep quality and cardiovascular fitness, as well as more exhaustion and back pain.

The Center for Neighborhood Technology, Housing and Transportation Affordability Index measures Neighborhood Characteristics on a scale from 0-10. Figure 22 illustrates transit access for Mat-Su, Palmer, Wasilla and Anchorage. The lower the access number, the more likely the community is car dependent with very little or no access to public transportation. Mat-Su and Palmer have limited transit access with a transit score less than 1, indicating these communities rely on cars for transportation as public transportation is extremely limited. The table also shows the number of trips available per week, with Palmer having slightly fewer trips available than Mat-Su, although both are limited in available trips per week.

Figure 22 - Transit Access, 2016

	Mat-Su	Palmer	Wasilla	Anchorage
Transit Access Score	0.6	0.8	1.7	2.3
Number of Trips Per Week	29	27	57	137

Source: The Center for Neighborhood Technology, Housing and Transportation (H+T®) Affordability Index

[91] Ibid.
[92] Ibid.

From data reported by the U. S. Census, **Table 24** illustrates how workers transport themselves to work. For 2016, the majority (70.0%) of workers drive alone to work in Mat-Su Borough. Residents in Glenn Highway (72.1%) have the highest percentage and Upper Susitna Valley (60.0%) having the lowest percentage of the population relying on this mode of transportation. The second highest mode of transportation utilized by workers in the borough was car pool (14.2% for the borough), with residents in Palmer (15.7%) relying on this mode of transportation more than the other areas. Workers in Upper Susitna Valley (5.3%) were more likely to walk or work from home (11.3%) when compared to the other areas.

Table 24 - Estimated Workers Age 16+ Mode of Transportation to Work by Select Areas, Mat-Su Borough and Anchorage*

2016 DEMOGRAPHICS	MAT-SU	GLENN HIGHWAY	KNIK GOOSEBAY ROAD	PALMER	PARKS HIGHWAY	UPPER SUSITNA VALLEY	WASILLA	ANCHORAGE	ALASKA
2016 EST. WORKERS (AGE 16+) BY TRANSPORTATION TO WORK	39,355	1,077	7,494	11,775	5,854	1,733	11,422	130,911	361,167
Drove Alone	27,564	777	5,167	8,407	4,007	1,040	8,166	97,688	241,710
Car Pooled	5,601	135	1,008	1,850	691	193	1,724	15,391	46,348
Public Transportation	464	7	187	118	35	1	116	3,261	6,629
Walked	934	24	241	286	123	91	169	4,303	30,451
Bicycle	42	3	2	19	0	17	1	1,718	3,602
Other Means	2,518	67	460	436	627	196	732	3,661	15,943
Worked at Home	2,232	64	429	659	371	195	514	4,889	16,484
% Drove Alone	70.0%	72.1%	69.0%	71.4%	68.5%	60.0%	71.5%	74.6%	66.9%
% Car Pooled	14.2%	12.5%	13.5%	15.7%	11.8%	11.1%	15.1%	11.8%	12.8%
% Public Transportation	1.2%	0.7%	2.5%	1.0%	0.6%	0.1%	1.0%	2.5%	1.8%
% Walked	2.4%	2.2%	3.2%	2.4%	2.1%	5.3%	1.5%	3.3%	8.4%
% Bicycle	0.1%	0.3%	0.0%	0.2%	0.0%	1.0%	0.0%	1.3%	1.0%
% Other Means	6.4%	6.2%	6.1%	3.7%	10.7%	11.3%	6.4%	2.8%	4.4%
% Worked at Home	5.7%	5.9%	5.7%	5.6%	6.3%	11.3%	4.5%	3.7%	4.6%
Avg. Travel Time to Work	36 min	38 min	40 min	35 min	36 min	33 min	34 min	20 min	21 min

Source: U.S. Census Bureau

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

As reported in the Mat-Su Transit Feasibility Study in 2016, **Figure 23** shows the number of commuters both in and out of Mat-Su for employment. There are almost four times as many residents living but working outside of the borough than individuals who commute into Mat-Su for work. Residents who participated in a focus group during the transportation feasibility assessment indicate the need for reliability and specialized senior transportation. The challenge indicated by participants is that many areas are rural with low population density; however, they have a high need for public transportation.

Figure 23 - Mat-Su Commuter Population

Source: Mat-Su Transit Feasibility Assessment, DOWL, July 2016

The 2016 Mat-Su Transit Feasibility Study also reported distance between major communities as outlined in **Table 25.** Talkeetna is the most isolated community of the borough with a distance of over 100 miles to Anchorage and just shy of 100 miles from Eagle River and Wasilla.

Table 25 - Distance Between Major Communities

Distance (miles)	Anchorage	Eagle River	Palmer	Wasilla	Talkeetna	Chickaloon
Anchorage	-	16	43	44	114	74
Eagle River	16	-	27	28	98	58
Wasilla	43	27	-	13	83	32
Talkeetna	44	28	13	-	70	42
Chickaloon	114	98	83	70	-	112

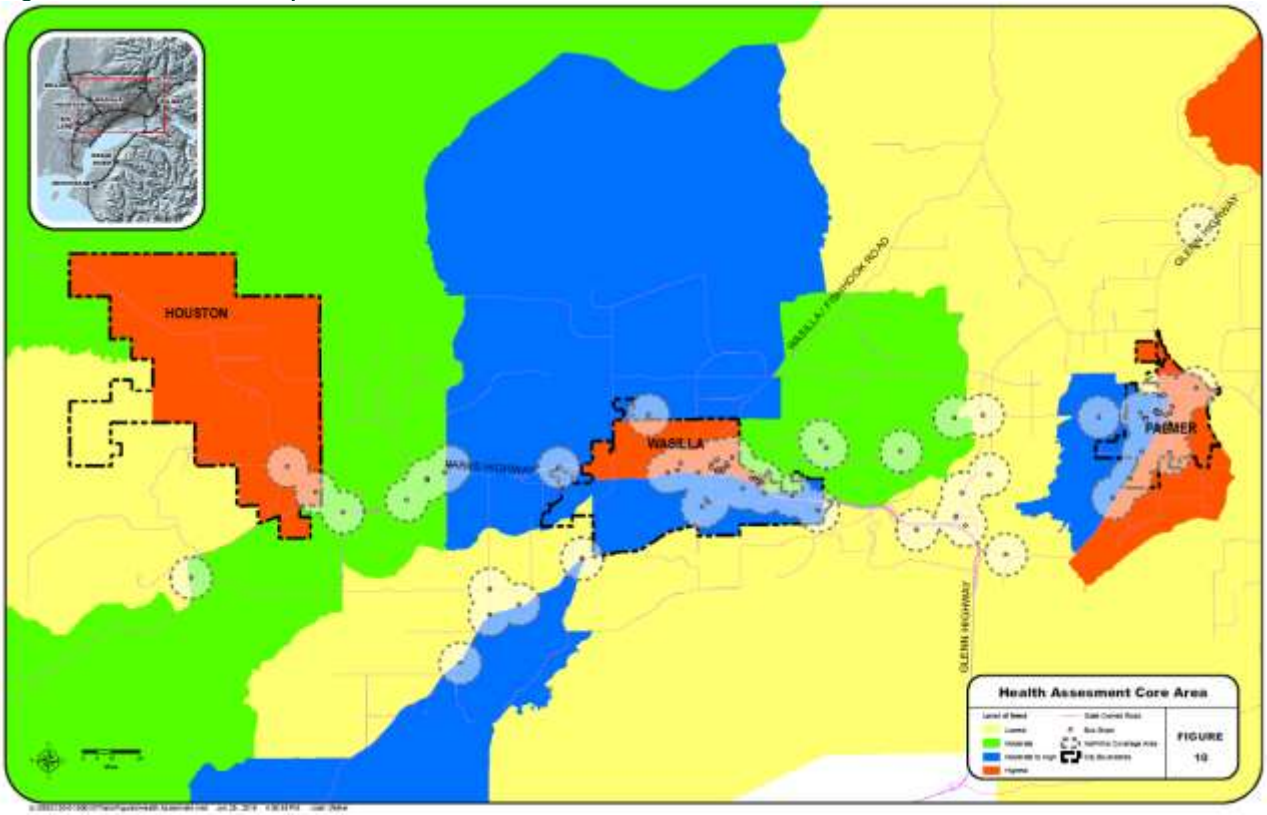
Source: Mat-Su Transit Feasibility Assessment, DOWL, July 2016

Transit dependent communities are those that have a high percentage of households without access to a vehicle, as well as other factors that contribute to the ability to afford transportation. **Figures 24 through 26** illustrate areas in the Mat-Su Borough, Palmer and Wasilla that have the highest indicators of both transit dependence and health needs. The areas shaded in red are considered as having a high level of need, those blue have a medium level of need, those green have a moderate level of need and those yellow had a low level of need. Indicators that were considered when assessing need included:

- Households without access to a vehicle
- Households below poverty
- High school graduates or higher
- Population spending more than 30% of household income on rental housing
- Households receiving SNAP benefits (food stamps)
- Alaska Native heritage
- Population density

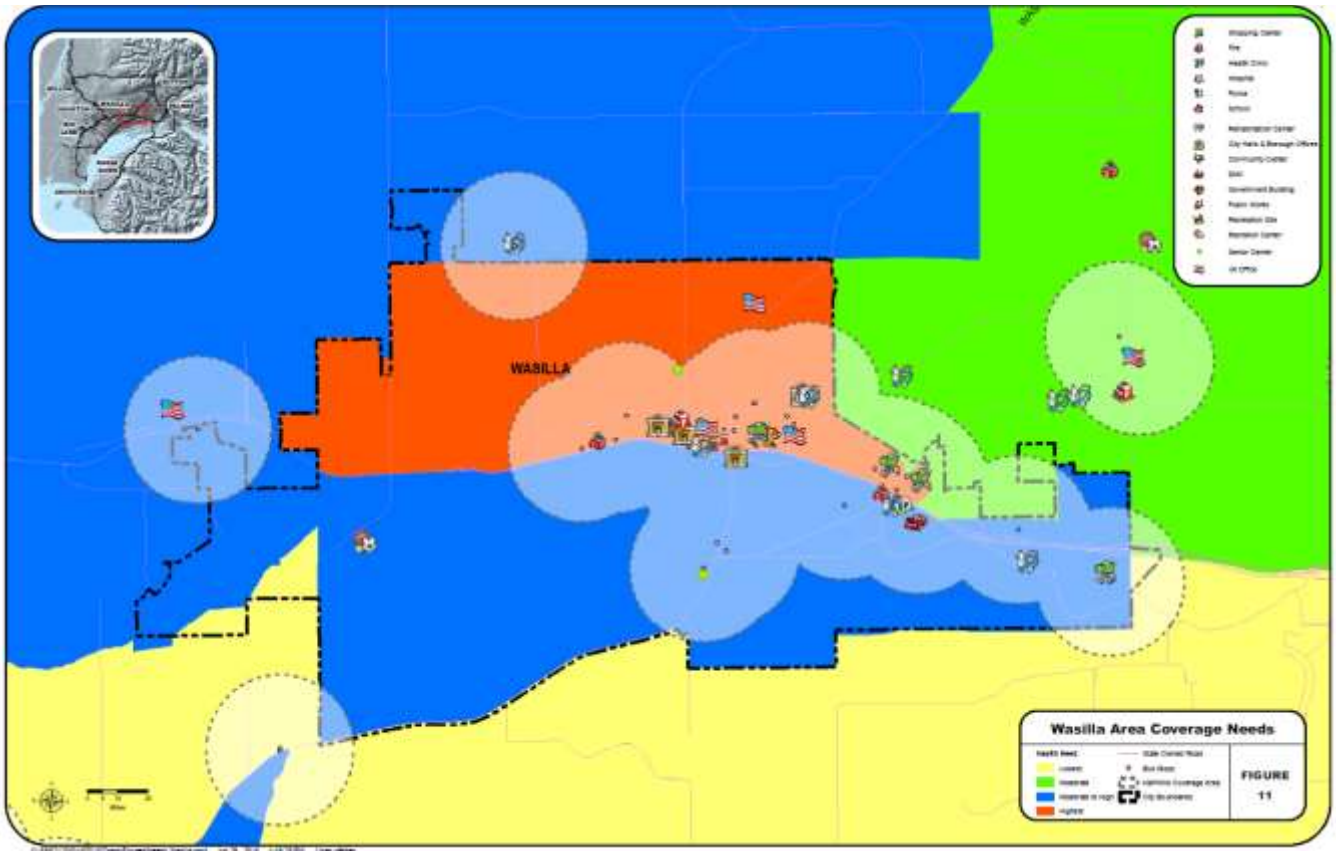
Palmer, Wasilla and Houston were identified as areas of highest need. A large portion on these identified areas lack bus stops with limited public transportation coverage. This is especially limiting in Houston, which only has two bus stops within the city boundaries. In both Palmer and Wasilla, the available bus routes cover the majority of the residents needs providing access to shopping centers, schools, medical facilities, city and government offices, and recreational opportunities.

Figure 24 - Transit Dependent Communities and Health Needs



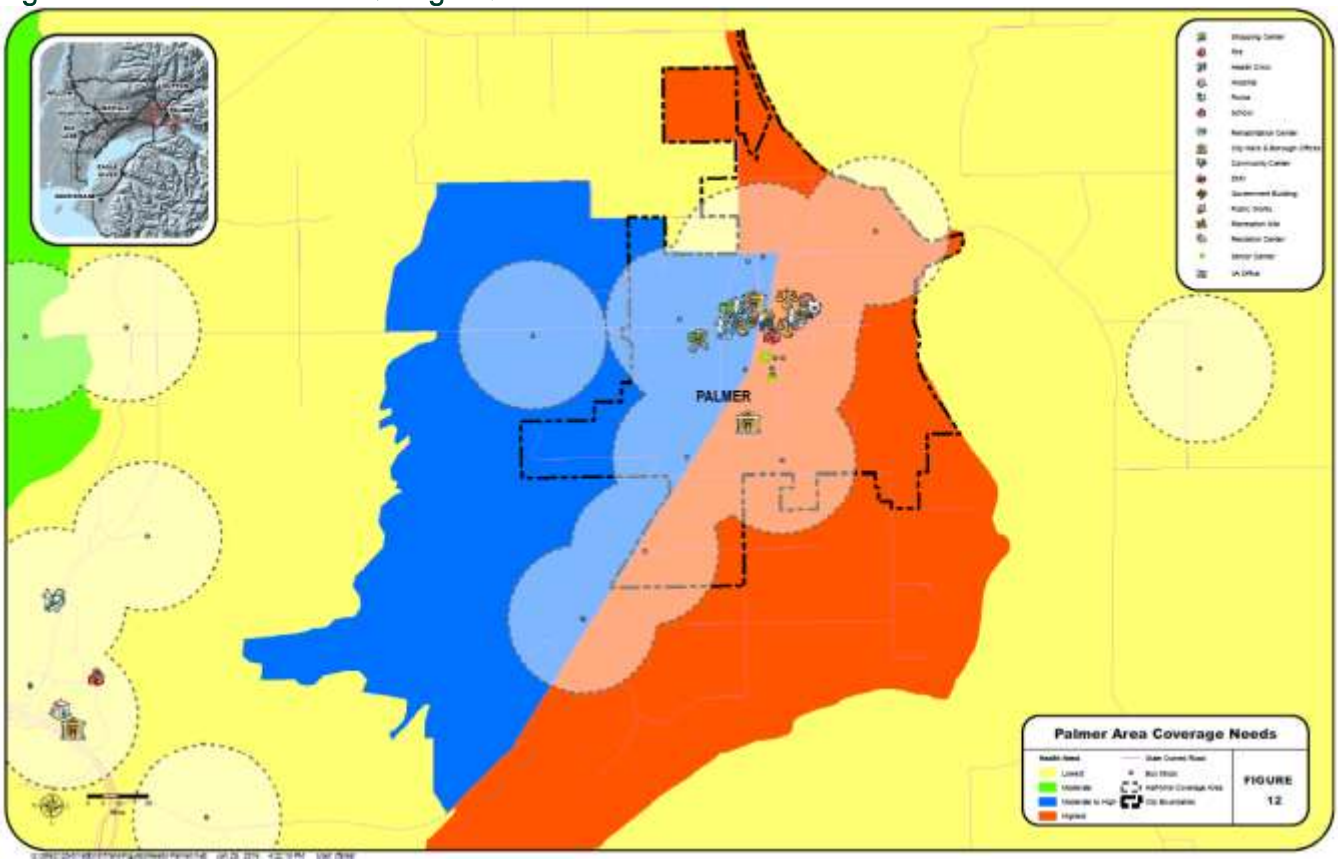
Source: Mat-Su Transit Feasibility Assessment, DOWL, July 2016

Figure 25 - Wasilla Area Coverage Needs



Source: Mat-Su Transit Feasibility Assessment, DOWL, July 2016

Figure 26 - Palmer Area Coverage Needs



Source: Mat-Su Transit Feasibility Assessment, DOWL, July 2016

How Transportation Impacts Health: Community Input

Transportation and/or lack of transportation were the most frequently noted factors that impact health by participants of the focus groups and interviews. It was also frequently mentioned as a high priority need for the Valley. While transportation resources do exist in the region, they are not adequate to support the need.

For example, positive comments regarding transportation options available included the bus service between Palmer and Wasilla, although participants noted that the limited hours and numbers of trips per day are a challenge. The transportation service offered by the Sunshine Clinic to residents of Talkeetna and surrounding areas is an important community benefit, noted by both residents and professionals in that area. There is also a Medicaid transportation system that helps, but it is limited to those who qualify and does not extend to all rural areas in the borough. The 'shared ride' vans that travel to Anchorage supports the workforce who commute there, but does not support those who must travel to Anchorage periodically for medical care.

Both residents and professionals cited the lack of transportation as a barrier to accessing appropriate medical care and services. It also impacts consistency of follow up care and chronic disease management, frequently contributing to high no-show rates. It also impacts Emergency Department utilization because individuals will wait to seek care until they "can't stand it anymore," which could also result in an ambulance trip in the middle of the night.

> *"People are a ways off the route. If you are not able to go two miles to the Mascot bus stop, you are isolated."*
> – Alaska Family Services Case Manager

How Food Impacts Health

Food insecurity is "the percentage of the population who did not have access to a reliable source of food during the past year."[93] "The percentage of the population who are low income (annual family income of less than or equal to 200 percent of the federal poverty threshold for the family size) and do not live close to a grocery store, has limited access to healthy foods. Living close to a grocery store is defined differently in rural and non-rural areas; in rural areas, it means living less than 10 miles from a grocery store; in non-rural areas, it is less than 1 mile.

Nutritious food is a basic need and hunger is a health issue. With more than 17.5 million U.S. households facing hunger — or one in every seven households nationwide — healthcare systems and leaders must recognize that lacking nutritious food to eat is a dire public health concern.'[94]

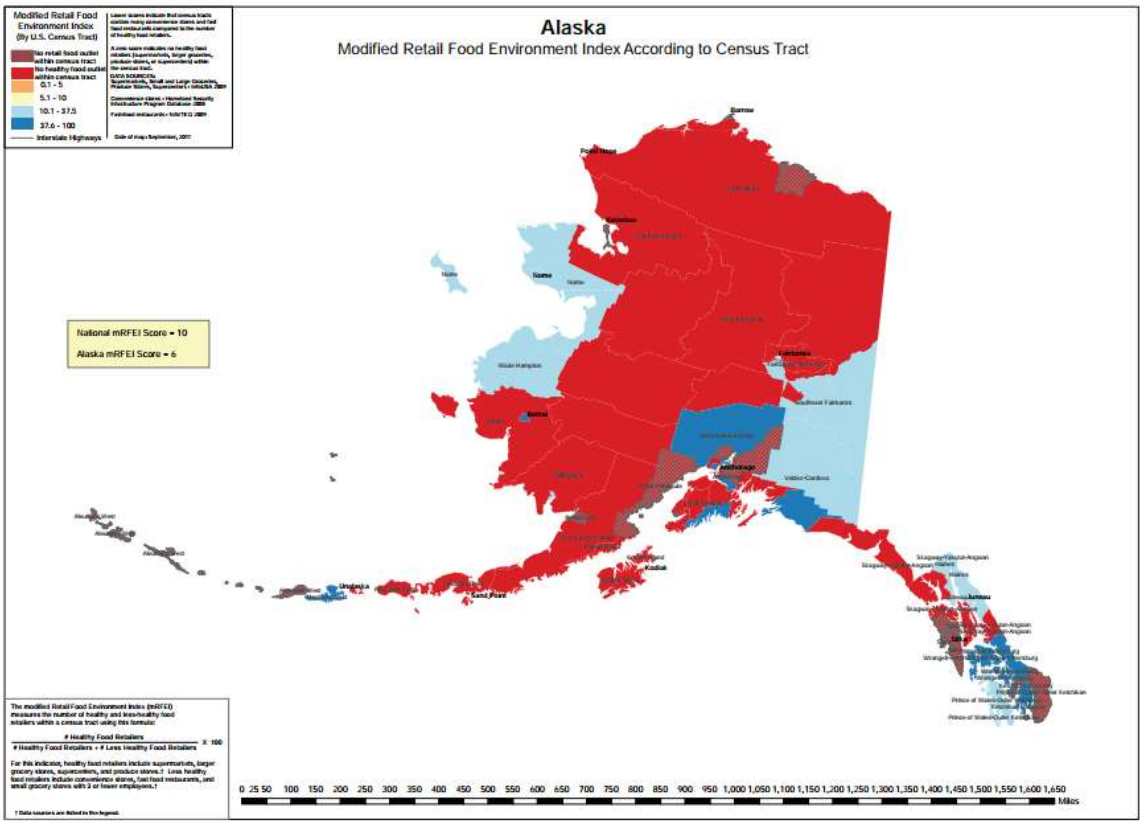
Access to healthy foods supports better eating habits and lowers risk for obesity and diet related diseases such as diabetes. Food insecurity and its results, including true hunger, are a health issue causing distress in communities nationwide by impacting low birth weights and creating health challenges for people of all ages. Malnutrition also results in higher health care costs.

> *"A healthy lifestyle doesn't start with pills and covering up misery. It starts with eating healthy and being around healthy people."*
>
> Mat-Su youth

[93] "Food Insecurity* | County Health Rankings & Roadmaps." http://www.countyhealthrankings.org/measure/food-insecurity. 2016.
[94] Oostra, Randy DM, FACHE. "A Case for Becoming True Care Integrators to Improve Population Health." ProMedica. 2015.

The modified retail food environment index (mRFEI) measures the number of healthy and less healthy food retailers within census tracts across each state as defined by typical food offerings in specific types of retail stores (e.g., supermarkets, convenience stores, or fast food restaurants). Figure 27 illustrates the mRFEI for Alaska. Lower scores indicate that census tracts contain many convenience stores and fast food restaurants compared to the number of healthy food retailers. The average mRFEI for Alaska is 6 compared to the nation (10), suggesting less availability of healthy food retailers compared to the nation. Mat-Su falls within the highest mRFEI range (37.6-100) suggesting high availability of healthy food retailers compared to the number of fast food restaurants and convenience stores. Mat-Su is higher when compared to much of the state in terms of access to healthy food retailers.

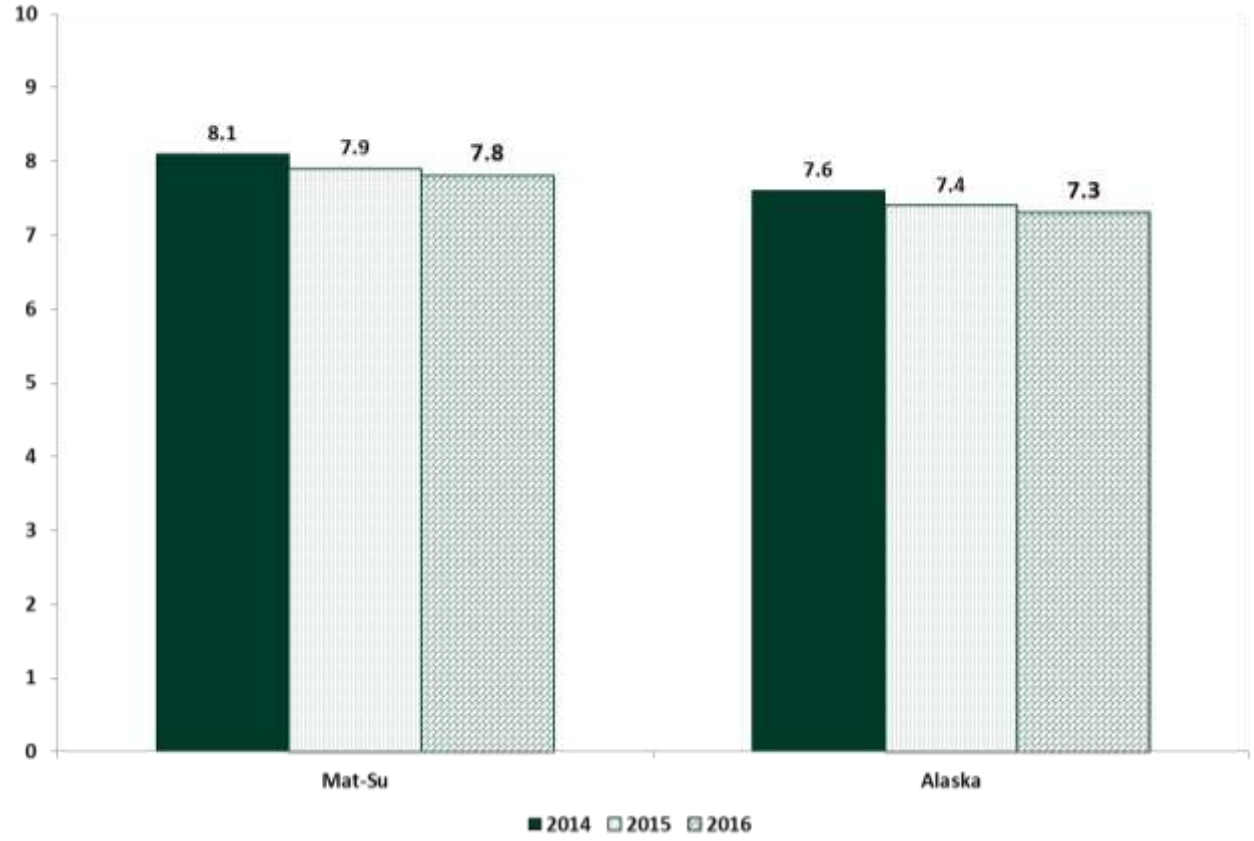
Figure 27 - Retail Food Environment Index by Census Tract, 2011



Source: CDC's Division of Nutrition, Physical Activity and Obesity, Children's Food Environment State Indicator Report, 2011.

The food environment index for Mat-Su and Alaska for 2014 through 2016 is illustrated in Figure 28. The food environment index combines two measures of food access: the percentage of the population that is low-income and has low access to a grocery store, and the percentage of the population that did not have access to a reliable source of food during the past year (food insecurity). The index ranges from 0 (worst) to 10 (best) and equally weights the two measures. Overall, both Mat-Su and Alaska have decent access to affordable food options, and the Mat-Su rate remains slightly above the state. The food environment index has been decreasing for both Mat-Su and Alaska over the past three years.

Figure 28 - Food Environment Index



Source: County Health Rankings

Hunger in America reports obstacles to distribution of healthy foods. **Table 26** shows barriers that agencies experience in distributing healthier foods. Three-fourths of the agencies (75.0%) are unable to distribute healthier foods because they are too expensive for them to purchase. Half of the agencies (55.0%) are unable to receive healthier foods from donors and other food sources, or find clients are not willing to eat healthier foods or unable to store them.

Table 26 - Agency Obstacles to Distribution of Healthier Foods

	Count	Percentage
Client reasons (unwilling to eat, inability to store, etc.)	17	55.0%
Too expensive to purchase	23	75.0%
Inability to store/handle	8	25.0%
Lack of knowledge	2	5.0%
Not a priority	5	15.0%
Unable to obtain from donor/food sources	17	55.0%

Source: Hunger in America, 2014

As reported by Hunger in America in 2014, **Table 27** shows the number of Mat-Su residents who participate in meal or grocery programs on a weekly, monthly, and annual basis. When looking at the unduplicated counts, 3,800 residents receive food on a weekly basis, with 11,500 served in a given month and 32,000 served in a given year.

Table 27 - Mat-Su Food Recipients

	Weekly		Monthly		Annually	
	Duplicated counts	Unduplicated counts	Duplicated counts	Unduplicated counts	Duplicated counts	Unduplicated counts
Total number of individual clients, all programs	4,600 (+/-4,300)	3,900 (+/-4,300)	20,100 (+/-18,800)	11,600 (+/-12,900)	240,800 (+/-225,700)	32,200 (+/-36,300)
Total number of client households, all programs	1,500 (+/-1,300)	1,100 (+/-1,300)	6,600 (+/-5,800)	3,400 (+/-4,000)	79,600 (+/-69,400)	9,500 (+/-11,200)
Total number of individual clients by meal and grocery programs						
Meal programs	400 (+/-300)	300 (+/-200)	1,900 (+/-1,300)	500 (+/-500)	22,700 (+/-15,800)	900 (+/-900)
Grocery Programs	4,200 (+/-4,300)	3,800 (+/-4,300)	18,200 (+/-18,800)	11,500 (+/-12,900)	218,100 (+/-225,200)	32,200 (+/-36,200)
Total number of individual clients by selected program subtypes (not mutually exclusive)						
Pantries	4,200	3,800	18,200	11,500	218,100	32,000

Source: Hunger in America, 2014

Food Deserts

The Healthy Food Financing Initiative (HFFI) Working Group considers a food desert as a low-income census tract where a substantial number or share of residents has low access to a supermarket or large grocery store. To qualify as low income, census tracts must meet the Treasury Department's New Markets Tax Credit (NMTC) program eligibility criteria. Furthermore, to qualify as a food desert tract, at least 33 percent of the tract's population or a minimum of 500 people in the tract must have low access to a supermarket or large grocery store. The NMTC program defines a low-income census tract as: any census tract where (1) the poverty rate for that tract is at least 20 percent, or (2) for tracts not located within a metropolitan area, the median family income for the tract does not exceed 80 percent of statewide median family income; or for tracts located within a metropolitan area, the median family income for the tract does not exceed 80 percent of the greater of statewide median family income or the metropolitan area median family income.

Low access to a healthy food retail outlet is defined as more than 1 mile from a supermarket or large grocery store in urban areas and as more than 10 miles from a supermarket or large grocery store in rural areas. The distance to supermarkets and large grocery stores is measured by the distance between the geographic center of the 1-km square grid that contains estimates of the population (number of people and other subgroup characteristics) and the nearest supermarket or large grocery store. Once the distance to the nearest supermarket or large grocery store is calculated for each grid cell, the estimated number of people or housing units more than one mile from a supermarket or large grocery store in urban tracts (or 10 miles for rural census tracts) is aggregated to the census tract level. (A census tract is considered rural if the centroid of that tract is located in an area with a population of less than 2,500, and all other tracts are considered urban tracts.) If the aggregate number of people in the census tract with low access is at least 500 or the percentage of people in the census tract with low access is at least 33 percent, then the census tract is considered a food desert[95].

From data from the US Department of Agriculture Economic Research Services, **Tables 28 and 29** show the food deserts in Mat-Su, as well as the percentage of the population and subpopulations with limited access. Tanaina is defined as urban, and based on the definition of a food desert should have access within 1 mile, however; 100% of the population has low access to a grocery store. For rural communities, access is considered low if a grocery store is not within 10 miles, Willow (93.9%) and Trapper Creek (85.1%) have the highest percentage of the population with low access.

[95] United States Department of Agriculture Economic Research Services http://www.ers.usda.gov/dataFiles/Food_Access_Research_Atlas/Download_the_Data/Archived_Version/archived_documentation.pdf.

Table 28 - Mat-Su Food Deserts, Low Access Defined as 1 Mile

Census Tract	Community	# Housing Units	Population	Rural/Urban	Low Access 1 Mile	Low Access/Low Income 1 Mile	Low Access/Kids 1 Mile	Low Access/ Seniors 1 Mile	Low Access/Limited Housing/ Vehicle 1 Mile
02170000101	Trapper Creek	297	620	R	100%	44.3%	100%	100%	18.1%
02170000102	Susitna North	1042	2181	R	95.6%	41.2%	97.0%	92.6%	7.8%
02170000200	Sutton-Alpine	671	2050	R	100%	24.8%	100%	100%	2.6%
02170000300	Fishhook	1944	5614	R	99.1%	16.3%	99.3%	98.0%	1.6%
02170000401	Houston City	731	1912	R	81.9%	23.0%	83.0%	78.2%	3.0%
02170000402	Willow	895	2105	R	100%	23.3%	100%	100%	3.1%
02170000501	Big Lake	693	1716	R	98.4%	34.6%	98.0%	99.0%	2.4%
02170000502	Big Lake	783	1896	R	100%	35.8%	100%	100%	0%
02170000601	Knik-Fairview	1498	4481	R	94.4%	14.2%	94.4%	94.5%	1.9%
02170000603	Knik-Fairview	2013	6131	R	100%	17.1%	100%	100%	2.2%
02170000604	Knik-Fairview	1599	4734	R	100%	30.1%	100%	100%	3.0%
02170000701	Meadow Lakes	1242	3362	R	80.0%	27.5%	80.1%	84.1%	1.2%
02170000703	Meadow Lakes	1281	3676	R	83.8%	20.5%	83.4%	85.6%	2.4%
02170000705	Tanaina	1263	3750	U	100%	25.3%	100%	100%	3.0%
02170000706	Tanaina	1633	4974	U	100%	19.7%	100%	100%	5.1%
02170000800	Wasilla City	1790	4895	U	39.0%	11.8%	41.5%	28.7%	1.7%
02170000900	Wasilla City	1070	2544	U	34.8%	10.9%	40.0%	20.7%	3.0%
02170001001	Lakes	1184	3458	R	98.8%	19.0%	98.9%	99.6%	3.2%
02170001003	Lakes	1197	3434	U	89.3%	20.2%	90.6%	84.9%	2.7%
02170001004	Lakes	1725	4831	U	64.6%	13.7%	67.3%	61.0%	1.4%
02170001100	Gateway	1793	5364	R	80.0%	7.5%	76.5%	83.6%	0.09%
02170001201	Palmer City	1820	5142	U	52.1%	20.0%	57.1%	46.4%	3.0%
02170001202	Palmer City	1652	4664	R	47.0%	9.3%	47.7%	45.2%	2.9%
02170001300	Butte	2008	5461	R	100%	20.8%	100%	100%	0.06%

Source: United States Department of Agriculture, Economic Research Service

Table 29 - Mat-Su Food Deserts, Low Access Defined as 10 Miles

Census Tract	Community	# Housing Units	Population	Rural/Urban	Low Access 10 Miles	Low Access/Low Income 10 Miles	Low Access/Kids 10 Miles	Low Access/Seniors 10 Miles	Low Access/Limited Housing/Vehicle 10 Miles
02170000101	Trapper Creek	297	620	R	85.1%	37.7%	83.8%	82.3%	15.5%
02170000102	Susitna North	1042	2181	R	32.2%	12.5%	30.0%	29.0%	2.9%
02170000200	Sutton-Alpine	671	2050	R	65.7%	17.0%	82.8%	86.4%	1.8%
02170000300	Fishhook	1944	5614	R	2.0%	0.03%	2.0%	2.3%	0%
02170000401	Houston City	731	1912	R	0%	0%	0%	0%	0%
02170000402	Willow	895	2105	R	93.9%	21.6%	94.2%	92.5%	2.8%
02170000501	Big Lake	693	1716	R	9.4%	2.6%	10.2%	11.6%	0%
02170000502	Big Lake	783	1896	R	10.8%	2.6%	9.3%	11.6%	0%
02170000601	Knik-Fairview	1498	4481	R	0%	0%	0%	0%	0%
02170000603	Knik-Fairview	2013	6131	R	0%	0%	0%	0%	0%
02170000604	Knik-Fairview	1599	4734	R	8.7%	4.8%	4.3%	11.1%	0.02%
02170000701	Meadow Lakes	1242	3362	R	0%	0%	0%	0%	0%
02170000703	Meadow Lakes	1281	3676	R	0%	0%	0%	0%	0%
02170000705	Tanaina	1263	3750	U	0%	0%	0%	0%	0%
02170000706	Tanaina	1633	4974	U	0%	0%	0%	0%	0%
02170000800	Wasilla City	1790	4895	U	0%	0%	0%	0%	0%
02170000900	Wasilla City	1070	2544	U	0%	0%	0%	0%	0%
02170001001	Lakes	1184	3458	R	0%	0%	0%	0%	0%
02170001003	Lakes	1197	3434	U	0%	0%	0%	0%	0%
02170001004	Lakes	1725	4831	U	0%	0%	0%	0%	0%
02170001100	Gateway	1793	5364	R	0%	0%	0%	0%	0%
02170001201	Palmer City	1820	5142	U	0%	0%	0%	0%	0%
02170001202	Palmer City	1652	4664	R	0%	0%	0%	0%	0%
02170001300	Butte	2008	5461	R	8.3%	3.1%	7.5%	4.8%	0%

Source: United States Department of Agriculture, Economic Research Service

According to Alaska, No Kid Hungry, **Figure 29** shows the percentage of families financially able to provide lunch for their children during the 2012-2013 school year. Families in Mat-Su (71.0%) had the highest percentage of families able to provide lunch for their children compared to Alaska (57.0%) and the United States (48.8%).

Figure 29 - Families Financially Able to Provide Lunch for Their Children, 2012-2013

Source: Alaska, No Kid Hungry

When looking at the percentage of those students receiving free and reduced lunch assistance in the Mat-Su School District in **Table 30**, a total of 40% of enrolled students are eligible for free and reduce priced lunch. This number fluctuates among various individual schools. Burchell High School has the highest rate with 100% of students eligible.

Table 30 - Mat-Su Borough School District Students Receiving Free and Reduced Lunch Assistance

	Free	Reduced	Enrolled	% F& R
Mat-Su School District School	5,590	913	16,088	40%
Big Lake Elementary-CEP	425	0	503	84%
Burchell High School-CEP	355	0	355	100%
Butte Elementary	119	30	305	49%
Colony High School	219	45	1,173	23%
Colony Middle School	156	34	747	25%
Cottonwood Creek Elementary	127	22	524	28%
Finger Lake Elementary	99	21	361	33%
Fred and Sara Machetanz Elementary School	65	27	479	19%
Glacier View School	8	9	35	49%
Goose Bay Elementary	181	43	521	43%
Houston High School	167	29	408	48%
Houston Middle School	156	33	324	58%
Iditarod Elementary	185	27	392	54%
John Shaw Elementary	146	40	457	41%
Knik Elementary School	182	35	516	42%
Larson Elementary	138	24	410	40%
Mat-Su Career & Tech Ed High School	103	24	555	23%

Mat-Su School District School	Free 5,590	Reduced 913	Enrolled 16,088	% F& R 40%
Mat-Su Day School	29	1	87	34%
Meadow Lakes Elementary	193	33	453	50%
Palmer High School	182	41	801	28%
Palmer Middle School	218	27	646	38%
Pioneer Peak Elementary	111	23	441	30%
Redington Jr./Sr. High School	198	32	478	48%
Sherrod Elementary	149	29	462	39%
Snowshoe Elementary	173	43	436	50%
Susitna Valley Jr/Sr High	80	13	200	47%
Sutton Elementary	75	3	104	75%
Swanson Elementary	156	24	453	40%
Talkeetna Elementary	56	12	131	52%
Tanaina Elementary	210	33	485	50%
TeeLand Middle School	229	46	772	36%
Trapper Creek Elementary-CEP	20	0	23	87%
Valley Pathways	95	8	222	46%
Wasilla High School	315	52	1,131	32%
Wasilla Middle School	210	37	551	45%
Willow Elementary	60	13	147	50%

Source: Alaska Department of Education & Early Development Child Nutrition Program, Program Year 2016

How Access to Healthy Food Impacts Health: Community Input

Access to healthy foods was identified as both a factor that impacts health as well as a community need by many of the participants. Because of the short growing season in Alaska, many fruits and vegetables must be imported from other places; the length of shipping time affects food quality. Participants also noted that distance from grocery stores and affordability also impact access to good nutrition, especially those with lower incomes. Pride is also a barrier to accessing nutritious food, because of the reluctance to seek help.

Participants cited obesity, diabetes and other conditions as resulting from the lack of proper nutrition. Meals on Wheels, community and/or school gardens, as well as farmers markets, were identified as solutions that could positively impact access to nutritious foods.

We have a lot of the working poor and I've met a lot of people who said when you ask them about their eating situation, they are like, "Are you going to buy my vegetables and my fruit that I can't afford to buy?" I've had grown men crying because they hadn't eaten in a few days. So food is definitely an issue."
– Mat-Su Public Health Nurse

How Housing Impacts Health

"The well-established links between poor housing and poor health indicate that housing improvement may be an important mechanism through which public investment can lead to health improvement."[96] Persons who are homeless either don't seek the medical attention they need, or if they do, have nowhere to go once discharged to recuperate. Conversely, poor health is a major cause of homelessness.

The National Health Care for the Homeless Council (NHCHC) has found that an injury or illness can start out as a health condition, but quickly lead to unemployment and homelessness:

- Exhausting sick leave and/or not being able to maintain a regular schedule or perform work functions results in lower wages and loss of employer-sponsored health insurance
- One cannot heal to work again without funds to pay for health care (treatment, medications, surgery, etc.)
- Lack of income often leads to homelessness

Common conditions, such as high blood pressure, diabetes, and asthma, become worse because there is no safe place to store medications or syringes properly. Maintaining a healthy diet is difficult in soup kitchens and shelters as the meals are usually high in salt, sugars, and starch (making for cheap, filling meals but lacking nutritional content)."[97] "Whether a primary or contributing factor to losing housing, or a condition acquired or made worse afterwards, individuals who are homeless have disproportionately high rates of health problems,"[98]

[96] "Housing Improvements for Health and Associated Socio-Economic Outcomes. - PubMed - NCBI." http://www.ncbi.nlm.nih.gov/pubmed/23450585. February 28, 2013.
[97] "Homelessness and Health: What's the Connection?" The National Health Care for the Homeless Council. July 2011.
[98] Ibid.

Additional household indicators by Mat-Su Borough, borough clusters, Anchorage, and Alaska are provided from the U.S. Census Bureau in Table 31. Indicators include household type with regard to head of household and presence of children, average household size, number in household and household poverty status. Knik Goosebay Road has the highest percentage of married couples with own children (41.6%) while Upper Susitna Valley has the highest percentage of married couples without children (57.6%). Knik Goosebay Road has the largest average household size at an estimated 2.93 persons per household in 2016, while Upper Susitna Valley has the lowest at 2.16 persons per household. Palmer has the lowest percentage of families with children in poverty at 3.0%, while the Glenn Highway has the highest percentage at 8.1%.

Table 31 - Regional Household Indicators by Select Areas, Mat-Su Borough and Anchorage*

2016 DEMOGRAPHICS	MAT-SU	GLENN HIGHWAY	KNIK GOOSEBAY ROAD	PALMER	PARKS HIGHWAY	UPPER SUSITNA VALLEY	WASILLA	ANCHORAGE	ALASKA
2016 EST. FAMILY HOUSEHOLD TYPE BY PRESENCE OF OWN CHILD	24,139	707	4,726	6,882	3,873	1,282	6,669	59,498	180,248
Married-Couple Family, Own Children	8,932	216	1,968	2,646	1,306	322	2,474	18,844	62,002
Married-Couple Family, No Own Children	10,337	364	1,846	2,934	1,698	738	2,757	23,439	72,905
Male Householder, Own Children	1,217	30	237	291	237	64	358	3,157	9,564
Male Householder, No Own Children	730	24	140	188	140	46	192	2,411	6,708
Female Householder, Own Children	1,873	41	352	497	298	71	614	7,248	18,429
Female Householder, No Own Children	1,050	32	183	326	194	41	274	4,399	10,640
% Married-Couple Family, Own Children	37.0%	30.6%	41.6%	38.5%	33.7%	25.1%	37.1%	31.7%	34.40%
% Married-Couple Family, No Own Children	42.8%	51.5%	39.1%	42.6%	43.8%	57.6%	41.3%	39.4%	40.45%
% Male Householder, Own Children	5.0%	4.2%	5.0%	4.2%	6.1%	5.0%	5.4%	5.3%	5.3%
% Male Householder, No Own Children	3.0%	3.4%	3.0%	2.7%	3.6%	3.6%	2.9%	4.1%	3.7%
% Female Householder, Own Children	7.8%	5.8%	7.5%	7.2%	7.7%	5.5%	9.2%	12.2%	10.2%
% Female Householder, No Own Children	4.4%	4.5%	3.9%	4.7%	5.0%	3.2%	4.1%	7.4%	5.9%

2016 DEMOGRAPHICS	MAT-SU	GLENN HIGHWAY	KNIK GOOSEBAY ROAD	PALMER	PARKS HIGHWAY	UPPER SUSITNA VALLEY	WASILLA	ANCHORAGE	ALASKA
2016 EST. AVERAGE HOUSEHOLD SIZE	**2.73**	**2.53**	**2.93**	**2.74**	**2.66**	**2.16**	**2.77**	**2.59**	**2.62**
FAMILY HOUSEHOLDS									
2000 Census	14,139	475	1,852	4,197	1,778	1,270	4,567	53,051	152,339
2010 Census	21,101	639	3,851	5,890	3,251	1,275	6,195	57,573	170,750
2016 Estimate	24,139	707	4,726	6,882	3,873	1,282	6,669	59,498	180,248
2021 Projection	26,153	755	5,305	7,489	4,270	1,295	7,039	61,112	187,458
Growth 2000-2010	49.2%	34.5%	107.9%	40.3%	82.9%	0.4%	35.7%	8.5%	12.1%
Growth 2010-2016	14.4%	10.6%	22.7%	16.8%	19.1%	0.6%	7.7%	3.3%	5.6%
Growth 2016-2021	8.3%	6.8%	12.3%	8.8%	10.3%	1.0%	5.6%	2.7%	4.0%
2016 EST. FAMILIES BY POVERTY STATUS	**24,139**	**707**	**4,726**	**6,882**	**3,873**	**1,282**	**6,669**	**59,498**	**180,248**
2016 Families at or Above Poverty	22,511	627	4,375	6,591	3,541	1,160	6,217	56,856	168,835
2016 Families at or Above Poverty with Children	10,226	216	2,085	3,147	1,381	425	2,972	28,392	83,707
2016 Families Below Poverty	1,628	80	351	291	332	122	452	2,642	11,413
2016 Families Below Poverty with Children	1,284	57	257	206	255	96	413	2,324	9,694
% 2016 Families at or Above Poverty	93.3%	88.7%	92.6%	95.8%	91.4%	90.5%	93.2%	95.6%	93.7%
% 2016 Families at or Above Poverty with Children	42.4%	30.6%	44.1%	45.7%	35.7%	33.2%	44.6%	47.7%	46.4%
% 2016 Families Below Poverty	6.7%	11.3%	7.4%	4.2%	8.6%	9.5%	6.8%	4.4%	6.3%
% 2016 Families Below Poverty with Children	5.3%	8.1%	5.4%	3.0%	6.6%	7.5%	6.2%	3.9%	5.4%

Source: U.S. Census Bureau

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

In looking at data from the U.S. Census Bureau, **Table 32** illustrates the types of occupied housing and length of residence for Mat-Su Borough, borough clusters, Anchorage, and Alaska for 2016. In all areas, more than half of the population owns their home. Glenn Highway residents have the highest percentage of homeowners (81.7%) and Wasilla has the lowest percentage (68.9%); all are above Anchorage (59.6%). The average length of residence for homeowners is highest in Glenn Highway at 15.7 years and lowest in Knik Goosebay Road at 11.2 years. Upper Susitna Valley has the lowest average length of renting at 5.7 years. Anchorage and Alaska have the highest average length of time renting at 7.1 years and 7.0 years, respectively.

Table 32 - Occupied Housing Unites by Tenure*

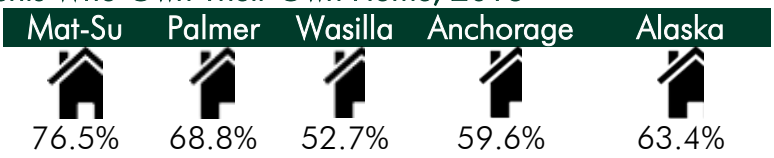
2016 DEMOGRAPHICS	MAT-SU	GLENN HIGHWAY	KNIK GOOSEBAY ROAD	PALMER	PARKS HIGHWAY	UPPER SUSITNA VALLEY	WASILLA	ANCHORAGE	ALASKA
2016 EST. OCCUPIED HOUSING UNITS BY TENURE	**33,891**	**1,053**	**6,322**	**9,302**	**5,712**	**2,214**	**9,288**	**93,874**	**271,691**
Owner Occupied	25,926	860	5,134	7,255	4,499	1,783	6,395	55,967	172,186
Renter Occupied	7,965	193	1,188	2,047	1,213	431	2,893	37,907	99,505
% Owner Occupied	76.5%	81.7%	81.2%	78.0%	78.8%	80.5%	68.9%	59.6%	63.4%
% Renter Occupied	23.5%	18.3%	18.8%	22.0%	21.2%	19.5%	31.2%	40.4%	36.6%
2016 Owner Occupied: Average Length of Residence	13.0	15.7	11.2	13.3	12.5	15.3	13.5	15.0	15.2
2016 Renter Occupied: Average Length of Residence	6.2	6.1	6.0	6.3	6.3	5.7	6.3	7.1	7.0

Source: U.S. Census Bureau

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

According to Nielson Answers, **Figure 30** shows the percentage of residents in Mat-Su, Palmer, Wasilla, Anchorage and Alaska who own their own home in 2016. Mat-Su had the highest percentage of home owners (76.5%) when compared to Palmer (68.8%), Wasilla (52.7%), Anchorage (59.6%) and Alaska (63.4%) residents.

Figure 30 - Residents Who Own Their Own Home, 2016



Source: Nielson Answers

As reported in the Mat-Su Borough Housing Needs Assessment, **Table 33** illustrates the number and percentage of residential parcels in Mat-Su in 2014. The majority (84.96%) of residential parcels are single family units.

Table 33 - Mat-Su All Residential Parcels

Type	# Units	Percent
Single Family Units	38,704 units	85.0%
Multifamily Units	3,378 units	7.4%
Mobile Homes	1,618 units	3.5%
Duplex Units	1,268 units	3.0%
Mobile Home Parks	435 units	.95%
Group Quarters	150 units	.33%

Source: Mat-Su Borough Housing Needs Assessment, 2014

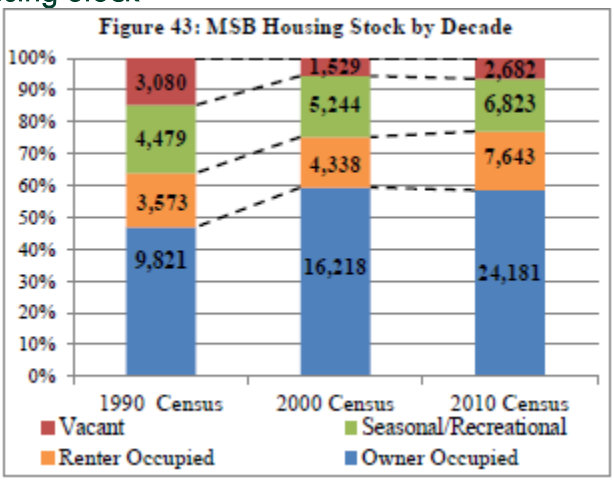
The Mat-Su Borough Housing Needs Assessment 2014 also shows the number and percentage of housing units in the major housing area compared to the rural area. This is illustrated in Figure 31. Just under one in four (23.12%) housing units are in the rural area, with the majority (76.88%) residing inside the major housing area.

Figure 31 - Mat-Su Major Residential Area and Rural Comparison

Source: Mat-Su Borough Housing Needs Assessment, 2014

Also reported in the Mat-Su Borough Housing Needs Assessment 2014, Figure 32 illustrates the Mat-Su housing stock in 1990, 2000 and 2010. The highest number of units are owner occupied and have been over the past three decades. The number of vacant units has fluctuated over the years with a decrease observed between 1990 and 2000 and then an increase between 2000 and 2010.

Figure 32 - Mat-Su Housing Stock



Source: Mat-Su Borough Housing Needs Assessment, 2014

The CCS Early Learning Community Assessment 2014 reported the average sales price of a single-family home, both new and existing construction, for the third quarter of 2013. This is depicted in Figure 33. Mat-Su housing prices are lower when compared to Anchorage and the state with new construction averaging $287,656 and existing construction averaging $251,824.

Figure 33 - Average Sale Price of a Single-Family Home

Source: CCS Early Learning Community Assessment, 2014

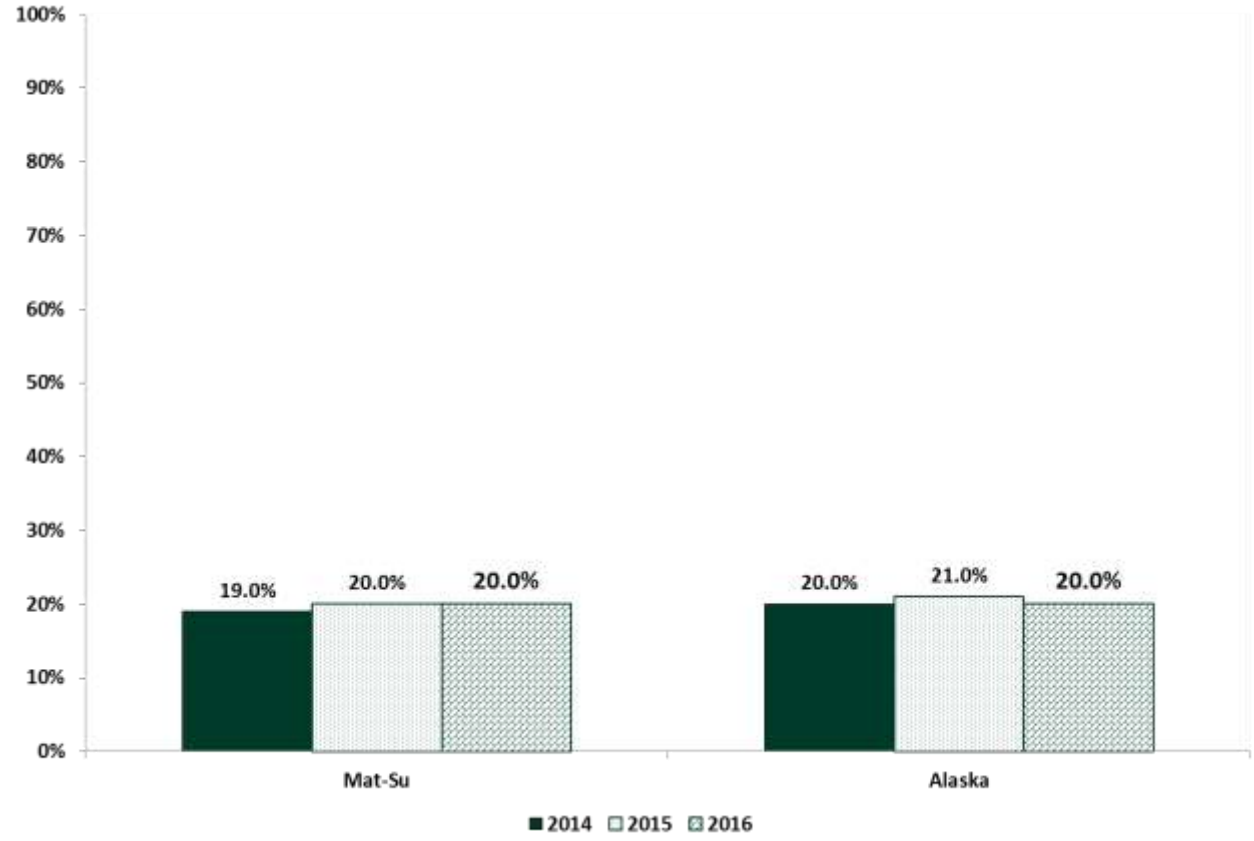
"Severe Housing Problems" is defined as the percentage of households with at least 1 or more of the following housing problems:

1. housing unit lacks complete kitchen facilities;
2. housing unit lacks complete plumbing facilities;
3. household is severely overcrowded; and
4. household is severely cost burdened.

"Severe overcrowding" is defined as more than 1.5 persons per room. Severe cost burden is defined as monthly housing costs (including utilities) that exceed 50% of monthly income.

According to the County Health Rankings, Figure 34 illustrates the percentage of residents in Mat-Su and Alaska considered to have a severe housing problem in 2014 through 2016. One in five (20.0%) residents in Mat-Su and Alaska experienced severe housing problems in 2016. The percentage of residents experiencing a severe housing problem has been fairly consistent over the three years with Mat-Su comparable to Alaska.

Figure 34 - Severe Housing Problems

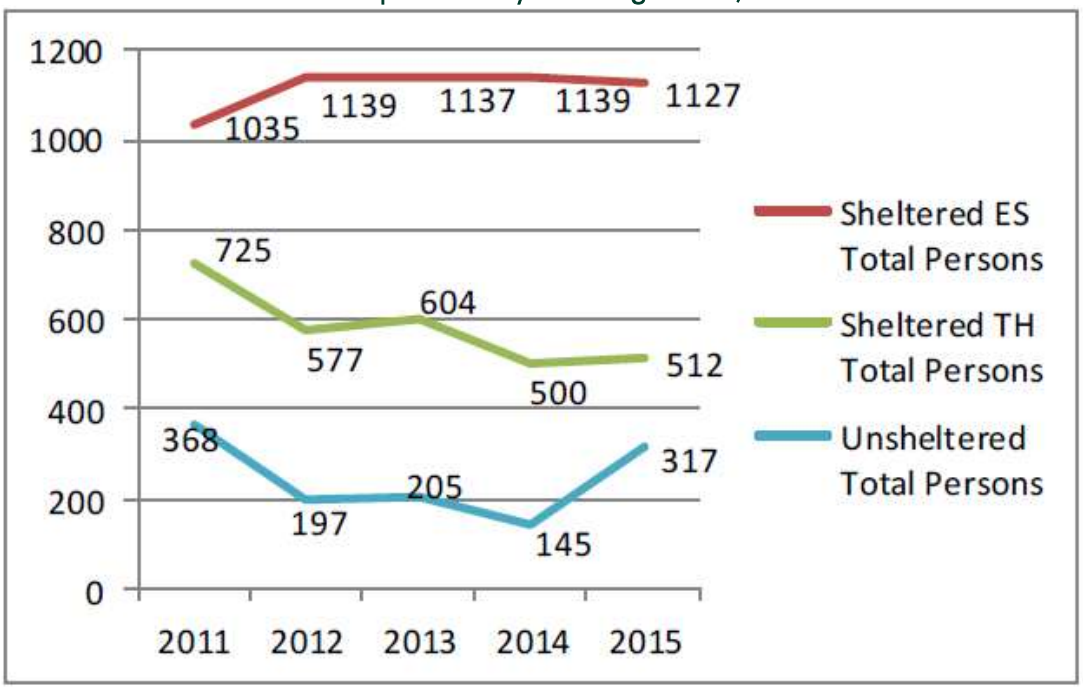


Source: County Health Rankings

Homelessness

According to the Point in Time Homeless Count 2015 for the Mat-Su Borough, **Figure 35** illustrates the point in time homeless counts for 2011-2015. According to the HUD (Housing and Urban Development) 2015 Point in Time count, there were 1,956 homeless individuals statewide, which was a 9% increase from the previous year. Of those, 317 were unsheltered at the time of the count. Over half (57.5%) were utilizing emergency shelter services. One out of five individuals experiencing homelessness were under the age of 18.

Figure 35 - Statewide Homeless Population by Housing Status, 2015



Source: Point in Time Homeless Count, HUD 2015

According to the Justice Center of the University of Alaska Anchorage, Table 34 lists the top 10 states with the highest concentration of homeless individuals in 2008. Alaska was identified as the 10th highest state, with .24% of the population considered homeless.

Table 34 - States with Highest Concentrations of Homeless Individuals, 2008

		Homeless population	
Rank*	State	N	% of total population
1	Oregon	20,653	0.54 %
2	Nevada	12,610	0.48
3	Hawaii	6,061	0.47
4	California	157,277	0.43
5	Washington	21,954	0.34
6	New York	61,125	0.31
7	Colorado	14,747	0.30
8	Michigan	28,248	0.28
9	Florida	50,158	0.27
10	Alaska	1,646	0.24

* Rank is based on the number of homeless persons as a percentage of the state's total population.

Source: Justice Center, University of Alaska Anchorage. (Summer 2009). "A Look at Homelessness in Alaska." Alaska Justice Forum 26(2): 2–5.

Also reported by the Justice Center, University of Alaska Anchorage, **Table 35** shows the subpopulations that were homeless in January 2009. In Alaska, the highest percentage of homeless individuals were those with chronic substance abuse (13.9%), which was also the highest in Anchorage (13.5%).

Table 35 - Subpopulations of Homeless Individuals, by Type

	Anchorage						Alaska (includes Anchorage)					
	Sheltered[1]		Unsheltered[2]		Total		Sheltered[1]		Unsheltered[2]		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Chronically homeless	207	7.4 %	46	29.3 %	253	8.5 %	312	7.3 %	78	23.9 %	390	8.5 %
Chronic substance abuse[3]	347	12.4	52	33.1	399	13.5	554	13.0	84	25.7	638	13.9
Victims of domestic violence	140	5.0	7	4.5	147	5.0	312	7.3	15	4.6	327	7.1
Veterans	190	6.8	25	15.9	215	7.3	257	6.0	37	11.3	294	6.4
Severely mentally ill	243	8.7	22	14.0	265	8.9	453	10.6	51	15.6	504	11.0
Unaccompanied youth (under 18 years)	45	1.6	0	0.0	45	1.5	115	2.7	6	1.8	121	2.6
Persons with HIV/AIDS	17	0.6	4	2.5	21	0.7	26	0.6	4	1.2	30	0.7
Total number of homeless	**2,805**		**157**		**2,962**		**4,256**		**327**		**4,583**	

Note: Percentages are calculated by averaging all available data points. This approach, a moving average, provides a clearer picture of the long-term trends in the homeless population. Veteran's Affairs homeless count was not included in this count, but generally adds 10 to 20 individuals to the count. Some homeless individuals are members of more than one subpopulation. Not all individuals were members of a subpopulation.

1. *Sheltered homeless* includes individuals living in emergency shelters, transitional shelters, living with extended family and/or friends, or temporarily living in motels.
2. *Unsheltered homeless* includes individuals living in a place not meant for human habitation, such as cars, parks, sidewalks, abandoned buildings, or on the street.
3. *Chronic homeless* is defined by the federal government as either (1) an unaccompanied homeless individual with a disabling condition who has been continuously homeless for a year or more, or (2) an unaccompanied individual with a disabling condition who has had at least four episodes of homelessness in the past three years. A *disabling condition* is a diagnosable substance abuse disorder, a serious mental illness, developmental disability, or chronic physical illness or disability, including the co-occurrence of two or more of these conditions. An *episode of homelessness* is a separate, distinct, and sustained stay on the streets and/or in a homeless emergency shelter.

Source: Justice Center, University of Alaska Anchorage. (Summer 2009). "A Look at Homelessness in Alaska." Alaska Justice Forum 26(2): 2–5.

The homeless count for various boroughs and cities in Alaska for 2007 through 2009 is outlined in **Table 36**. The number of homeless individuals in Mat-Su fluctuated during the three years, but between 2008 (95) and 2009 (472) increased by almost 400%.

Table 36 - Alaska Homeless County, 2007-2009

Area	2007	2008	2009
Anchorage	1,653	2,199	2,962
Fairbanks	171	280	428
Kenai Peninsula Borough	191	153	166
Mat –Su Borough	127	95	472
City of Juneau	232	203	403
Homer	62		
Bethel	28		
Rest of state	190	381	152
Total homeless count	**2,654**	**3,311**	**4,583**
Anchorage population	282,375	284,994	—
Alaska population	674,510	679,200	—

Source: Justice Center, University of Alaska Anchorage. (Summer 2009). "A Look at Homelessness in Alaska." Alaska Justice Forum 26(2): 2–5.

Homeless Youth

From July 1, 2015 to May 20, 2016, the Mat-Su School District identified 695 students who were experiencing homelessness. The federal definition in regard to the McKinney Vento Act defines student homelessness as lacking a fixed, regular, and adequate nighttime residence. During the 2015-2016 school year, the school districts' Families in Transition program provided over 4,200 services. The complete list of services and total number provided can be found in Table 37.

The most frequent services provided for families in transition students were transportation (835), free lunch (818), clothing (693) and personal supplies (653).

Table 37 - Services Provided for Families in Transition Students, 2015-2016 School Year

Row Labels	Count of Service
Clothing	693
Emergency Shelter Referral	68
Free Lunch	818
Laundry	161
Medical Referral	37
Other	27
Parent Education	16
Personal Supplies i.e. Hygiene Kit	653
Professional Services Referral	473
School Enrollment/ Participation Assistance	56
School Supplies i.e. backpack, school supplies, etc.	400
Transportation	835
Tutoring/ Education Support	20
(blank)	
Grand Total	**4257**

Source: Matanuska-Susitna Borough School District, 2016

How Housing Impacts Health: Community Input

Housing was mentioned in many of the focus groups and interviews as both a factor that impacts health, as well as an area that is impacted when people have health challenges without the resources to pay for medical care. One major medical issue can cause homelessness if an individual does not have medical insurance and/or paid sick leave. According to professionals in the Mat-Su region, the lack of diversified housing stock is a problem because not everyone can afford a single family home on an acre of land, which is the predominant type of housing available. This adversely affects both seniors on fixed incomes and young people who are just getting started in their careers and cannot yet afford to purchase a single family home.

There is a sizable number of homeless youth in the region who struggle to finish high school due to lack of stability. Many of these young people will be destined to live in poverty due to lack of education and adequate income. The lack of utility infrastructure especially in the rural/remote areas of the borough results in housing that lacks running water and electricity, making sanitation a factor in some homes and places. In some cases, the quality and safety of the house itself is an issue, because some people choose to come to Alaska to live off the land and attempt to build their own houses without appropriate carpentry and other skills required.

In many of the focus groups and interviews, participants noted that an ideal healthy community includes access to affordable housing, with no homelessness. Ending homelessness through adequate affordable housing is also a key goal for the Mat-Su Borough.

How Where One Lives Impacts Health

As reported in the Alaska Behavioral Risk Factor Surveillance Survey, Table 38 shows the indicators where a statistically significant difference was observed based on how where one lives impacts health. Rural respondents self-reported that they are less likely to have insurance, access medical care, or be healthy compared to other respondents. They are more likely to smoke and to have ever been told they have COPD.

Table 38 - How Where One Lives Impacts Health, 2010-2014, 2011-2014, and 2013-2014

How Where One Lives Impacts Health			
Where We Live	**Palmer**	**Wasilla**	**Rural**
Have health insurance (2010-2014)	84.4%	79.2%	73.9%
Access to medical care not limited due to cost (2010-2014)	87.7%	83.1%	73.9%
Satisfied with health care received (2013-2014)	97.4%	95.2%	83.8%
Health Status Impact	**Palmer**	**Wasilla**	**Rural**
Are physically healthy (2010-2014)	67.3%	60.2%	57.1%
Positive mental health outlook (2010-2014)	67.4%	67.4%	58.2%
Ever told they had COPD (2011-2014)	4.3%	7.4%	10.4%
Non-Smoking Adults (2010-2014)	78.1%	78.4%	67.8%

Source: Alaska Behavioral Risk Factor Surveillance System Data

Where We Live: Upper Susitna Valley

Upper Susitna Valley is composed of the communities of Chase, Petersville, Skwentna, Susitna, Susitna North, Talkeetna, Trapper Creek, Sunshine, and Willow. Located within Upper Susitna Valley lies Sunshine Community Health Center (SCHC), a federally qualified community health center, with integrated primary medical, behavioral health and dental care with offices in two locations – Willow and Talkeetna.

SCHC provides a full spectrum of high-quality, comprehensive, culturally competent, healthcare services. The Clinic promotes prevention and early intervention, thus keeping under-insured or uninsured individuals out of hospital emergency rooms. These services include:

- Medical Services – Family Health Care, Laboratory and X-Ray, Dispensary, DOT Medical Exams, Immunization, Sport Physicals, Eye Clinic and a Men's Clinic
- Dental Services – Preventative care, initial pediatric "first visits," and full mouth rehabilitation
- Behavioral Health – Confidential mental health and substance abuse treatment, as well as the following traditional counseling services: Individual, couples, family, and group therapy.

SCHC Partners with other agencies to make additional services available and convenient such as:

- Mobile Mammography – Mammograms are performed in both Talkeetna and Willow throughout the year with the Providence Imaging mammogram-mobile.
- Physical Therapy – Services are available in both the Talkeetna and Willow clinics with Health Quest Therapy.
- Eye Care – Eye exams and frame selection are offered in the Talkeetna clinic once a month.

With 30 years of service in the Upper Susitna Valley, SCHC is a resource for the community with health education, community outreach, advocacy and support programs. In listening and responding to the specific needs of this community, unique programs have been developed, such as:

- Sunshine Transit – Inexpensive, reliable transportation to health care, wellness, education and employment in the Upper Susitna Valley. Current routes include the Daily Talkeetna Spur Road, Willow on-Demand Service and twice a week Talkeetna to Wasilla.
- Office Based Opioid Treatment - a program that combines the use of the medication, with outpatient Behavioral Health treatment to help patients transition from drug dependence to recovery.
- Positive Action - Youth advocacy and family support programs in schools that promote an intrinsic interest in learning and becoming a better person.
- Patient Advocacy – Help patients navigate the confusing healthcare system with education and assistance completing financial paperwork or applications including Medicaid, Medicare, Marketplace, TBI Grants, Heating Assistance and more.
- Sunshine Care Connections - Organization of resources needed for patients to bridge the gaps along the care pathway like home care, home delivered meals, equipment, and transportation.

Upper Susitna Valley Population

The information from the U.S. Census Bureau in **Table 39** shows how the population of the Upper Susitna Valley has had a slight decline in the population since 2010.

Table 39 - Upper Susitna Population

UPPER SUSITNA POPUL ATION				
	2010 Census	2016 Estimate	Change 2010 -2016	% Change 2010 -2016
Population	*4,812*	*4,801*	*-11*	*-0.2%*
Households	*2,189*	*2,214*	*25*	*1.1%*
Family Households		*57.9%*		
Average Household Size		*2.16*		
Owner- Occupied Housing		*80.5%*		
Renter- Occupied Housing		*19.5%*		

Source: U.S. Census Bureau, 2016 Estimate

Upper Susitna Valley Income

When looking at income for Upper Susitna Valley, the median household income is $56,173. Table 40 outlines the percent of residents by income level.

Table 40 - Percent of Upper Susitna Valley Resident by Income Level

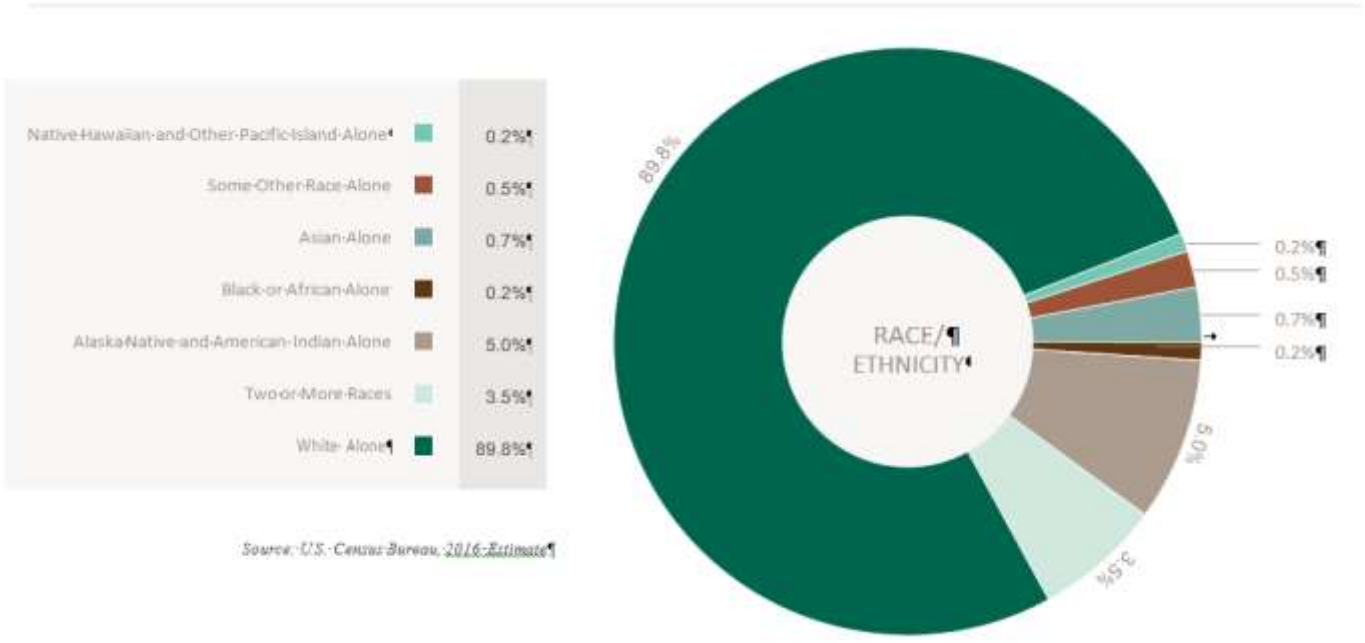
PERCENT OF UPPER SUSITNA VALLEY RESIDENTS BY INCOME LEVEL					
< $15K	$15-24,999K	$25K – 49,999	$50K – 74,999	$75K – 99,999	>$100K
14.3%	*11.8%*	*18.5%*	*22.0%*	*14.9%*	*18.7%*

Source: U.S. Census Bureau, 2016 Estimate

Upper Susitna Valley Race/Ethnicity

The breakdown of race/ethnicity in the Upper Susitna Valley is illustrated in Figure 36 . At least 5% of the population state they are Alaska Native/American Indian alone and 89.9% White, 1.6% other race, and 3.5% two or more races.

Figure 36 - Race/Ethnicity in Upper Susitna Valley



Source: U.S. Census Bureau, 2016 Estimate

Upper Susitna Valley Age

In the Upper Susitna Community, 25.8% of resident are under the age of 24 years and 18.2% are over the age of 65 years.

Upper Susitna Valley Education Level

The U.S. Census Bureau data in **Table 41** lists the education level for the Upper Susitna Valley.

Table 41 - Education Level of Upper Susitna Valley

EDUCATION LEVEL OF UPPER SUSITNA VALLEY				
Less than high school diploma	High school graduate	Some college no degree	College Degree (Associates/ Bachelor's)	Graduate Degree
12.1%	*31.2%*	*28.4%*	*19.0%*	*4.2%*

Source: U.S. Census Bureau, 2016 Estimate

Upper Susitna Valley Occupations

In the Upper Susitna Community, 51.1% of the workers are white collar, 34.8% are blue collar, and 16.3% are service/farm workers. The average time traveled to work is 33 minutes.

Upper Susitna Valley: Community Input

Focus Group participants from the Upper Susitna Valley community rated the health status of children and families in Mat-Su. The responses are outlined in **Table 42** below.

Table 42 - Overall, How Would You Rate the Health Status of Children and Families in Mat-Su?

OVER ALL, HOW WOULD YOU RATE THE HEALTH STATUS OF CHILDREN AND FAMILIES IN MAT- SU?					
	Excellent	Very Good	Good	Fair	Poor
Sunshine CHNA (N=17)	*0%*	*6%*	*35%*	*59%*	*0%*

Source: Mat-Su Focus Groups, Strategy Solutions, Inc., 2016

Participants were also asked to identify the percentage of Mat-Su residents that have a minimum baseline of factors that would allow them to make healthy decisions. Table 43 shows the responses below.

Table 43 - What Percentage of Residents of Mat-Su Have a Minimum Baseline of All Factors We Mentioned That Allow Them to Make Healthy Decisions

WHAT PERCENTAGE OF RESIDENTS OF MAT-SU HAVE A MINIMUM BASELINE OF ALL FACTORS WE MENTIONED THAT ALLOW THEM TO MAKE HEALTHY DECISIONS?				
	Less than 25%	26- 50%	51-75%	More than 75%
Sunshine CHNA (N=17)	*0%*	*65%*	*29%*	*6%*

Source: Mat-Su Focus Groups, Strategy Solutions, Inc., 2016

During the focus groups, participants were asked to indicate their agreement with the statement, "Mat-Su is currently a healthy community." Table 44 shows the responses for the residents of the Upper Susitna area.

Table 44 - Mat-Su is Currently a "Healthy Community"

TABLE 28 - MAT-SU IS CURRENTLY A "HEALTHY COMMUNITY"					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Sunshine CHNA (N=17)	*0%*	*6%*	*41%*	*53%*	*0%*

Source: Mat-Su Focus Groups, Strategy Solutions, Inc., 2016

Snapshot of Patients at Sunshine Clinic

The Federally Qualified Health Care Centers in the Mat-Su region offer the opportunity to extend care to many residents who would not otherwise be able to access primary care and preventative services. Based on the UDS (Universal Data System) data provided by Sunshine Clinic, in 2015, 87.2% of Sunshine Clinic's 3,352 patients (2,923) lived in zip codes categorized as Mat-Su. The majority of these patients lived in Talkeetna (36.0%) and Willow (34.7%). About a third (33.7%) of patients served had no health insurance, which is an approximately 10% decline over the three-year period 2013-2015. Over half (52.8%) had incomes under 200% of the federal poverty level. The majority of the residents (89.7%) were White. **Table 45** below outlines the various diagnoses of the patient population in 2015, along with utilization.

Table 45 - Health Status Snapshot of Sunshine Clinic Patients (3,352)

HEALTH STATUS SNAPSHOT OF SUNSHINE CLINIC PATIENTS (3,352)			
	Number of Patients	Percentage of Patients	Avg. Visits Per Year per Patient
Selected Diseases of the Respiratory System			
Asthma	*123*	*3.7%*	*1.5*
Chronic obstructive pulmonary diseases	*103*	*3.1%*	*1.5*
Selected Other Medical Conditions			
Diabetes mellitus	*170*	*5.1%*	*2.2*
Heart disease	*102*	*3.0%*	*1.8*
Hypertension	*466*	*13.9%*	*1.6*
Contact dermatitis and other eczema	*88*	*2.6%*	*1.3*
Dehydration	*9*	*0.3%*	*1.6*
Overweight and obesity	*80*	*2.4%*	*1.3*
Selected Mental Health and Substance Abuse Conditions			
Alcohol related disorders	*76*	*2.3%*	*3.5*
Other substance related disorders (excluding tobacco use disorders)	*78*	*2.3%*	*10.4*
Tobacco use disorder	*243*	*7.2%*	*1.6*
Depression and other mood disorders	*276*	*8.2%*	*2.3*
Anxiety disorders including PTSD	*175*	*5.2%*	*2.1*
Attention deficit and other disruptive behaviors	*23*	*0.7%*	*3.4*
Other mental disorders, excluding drug or alcohol dependence	*101*	*3.0%*	*1.8*

Source: Sunshine Clinic UDS Data, 2015 HRSA Health Center Program

Where We Live: Glenn Highway

The Glenn Highway Region is composed of the communities of Buffalo/Soapstone, Chickaloon, Eureka Roadhouse, Glacier View, Lake Louise, and Sutton Alpine.

Located in the area of Glenn Highway is Life House Community Health Center. C'eyiits' Hwnax Life House Community Health Center serves Alaska Native and non-Native people from Palmer to Eureka, including the communities of Chickaloon, Glacier View and Sutton/Alpine. In addition, the center provides Veterans Affairs supported medical services to veterans residing in the area. Chickaloon Village Traditional Council (CVTC) and SCF operate the Life House Community Health Center collaboratively.

Services that are provided by Life House Community Health Center include:

- Primary Care Services
- Behavioral Health Services
- Select Pharmacy Services
- Radiology Services
- Scheduled Specialty Services (mammograms, dieticians, women's health and more)
- Health Education
- Wellness Center

Glenn Highway Population

The U.S. Census Bureau, 2016 Estimates in **Table 46** outlines how the population of Glenn Highway has had an increase in the population since 2010.

Table 46 - Glenn Highway Region Population

GLENN HIGHWAY REGION POPULATION				
	2010 Census	2016 Estimate	Change 2010 -2016	% Change 2010 -2016
Population	*2,883*	*3,427*	*544*	*18.9%*
Households	*960*	*1,053*	*93*	*9.7%*
Family Households		*707*		
Average Household Size		*2.53*		
Owner- Occupied Housing		*81.7%*		
Renter- Occupied Housing		*18.3%*		

Source: U.S. Census Bureau, 2016 Estimate

Glenn Highway Income

When looking at income for Glenn Highway, the median household income is $57,624. **Table 47** illustrates the percent of residents by income level.

Table 47 - Percent of Glenn Highway Residents by Income Level

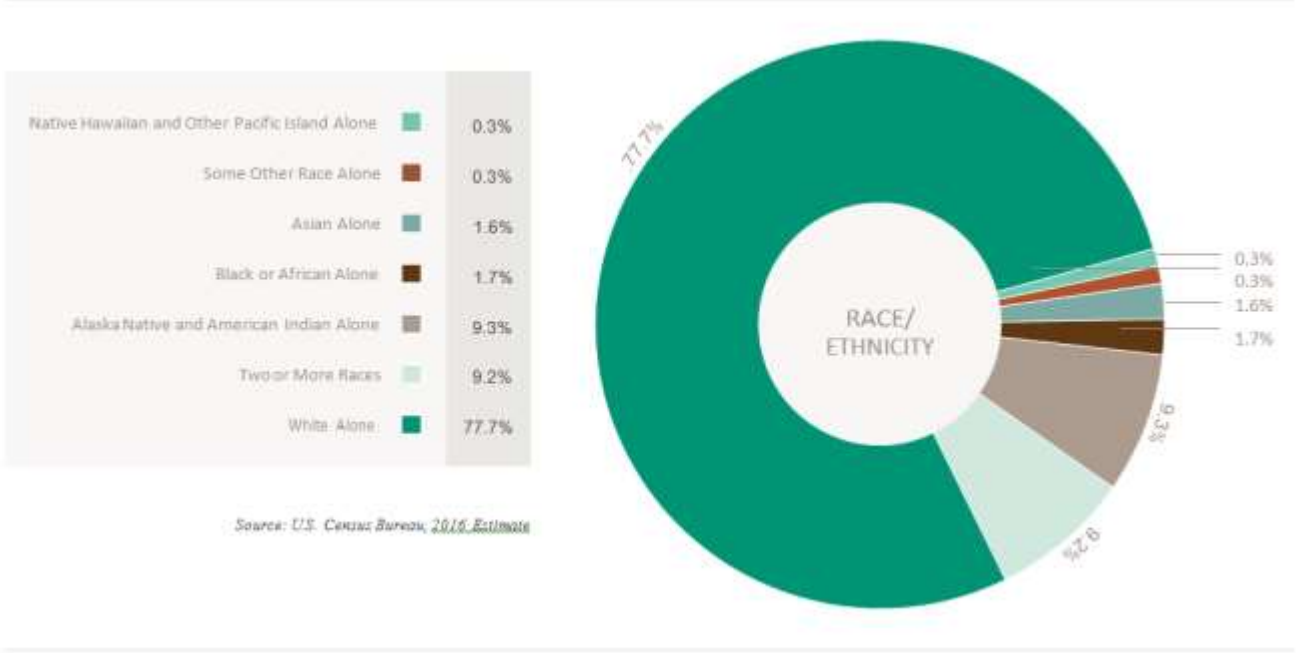
PERCENT OF GLENN HIGHWAY RESIDENTS BY INCOME LEVEL					
< $15K	$15-24,999K	$25K – 49,999	$50K – 74,999	$75K – 99,999	>$100K
10.0%	12.6%	22.1%	17.3%	13.1%	24.9%

Source: U.S. Census Bureau, 2016 Estimate

Glenn Highway Race/Ethnicity

The U.S. Census Bureau, 2016 estimates in **Figure 37** illustrates the breakdown of race/ethnicity in Glenn Highway. At least 9.3% of the population state they are Alaska Native/American Indian alone and 77.7% White, 0.3% other race, and 9.3% two or more races.

Figure 37 - Race/Ethnicity in Glenn Highway Region



Source: U.S. Census Bureau, 2016 Estimate

Glenn Highway Age

In the Glenn Highway Region, 32.3% of residents are under the age of 24 years and 11.8% are over the age of 65 years.

Glenn Highway Education Level

The education level for Glenn Highway is outlined in **Table 48** below.

Table 48 - Education Level of Glenn Highway

EDUCATION LEVEL OF GLENN HIGHWAY			
Less than high school diploma	High school graduate	Some college no degree	College Degree (Associates/Bachelor's)
14.7%	*31.3%*	*27.4%*	*20.4%*

Source: U.S. Census Bureau, 2016 Estimate

Glenn Highway Occupations

In the Glenn Highway Region, 51.1% of the workers are white collar, 24.4% are blue collar, and 24.5% are service/farm workers. The average time traveled to work is 38 minutes.

Glenn Highway Healthcare-related Transportation

Information from the Chickaloon Village Traditional Council in **Table 49** shows the Southcentral Foundation provided transportation to the residents of Glenn Highway for the first half of the year (October 2015-March 2016). The 167 Life House visits included wellness transports in Sutton and to clinical visits. The 212 Outreach transports included those rides for prescriptions and shopping. The 67 Outreach Wellness included rides to Benteh Nuutah on Tuesdays. The Non- Beneficiary Transports are those rides exclusively to the Life House Clinic.

Table 49 - Healthcare-Related Transportation for Glenn Highway Community Residents

HEALTHCARE- REL ATED TR ANSPORTATION FOR GLENN HIGHWAY COMMUNITY RESIDENTS							
	Life House Visits	All Medical	All Dental/ Vision	All Behavioral Health	Outreach	Outreach Wellness	Non-Beneficiaries
Total	*167*	*90*		*19*	*4*	*212*	*67*

Source: Chickaloon Village Traditional Council

The behavioral health and wellness activities at Life House are outlined in Table 50 below. In the second quarter of FY 2016, Life House hired a new Behavioral Health Case Manager and therefore, due to training, numbers are lower than in previous quarters.

Table 50 - Behavioral Health and Wellness Activities at Life House

BEHAVIOR AL HEALTH AND WELLNESS ACTIVITIES AT LIFE HOUSE						
Wellness	Customer BH Cases	BH Referrals	Elder Congregate Meals	Volunteer/ Community	Home Delivered Meals	Total Health & Wellness Promotions
Qtr. 1	11	45	93	119	687	899
Qtr. 2	5	12	119	420	609	1,148
Total	16	57	212	539	1,296	2,047

Source: Southcentral Foundation, October 2015-March 2016

Glenn Highway: Community Input

The majority of focus group participants (53%) from the Glenn Highway community rated their community health status Good. This is illustrated in **Table 51.**

Table 51 - Overall, How Would You Rate the Health Status of Children and Families in Mat-Su?

OVER ALL, HOW WOULD YOU RATE THE HEALTH STATUS OF CHILDREN AND FAMILIES IN MAT- SU?					
	Excellent	Very Good	Good	Fair	Poor
Tribal (N=19)	*5%*	*32%*	*53%*	*5%*	*5%*

Source: Mat-Su Focus Groups, Strategy Solutions, Inc., 2016

The majority of focus group participants (57%) also indicated that between 51% and 75% of the residents of Mat-Su have a minimum baseline of all factors that allows them to make healthy decisions. This is outlined in **Table 52.**

Table 52 - What Percentage of Residents of Mat-Su Have a Minimum Baseline of All Factors We Mentioned That Allow Them to Make Healthy Decisions?

WHAT PERCENTAGE OF RESIDENTS OF MAT- SU HAVE A MINIMUM BASELINE OF ALL FACTORS WE MENTIONED THAT ALLOW THEM TO MAKE HEALTHY DECISIONS?				
	Less than 25%	26- 50%	51-75%	More than 75%
Tribal (N=19)	*14%*	*24%*	*57%*	*5%*

Source: Mat-Su Focus Groups, Strategy Solutions, Inc., 2016

Table 53 outlines the responses when Glenn Highway focus group participants were asked to agree or disagree with the statement "Mat-Su is currently a healthy community." A little over half of the respondents either agreed (52%) or strongly agreed (5%). Almost a quarter (24%) indicated that they were neutral.

Table 53 - Mat-Su is Currently a "Healthy Community"

MAT- SU IS CURRENTLY A "HEALTHY COMMUNITY"					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Tribal (N=19)	*5%*	*52%*	*24%*	*19%*	*0%*

Source: Mat-Su Focus Groups, Strategy Solutions, Inc., 2016

Where We Live: Mat-Su Core

Mat-Su Core is composed of the communities of Wasilla, Palmer, Big Lake, Houston and Knik. The Census areas of Point Mackenzie, Meadow Lakes, Knik- Fairview and Tanaina are also part of the Mat-Su Core.

Located within the Mat-Su Core lies Mat-Su Health Services, a federally qualified community health center that is also a community mental health center. Health is broadly defined as a state of complete physical, mental, and social well-being and not simply the absence of disease or infirmary. The mission of a Community Health Center (CHC) is to achieve good health for the individuals served, community service, strongly emphasize prevention, early intervention, rehabilitation, and education, in addition to direct care.

Services provided by Mat-Su Health Services include:

- Family Medicine –Primary medical care for the whole family including physicals, well child checks, immunizations, and management of chronic illness such as heart disease, diabetes and asthma.
- Women's Health – Participate in Alaska's Breast and Cervical Health Check program. This program provides mammograms and Pap services to women who meet certain income guidelines.
- Depression – Offer a Collaborative Care approach to treatment of depression and other common mental disorders through the IMPACT Program. IMPACT intervention provides wraparound services for depression, quality of life, and overall wellness of the individual.
- Behavioral Health – Crisis intervention, counseling services, and psychosocial rehabilitative services.

Mat-Su Core Population

The information from the U.S. Census Bureau in **Table 54** outlines how the population of the Mat-Su Core has had a 14.9% increase in the population since 2010.

Table 54 - Population of Mat-Su Core

POPULATION OF MAT-SU CORE				
	2010 Census	2016 Estimate	Change 2010 -2016	% Change 2010 -2016
Population	*59,357*	*68,225*	*8,868*	*14.9%*
Households	*2,189*	*2,214*	*25*	*1.1%*
Family Households		*71.3%*		
Average Household Size		*2.69*		
Owner- Occupied Housing		*74.6%*		
Renter- Occupied Housing		*24.4%*		

Source: U.S. Census Bureau, 2016

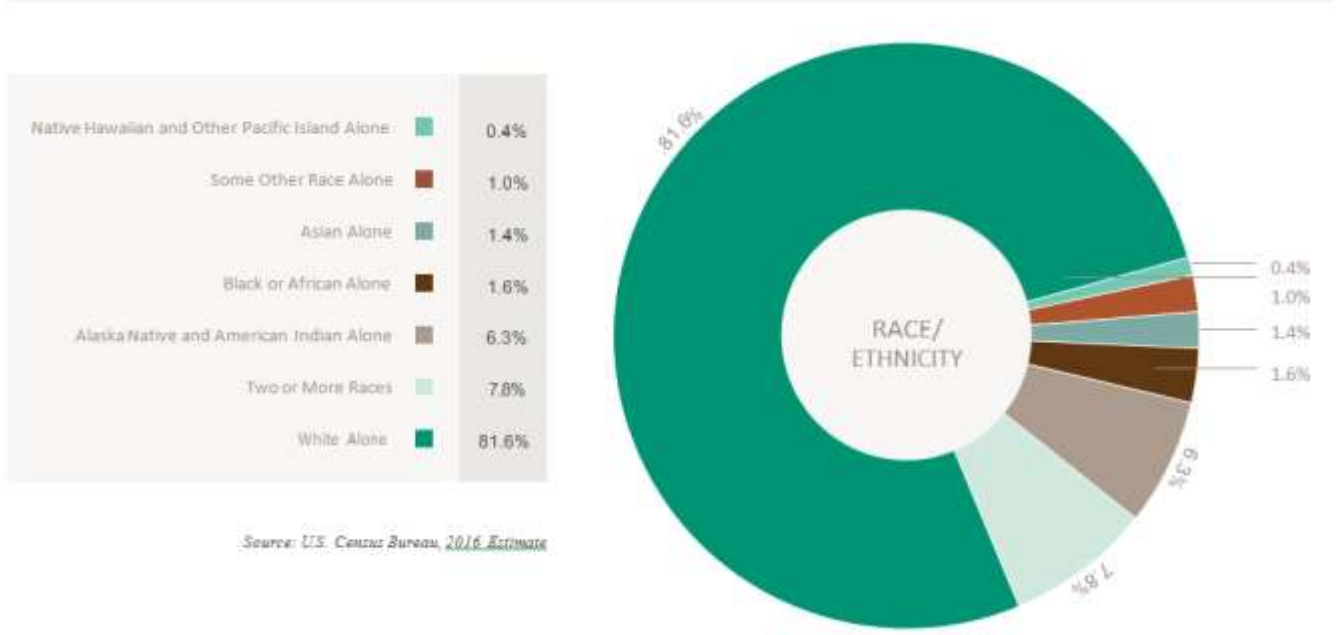
Mat-Su Core Income

When looking at income for Mat-Su Core, the median household income is $73,214, according to the US Census Bureau, 2016.

Mat-Su Core Race/Ethnicity

Illustrated in **Figure 38** below is the breakdown of race/ethnicity in Mat-Su Core. At least 6.0% of the population state they are Alaska Native/American Indian alone and 81.6% White, 1.0% other race, and 7.8% two or more races.

Figure 38 - Race/Ethnicity in Mat-Su Core



Source: U.S. Census Bureau, 2016 Estimate

Mat-Su Core Age

In the Core area, 37.9% of residents are under the age of 24 years and 10.1% are over the age of 65 years, according to the US Census Bureau, 2016.

Mat-Su Core Education Level

Illustrated in **Table 55** is the education level for the Mat-Su Core, according to the US Census Bureau, 2016.

Table 55 - Education Level of Mat-Su Core

EDUCATION LEVEL OF MAT- SU CORE				
Less than high school diploma	High school graduate	Some college no degree	College Degree (Associates/Bachelor's)	Graduate Degree
8.1%	*33.8%*	*30.5%*	*21.8%*	*5.8%*

Source: U.S. Census bureau, 2016

Mat-Su Core Occupations

In the Core area, according to the US Census Bureau, 2016, 54.2% of the workers are white collar, 33.8% are blue collar, and 19.4% are service/farm workers. The average time traveled to work is 36.8 minutes.

Palmer Health Care Access and Health Status

- 85.0% have health insurance
- 86.6% of respondents rated their health as Excellent, Very Good, or Good
- 12.1% are unable to receive needed care due to cost
- 70.4% have a primary care provider

Source: AK BRFSS, 2010-2014

Wasilla Health Care Access and Health Status

- 79.9% have health insurance
- 84.8% of respondents rated their health as Excellent, Very Good, or Good
- 16.9% are unable to receive needed care due to cost
- 67.6% have a primary care provider

Source: AK BRFSS, 2010-2014

Snapshot of Patients at Mat-Su Health Services

The Federally Qualified Health Care Centers in the Mat-Su region offer the opportunity to extend care to many residents who would not otherwise be able to access primary care and preventative services. Based on the UDS (Universal Data System) data provided by Mat-Su Health Services, in 2015, the majority, 94.6% of Mat-Su Health Services' 2,462 patients lived in zip codes designated as the Mat-Su. More than half (57%) of these patients lived in Wasilla and the surrounding areas (18.7%). An additional 20.6% lived in the Palmer area. More than half (55.7%) of patients served had no health insurance. Almost four out of ten patients (38.3%) had incomes under 200% of the federal poverty level. Of those patients where race was designated (86.3%), the majority (91.1%) indicated that they were White.

Table 56 below outlines the various diagnoses of the patient population in 2015, along with utilization.

Table 56 - Health Status Snapshot of Mat-Su Health Services Patients (2,416)

HEALTH STATUS SNAPSHOT OF MAT- SU HEALTH SERVICES PATIENTS (2,416)			
	2015 Mat-Su Patients Services	Mat-Su Percentage of Visits	Mat-Su Avg. Health
Selected Diseases of the Respiratory System			
Asthma	66	2.7%	1.5
Chronic obstructive pulmonary diseases	62	2.5%	1.3
Selected Other Medical Conditions			
Diabetes mellitus	191	7.8%	2.9
Heart disease	47	1.9%	1.5
Hypertension	396	16.1%	2.1
Overweight and obesity	125	5.1%	1.3
Selected Mental Health and Substance Abuse Conditions			
Alcohol related disorders	86	3.5%	2.9
Other substance related disorders (excluding tobacco use disorders)	104	4.2%	2.4
Tobacco use disorder	182	7.4%	1.6
Depression and other mood disorders	961	39.0%	4.3
Anxiety disorders including PTSD	592	24.0%	3.2
Attention Deficit and disruptive behavior disorders	196	8.0%	4.1
Other mental disorders, excluding drug or alcohol dependence	449	18.2%	4.5

Source: Mat-Su Health Services UDS Data, 2015 HRSA Health Center Program

Where We Live: Rural Vs. Mat-Su Core Area

Data for the rural parts of Mat-Su were compared to the core area. The rural data is inclusive for both Upper Susitna Valley and Glenn Highway, while the core area encompasses Palmer and Wasilla. The data, unless otherwise cited, came from the 2016 Mat-Su Household Survey that was conducted by the McDowell Group (N=700).

Rural Vs. Mat-Su Core Area Access to Health Care

Mat-Su survey respondents were asked if in the past 12 months, you or any members of your household experienced a number of access to health care issues. The comparative answers (rural versus core area) are outlined in Table 57.

Table 57 - Access to Health Care, Rural vs. Core Area

ACCESS TO HEALTH CARE RESPONSES		
Urban	Rural	
19%	*18%*	Did not seek health care because of the cost
11%	*14%*	Couldn't get a health care appointment at a time that worked for their household
10%	*7%*	Didn't know where to go for medical or mental health care
6%	*11%*	Were not able to get information because they didn't have access to a computer
6%	*7%*	Didn't have transportation to get to a health appointment
8%	*8%*	Mental health concern
6%	*5%*	Drug or alcohol abuse
2%	*3%*	Violence or threats of violence between family members

Source: 2016 Mat-Su Household Survey, McDowell Group

Rural Vs. Mat-Su Core Area Basic Needs

Mat-Su survey respondents were also asked if in the past 12 months they or any members of their household had to go without any of a number of basic needs. The comparative responses (rural versus core area) are reported in Table 58.

Table 58 - Basic Needs, Rural vs. Core Area

BASIC NEEDS		
Urban	Rural	
17%	*15%*	Needed dental care
14%	*9%*	Needed health care services
13%	*10%*	Needed prescriptions or medications
7%	*6%*	Reliable transportation
3%	*3%*	Food
3%	*2%*	Housing
3%	*2%*	Utilities such as heat or electricity

Source: 2016 Mat-Su Household Survey, McDowell Group

Rural Vs. Mat-Su Core Area Social Connections

To look at the social connections of the Mat-Su residents, survey respondents were asked if they experienced a number of social connections. The comparative results (rural versus core area) are listed in Table 59.

Table 59 - Social Connections, Rural vs. Core Area

SOCIAL CONNECTIONS		
Urban	Rural	
28%	*34%*	Reach outside of their circle of friends to give or receive help very often or often
84%	*85%*	Would feel very or somewhat comfortable asking their neighbors for help
64%	*66%*	Would tell the parents of a child in their neighborhood if they saw the child skipping school
45%	*43%*	Have volunteered in the last year
42%	*46%*	Have helped a community member - someone outside of their family or relatives in the last year often or very often
70%	*71%*	Have attended a local community event
61%	*58%*	Feel very safe in their neighborhood
90%	*91%*	Have two or more people they could count on for help
49%	*57%*	Do favors for others in their community very often or often
52%	*49%*	Would be likely to ask for help to care for your children

Source: 2016 Mat-Su Household Survey, McDowell Group

Rural Vs. Mat-Su Core Area Health Status

Mat-Su residents participating in the household survey were asked to rate their personal health status, as well as that of the community. The comparative results (rural versus core area) are shown in **Table 60**.

Table 60 - Health Status, Rural vs. Core Area

HEALTH STATUS		
Urban	Rural	
86%	*83%*	Rated their health as excellent, very good, or good
58%	*50%*	Thought the health status of others in the borough was excellent, very good, or good;
89%	*86%*	Said quality of life in Mat-Su is excellent very good, or good.
77%	*77%*	Said their satisfaction with life was 8-10 on a 10 point scale

Source: 2016 Mat-Su Household Survey, McDowell Group

Rural Vs. Mat Su Core Area Relationship with Nature

As reported in **Table 61,** Mat-Su residents who participated in the household survey reported that they experienced a relationship with nature in a number of ways.

Table 61 - Relationship with Nature, Rural vs. Core Area

REL ATIONSHIP WITH NATURE		
Urban	Rural	
92%	*92%*	Agreed or strongly agreed that their favorite places are in nature
88%	*81%*	Agreed or strongly agreed that they think about how their actions impact the earth
87%	*84%*	Agreed or strongly agreed that their relationship with nature is an important part of who they are

Source: 2016 Mat-Su Household Survey, McDowell Group

How the Rural FQHCs Compare to the Mat-Su Core Area FQHC

The Federally Qualified Health Care Centers (FQHC) in the Mat-Su region offer the opportunity to extend care to many residents who would not otherwise be able to access vital primary care and preventative services. Based on the UDS (Universal Data System) data provided by Sunshine Clinic and Mat-Su Health Services, almost half (43% in 2015) of the patients served are uninsured. Over the three-year period (2013-2015), both organizations saw the percentage of uninsured patients decline about 10.0%. Additionally, these entities not only serve residents of the Mat-Su Borough, approximately 10.0% of their patients live outside of the region. It is interesting to note that the demographics of the two health centers are very different.

Mat-Su Health Services patients have slightly higher rates of diabetes, obesity, hypertension, and alcohol disorders, and much higher rates of depression, anxiety (including PTSD), and other mental disorders (excluding drug or alcohol dependence) than patients served by the Sunshine Clinic. In 2015, the two clinics had only 35 patients that were designated as best served by a language other than English.

Utilization of services for patients diagnosed with various conditions was comparable, with the exception of other substance abuse disorders (Sunshine had 10.4 average visits for that condition versus 3.2 for Mat-Su), although Mat-Su Health Services has a higher percentage of patients diagnosed with anxiety disorder or PTSD (24.0% versus 5.2%) and other mental disorders (18.2% versus 3.0%).

How Where One Lives Impacts Health: Community Input

Whether one lives in a rural community or in the core area of the Mat-Su Valley (Palmer/ Wasilla) where one lives impacts health, according to focus group and interview participants. Those who live in the rural areas must travel farther to grocery stores, shopping, and health care services than those who live in the core area. Rural residents are more likely to have lower incomes and lack transportation and other resources. Rural residents are also more likely not to have electricity and/or running water in their homes.

Those who live in the core area have better access to indoor recreation opportunities and better access to health care services. They are also more likely to live closer to their neighbors and have more options for social connection and assistance than those who are more isolated in the rural areas.

How the Environment Impacts Health

"Studies have shown that exposure to the natural environment, or so-called green space, has an independent effect on health and health-related behaviors."[99] A 2010 meta-analysis in BMC Public Health found that people who participate in physical activity in the natural environment have less anger, fatigue, and feelings of depression, including an increased attention level.

Populations that are exposed to the greenest environments also have the lowest levels of health inequality related to income deprivation. Physical environments that promote good health might be important to reduce socioeconomic health inequalities."[100]

On the other hand, humans interact with the environment constantly. These interactions affect quality of life, years of healthy life lived, and health disparities. The World Health Organization (WHO) defines environment, as it relates to health, as "all the physical, chemical, and biological factors external to a person, and all the related behaviors." Environmental health consists of preventing or controlling disease, injury, and disability related to the interactions between people and their environment."[101]

There are ten Environmental Risk Factors that, if not appropriately controlled, can lead to disease. These include:

1. Pollution
2. Microbes in air, water, or soil
3. Contaminants in food
4. Weather conditions (droughts, heat waves)
5. Natural disasters (hurricanes, earthquakes, floods)
6. Pesticides and other chemicals
7. Pests and parasites
8. Radiation
9. Poverty
10. Lack of access to health care"[102]

[99] Mitchell, Dr Richard, PhDa, Popham, Frank, PhDb. "Effect of Exposure to Natural Environment on Health Inequalities: An Observational Population Study. The Lancet, Volume 372, Issue 9650, 8–14. November 2008, pages 1614-1615.

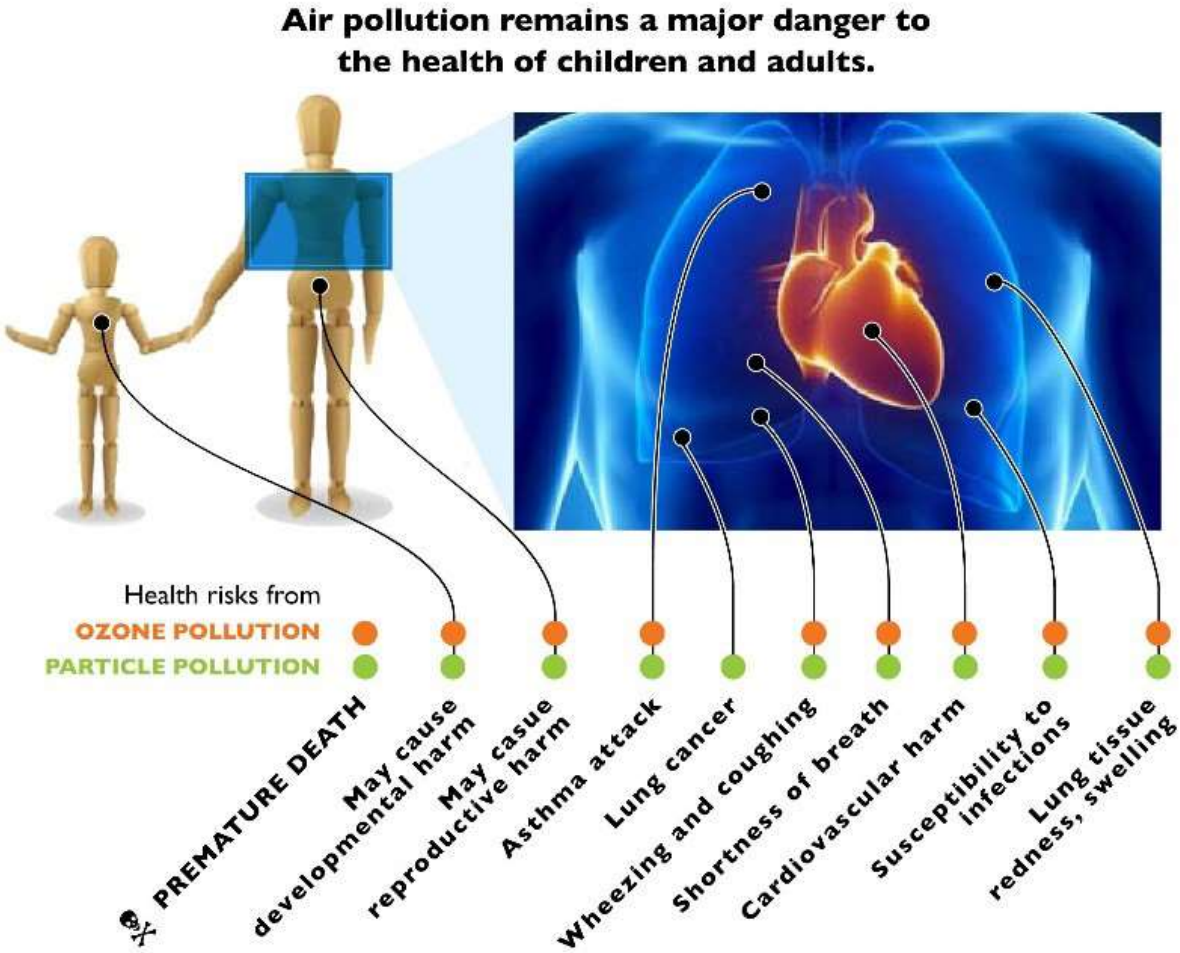
[100] Ibid.

[101] "Environmental Health | Healthy People 2020."https://www.healthypeople.gov/2020/topics-objectives/topic/environmental-health. April 18, 2016

[102] Ibid.

According to the American Lung Association, Figure 39 illustrates the health effects of ozone and particle pollution on children and adults. Both ozone and particle pollution may cause development harm to children and, in adults, pollution may cause reproductive harm, asthma attacks, wheezing and coughing, shortness of breath, cardiovascular harm, susceptibility to infections, and lung tissue redness and swelling.

Figure 39 - Health Effects of Air Pollution



Source: State of the Air, American Lung Association 2016

High ozone days and high particle pollution days impact the health of at-risk groups. Mat-Su was the second highest in the state and received a failing (F) grade for having high particle pollution days between 2012 and 2014. Table 62 lists the 24-Hour and Annual High Particle Pollution days from 2012-2014 for the Mat-Su Borough. The determination of the high particle pollution days comes from the Environmental Protection Agency (EPA). The colors noted in the table are from the Air Quality Index. The color-coded scale that the EPA developed is to help the public understand daily air pollution forecasts and protect themselves. Each color provides a specific warning about the risk associated with air pollution in that range. For the colors below, orange warns that the high particle pollution in the air is unhealthy for sensitive populations, while red means unhealthy and purple means very unhealthy.

Table 62 - High Particle Pollution Days, 2012- 2014

TABLE 46 - HIGH PARTICLE POLLUTION DAYS, 2012-2014

	High Particle Pollution Days 2012-2014						
	24-Hour					Annual	
Borough	Orange	Red	Purple	Wgt. Avg.	Grade	Design Value	Pass/Fail
Mat-Su	*17*	*1*	*0*	*6.5*	*F*	*6.8*	*Pass*

Source: American Lung Association in Alaska, www.lung.org/alaska

Also reported by the American Lung Association, **Table 63** lists the top 25 most polluted cities in the United States in 2016, based on short-term particle pollution. Fairbanks was identified as the 5th most polluted city in the United States in 2016, and Anchorage was identified as the 16th most polluted city. The State of Air report also notes that during 2012-2014, Fairbanks and Alaska had the worst ever averages for short-term particle pollution.

Table 63 - 25 Most Polluted U.S. Cities by Short-Term Particle Pollution

RANKINGS

People at Risk In 25 U.S. Cities Most Polluted by Short-Term Particle Pollution (24-hour $PM_{2.5}$)

2016 Rank[1]	Metropolitan Statistical Areas	Total Population[2]	Under 18[3]	65 and Over[3]	Pediatric Asthma[4,6]	Adult Asthma[5,6]	COPD[7]	CV Disease[8]	Diabetes[9]	Poverty[10]
1	Bakersfield, CA	874,589	257,512	86,198	22,811	47,274	27,545	39,611	58,509	206,604
2	Fresno-Madera, CA	1,120,522	321,538	127,627	28,482	61,434	37,066	54,190	78,465	293,929
3	Visalia-Porterville-Hanford, CA	608,467	186,159	61,302	16,490	32,302	18,893	27,286	39,992	160,479
4	Modesto-Merced, CA	798,350	225,241	92,260	19,952	44,214	26,914	39,399	57,132	160,041
5	Fairbanks, AK	99,357	23,924	7,913	2,205	5,999	2,938	3,875	4,764	9,011
6	Salt Lake City-Provo-Orem, UT	2,423,912	749,941	222,480	50,564	145,851	59,401	93,542	115,627	267,966
7	Logan, UT-ID	131,364	41,232	11,968	2,889	7,834	3,153	4,831	5,817	17,696
8	San Jose-San Francisco-Oakland, CA	8,607,423	1,876,296	1,168,168	166,204	523,893	330,069	488,003	703,447	968,270
9	Los Angeles-Long Beach, CA	18,550,288	4,419,138	2,287,192	391,452	1,093,121	670,009	981,745	1,425,473	3,174,300
10	Missoula, MT	112,684	21,839	15,363	1,555	8,935	5,475	5,801	6,945	17,216
11	Reno-Carson City-Fernley, NV	597,837	130,592	97,747	8,848	38,360	34,676	45,621	47,522	89,277
11	Lancaster, PA	533,320	128,671	87,385	13,929	39,794	27,486	39,175	44,979	54,499
13	El Centro, CA	179,091	51,111	21,523	4,527	9,863	6,046	8,897	12,791	40,162
14	Pittsburgh-New Castle-Weirton, PA-OH-WV	2,653,781	512,313	489,155	55,262	210,546	154,349	218,588	249,655	331,578
15	Yakima, WA	247,687	73,891	31,719	4,826	16,075	10,398	12,998	14,992	50,044
16	Anchorage, AK	398,892	101,730	36,091	9,374	23,752	12,587	16,994	20,760	39,450
17	Sacramento-Roseville, CA	2,513,103	592,935	358,196	52,523	149,894	96,523	144,007	205,390	397,024
18	Philadelphia-Reading-Camden, PA-NJ-DE-MD	7,164,790	1,601,349	1,058,447	164,662	520,226	350,165	491,940	577,817	950,284
18	Harrisburg-York-Lebanon, PA	1,239,677	271,569	204,056	29,398	95,249	66,506	94,211	108,812	129,647
20	El Paso-Las Cruces, TX-NM	1,050,374	290,708	124,863	20,269	55,486	39,945	58,111	81,066	250,142
21	Eugene, OR	358,337	68,413	62,334	4,963	29,455	16,575	24,260	26,412	64,722
21	South Bend-Elkhart-Mishawaka, IN-MI	723,537	178,540	110,538	15,281	58,635	48,571	53,112	58,902	111,135
21	Phoenix-Mesa-Scottsdale, AZ	4,489,109	1,121,933	638,383	122,364	325,041	226,682	264,470	327,660	753,716
24	New York-Newark, NY-NJ-CT-PA	23,632,722	5,198,379	3,383,979	473,026	1,812,756	1,039,620	1,392,285	1,785,585	3,281,939
25	Medford-Grants Pass, OR	293,886	60,420	63,154	4,383	23,312	14,641	22,447	24,063	54,487

Notes:

1. Cities are ranked using the highest weighted average for any county within that Combined or Metropolitan Statistical Area.
2. Total Population represents the at-risk populations for all counties within the respective Combined or Metropolitan Statistical Area.
3. Those under 18 and 65 and over are vulnerable to $PM_{2.5}$ and are, therefore, included. They should not be used as population denominators for disease estimates.
4. Pediatric asthma estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2014 based on state rates (BRFSS) applied to population estimates (U.S. Census).
5. Adult asthma estimates are for those 18 years and older and represent the estimated number of people who had asthma in 2014 based on state rates (BRFSS) applied to population estimates (U.S. Census).
6. Adding across rows does not produce valid estimates. Adding the disease categories (asthma, COPD, etc.) will double-count people who have been diagnosed with more than one disease.
7. COPD estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
8. CV disease is cardiovascular disease and estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
9. Diabetes estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to population estimates (U.S. Census).
10. Poverty estimates come from the U.S. Census Bureau and are for all ages.

Source: State of the Air, American Lung Association 2016

The 25 cleanest cities for year round particle pollution from the American Lung Association "State of the Air" report are outlined in **Table 64**. Anchorage was identified as the 17th cleanest city in the United States with a design value of 6.8 for annual particle pollution.

Table 64 - Cleanest U.S. Cities for Year Round Particle Pollution

Top 25 Cleanest U.S. Cities for Year-Round Particle Pollution (Annual $PM_{2.5}$)[1]

Rank[2]	Design Value[3]	Metropolitan Statistical Area	Population
1	4.5	Farmington, NM	123,785
2	4.7	Cheyenne, WY	96,389
3	4.8	Casper, WY	81,624
4	5.4	Kahului-Wailuku-Lahaina, HI	163,108
5	5.6	Urban Honolulu, HI	991,788
6	5.7	Bismarck, ND	126,597
7	6.0	Elmira-Corning, NY	186,164
8	6.1	Salinas, CA	431,344
9	6.3	Redding-Red Bluff, CA	242,871
10	6.4	Fargo-Wahpeton, ND-MN	251,218
11	6.5	Albuquerque-Santa Fe-Las Vegas, NM	1,165,798
12	6.6	Burlington-South Burlington, VT	216,167
13	6.7	Syracuse-Auburn, NY	740,301
13	6.7	Wilmington, NC	272,548
13	6.7	Bangor, ME	153,414
13	6.7	Rapid City-Spearfish, SD	168,295
17	6.8	Anchorage, AK	398,892
18	7.0	Sierra Vista-Douglas, AZ	127,448
19	7.2	Rochester-Austin, MN	252,101
19	7.2	Duluth, MN-WI	280,218
19	7.2	Grand Island, NE	84,755
22	7.3	Albany-Schenectady, NY	1,173,518
22	7.3	Pittsfield, MA	128,715
24	7.4	Yuma, AZ	203,247
24	7.4	Houma-Thibodaux, LA	211,348

Notes:

1. This list represents cities with the lowest levels of year-round $PM_{2.5}$ air pollution.
2. Cities are ranked by using the highest design value for any county within that metropolitan area.
3. The Design Value is the calculated concentration of a pollutant based on the form of the Annual $PM_{2.5}$ National Ambient Air Quality Standard, and is used by EPA to determine whether the air quality in a county meets the current (2012) standard (U.S. EPA).

Source: State of the Air, American Lung Association 2016

The number of people in various at risk populations in Mat-Su Borough, Kenai Peninsula, Juneau City and Borough, Fairbanks North Star Borough, Denali Borough and Anchorage Municipality are outlined in Table 65. In the Mat-Su Borough, there is a sizable population suffering from various conditions that are affected by the air quality.

Table 65 - At-Risk Groups

STATE TABLES

ALASKA

American Lung Association in Alaska

www.lung.org/alaska

	AT-RISK GROUPS								
				Lung Diseases					
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Cardiovascular Disease	Diabetes	Poverty
Anchorage Municipality	301,010	74,964	26,719	6,908	18,046	9,397	12,634	15,450	29,207
Denali Borough	1,921	362	164	33	126	74	97	119	133
Fairbanks North Star Borough	99,357	23,924	7,913	2,205	5,999	2,938	3,875	4,764	9,011
Juneau City and Borough	32,406	7,165	3,436	660	2,028	1,154	1,585	1,928	2,500
Kenai Peninsula Borough	57,477	13,276	8,163	1,223	3,568	2,216	3,209	3,847	6,472
Matanuska-Susitna Borough	97,882	26,766	9,372	2,466	5,706	3,190	4,360	5,310	10,243
Totals	**590,053**	**146,457**	**55,767**	**13,496**	**35,473**	**18,968**	**25,760**	**31,417**	**57,5662**

Source: State of the Air, American Lung Association 2016

Table 66 shows high ozone days and high particle pollution days in 2012-2014, which may impact the health of the at-risk groups. Data on high ozone days was not available or incomplete for much of Alaska. When looking at high particle pollution days, Mat-Su was the second highest and received a failing (F) grade.

Table 66 - High Ozone Days and High Particle Pollution Days, 2012-2014

STATE TABLES

ALASKA

American Lung Association in Alaska

www.lung.org/alaska

	HIGH OZONE DAYS 2012-2014					HIGH PARTICLE POLLUTION DAYS 2012-2014						
						24-Hour					Annual	
Borough	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Anchorage Municipality	INC	INC	INC	INC	INC	0	1	0	0.5	B	5.8	PASS
Denali Borough	0	0	0	0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fairbanks North Star Borough	0	0	0	0.0	A	26	25	3	23.2	F	11.1	PASS
Juneau City and Borough	DNC	DNC	DNC	DNC	DNC	4	0	0	1.3	C	6.7	PASS
Kenai Peninsula Borough	DNC	DNC	DNC	DNC	DNC	0	2	0	1.0	C	0.0	INC
Matanuska-Susitna Borough	INC	INC	INC	INC	INC	17	1	0	6.2	F	6.8	PASS

Source: State of the Air, American Lung Association 2016

How the Environment Impacts Health: Community Input

Focus groups comprised of community residents, as well as municipal representatives, were more likely to discuss how the environment impacts health than groups that were comprised of social service and/or other professionals. Particularly in the Palmer area, residents are aware of and highlighted concerns regarding air quality issues that are related to glacial silt.

Some people discussed the weather and the impact that the climate has on the growing season, as well as the impact that many hours of darkness in the winter has on mental health. On the other hand, the climate and terrain also make for excellent year-round sports and recreational activities for those who enjoy both winter and summer outdoor sports.

> *"Health is a non-combative way to approach things. We could create a team that can really help further that message (for community planning) and have a bigger discussion. It could come from ROCK Mat-Su; we need community capacity to come together and help families. Addressing healthy relationships feeds into it; that impacts everything. Most comprehensive plans include good schools, safe communities, clean air, clean water and safe roads."*
>
> – Mat-Su Professional

Others noted that environmental hazards and other factors related to the environment will impact health, including access to running water and water quality and the design and capacity of roadways. Some of the borough's roads were not designed for the current volume of traffic. This, coupled with poor weather conditions and aggressive drivers, contributes to motor vehicle crash deaths. Without zoning regulations, it is almost impossible to extend utility infrastructure (electricity, water and sewer) to outlying areas because there is no ability to create easements to bring utility lines through residents' property.

The need for sewage treatment facilities, particularly in the Talkeetna area, where both the year round and seasonal population is growing, is an issue that could impact health if not properly addressed. Additionally, the forest is getting dryer every year, which makes the region more susceptible to wild fires, in turn impacting the environment. In the past few years, the borough had the state's most destructive fire, which destroyed between 400 and 500 buildings. The borough does not currently have a comprehensive emergency response network and plan, even though there have been two "100-year" floods in the past ten years, as well as other disasters including the fire.

Those professionals that spoke about the connection between community infrastructure and health identified the importance of community infrastructure, as well as public health planning. They noted that the borough does not currently have health powers; nor does it have the ability to fund new highway capacity. It is challenging for elected officials or municipal employees to change municipal policy to address these issues as vocal residents show up to public meetings opposing any type of guidelines and regulations. There is

currently no mechanism to educate the community regarding those environment-related public policy issues and how they impact health. It was suggested that the MSHF could be a catalyst for change by educating the community about the relationship between community infrastructure and health status.

The final area discussed by a few participants is the role of technology on health. The explosion of video games and other technology-related entertainment has impacted the amount of physical activity of some people, contributing to the rate of obesity in the area.

How Community Safety Impacts Health

Community safety reflects not only violent acts in neighborhoods and homes, but also includes injuries caused unintentionally through accidents. Community safety impacts health in a number of ways including:

- Children in unsafe circumstances can suffer post-traumatic stress disorder and exhibit more aggressive behavior, alcohol and tobacco use, and sexual risk-taking than peers in safer environments.
- The chronic stress associated with living in unsafe neighborhoods can accelerate aging and harm health.
- Unsafe neighborhoods can cause anxiety, depression, and stress, and are linked to higher rates of pre-term births and low birthweight babies, even when income is accounted for.
- Fear of violence can keep people indoors, away from neighbors, exercise, and healthy foods.
- Companies may be less willing to invest in unsafe neighborhoods, making jobs harder to find."[103]

The violent crime rate for Alaska and the United States in 2015 is outlined in Table 67. The table also shows the number of violent crime offenses for Palmer, Wasilla, Alaska and the United States in 2015. In 2015, Alaska had a violent crime rate (603.2) double that of the state (386.9). There were more violent crime offenses in Wasilla (126) when compared to Palmer (87).

Table 67 - Violent Crime, 2015

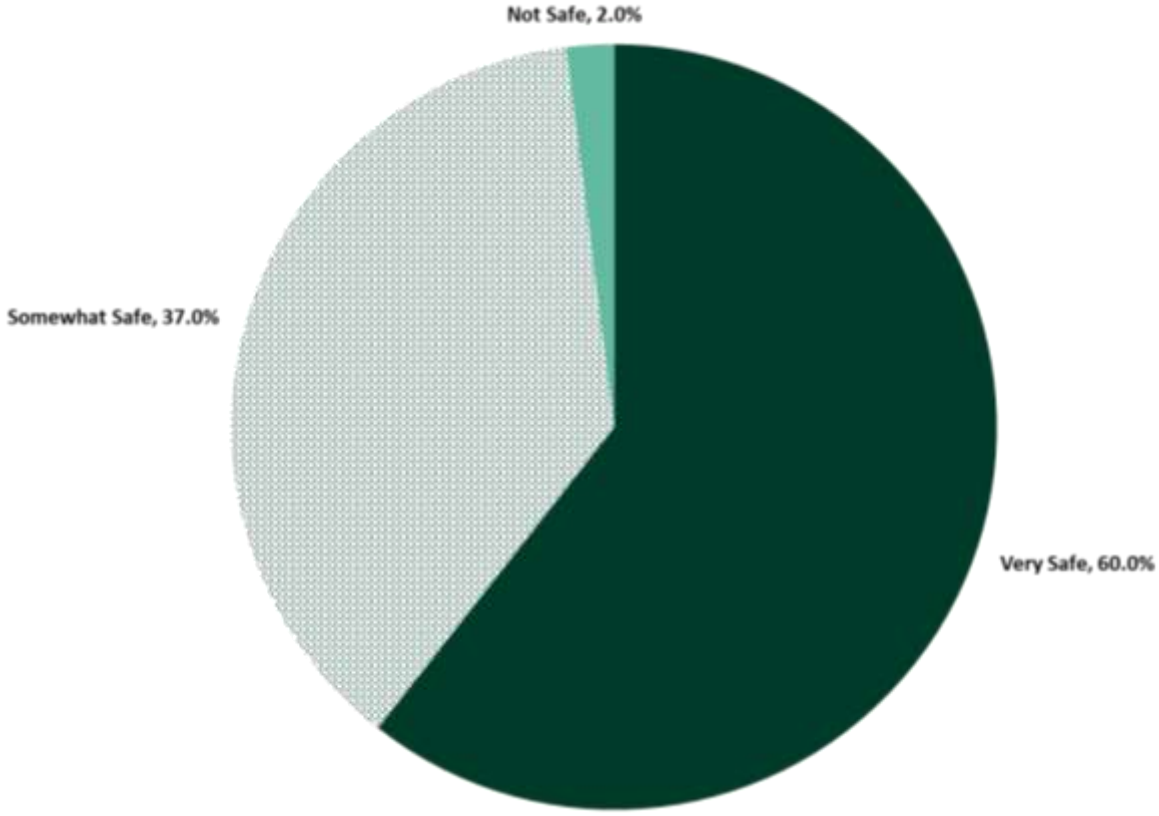
	Palmer	Wasilla	Alaska	United States
Violent Crime Rate (Per 100,000)			603.2	386.9
Number of Violent Crime Offenses	87	126	4,665	1,165,383

Source: AK DPS - Uniform Crime Report and FBI Uniform Crime Report

[103] "Community Safety | County Health Rankings & Roadmaps." http://www.countyhealthrankings.org/our-approach/health-factors/community-safety. 2016.

The percentage of Mat-Su residents who responded to the household survey (N=700) who feel safe in their neighborhood is illustrated in **Figure 40**. Over half (60%) of the respondents feel very safe in their neighborhood. A small percentage of respondents (2%) indicated that they experienced violence, or threats of violence, between family members within the household.

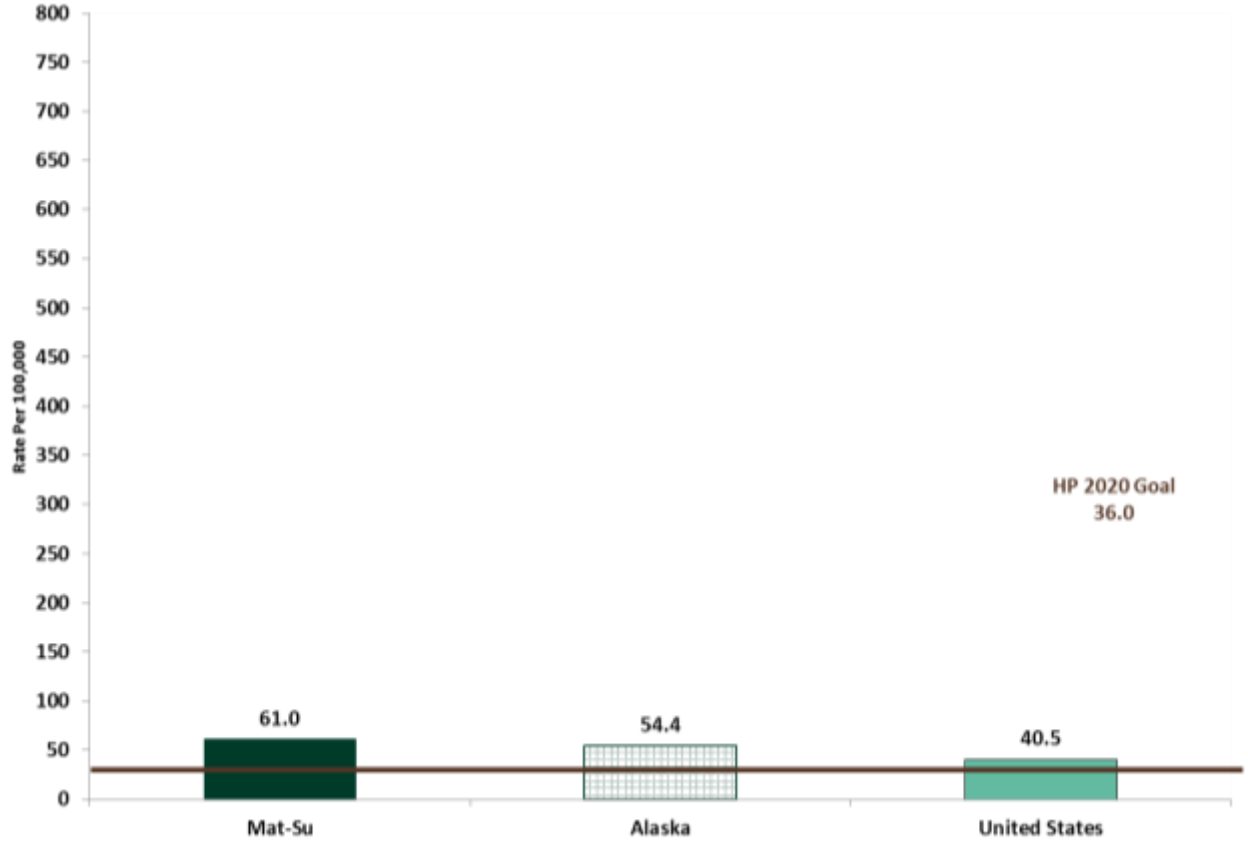
Figure 40 - Mat-Su Residents Feel Safe in Their Neighborhood



Source: Mat-Su Household Survey, McDowell Group, 2016

As reported by the Alaska Department of Health and Human Services, **Figure 41** illustrates the unintentional mortality rate for Mat-Su, Alaska and the United States in 2015. Mat-Su had the highest unintentional injury mortality rate (61.0) when compared to Alaska (54.4) and the United States (40.5). All three are higher than the Healthy People 2020 goal of 36.0.

Figure 41 - Unintentional Injury Mortality Rate, 2015



Source: Alaska DHSS Bureau of Vital Statistics, Healthy People 2020 Goals

Adverse Childhood Experiences

Childhood experiences, both positive and negative, have a tremendous impact on future violence victimization and perpetration, and lifelong health and opportunity. As such, early experiences are an important public health issue. Adverse Childhood Experiences (ACEs) have been linked to:

- risky health behaviors,
- chronic health conditions,
- low life potential, and
- early death.

As the number of ACEs increases, so does the risk for these outcomes.

The ACEs scores for Mat-Su, Anchorage and Alaska for the combined years of 2013 and 2014 from the Alaska Behavioral Risk Factor Surveillance System data are outlined in **Table 68**. The questions refer back to when an individual was younger than 18. The ACEs that are higher in Mat-Su compared to the state are highlighted in yellow. Mat-Su respondents are more likely to experience physical abuse, verbal abuse or sexual abuse when compared to the state. Mat-Su (13.4%) also had a higher percentage of respondents who experienced five or more ACEs when compared to Anchorage (10.8%) and Alaska (11.7%).

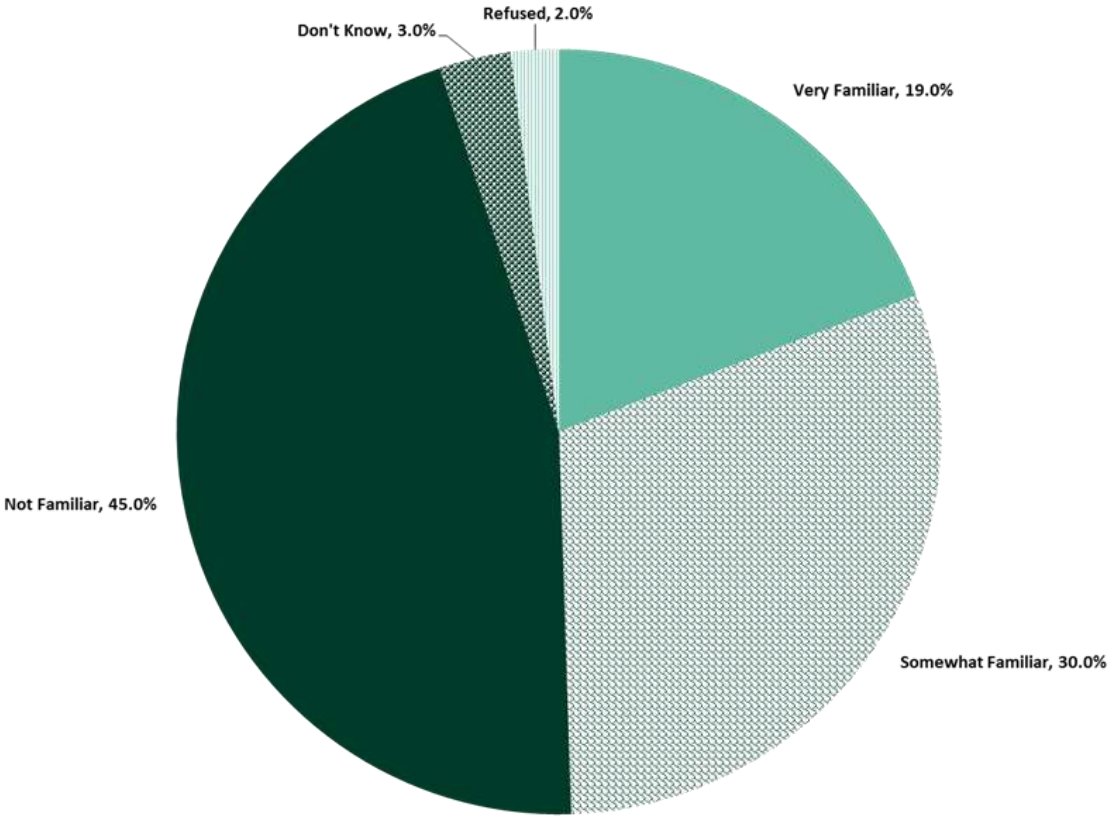
Table 68 - Adverse Childhood Experiences, 2013 and 2014

	Mat-Su	Anchorage	Alaska
Lived with anyone who used illegal street or abused prescription drugs	15.5%	15.1%	14.9%
Lived with anyone depressed, mentally ill, or suicidal	19.7%	22.7%	19.7%
Lived with anyone problem drinker or alcoholic	32.3%	27.6%	30.0%
Lived with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility	12.7%	11.9%	11.5%
Parents separated or divorced	34.8%	33.4%	30.2%
Parents/adults in home hit/kick/beat/physically hurt you in any way, at least once	23.4%	17.4%	17.8%
Parents/adults in home slap/hit/kick/punch/beat each other up, at least once	21.2%	17.9%	18.2%
Parent/adults in your home ever swear at you, insult you, or put you down, at least once	36.5%	29.7%	30.2%
Anyone at least 5 years older than you or an adult, ever touch you sexually, at least once	16.6%	11.4%	13.5%
Anyone at least 5 years older than you or an adult try to make you touch them sexually, at least once	12.5%	9.1%	9.6%
Anyone at least 5 years older than you or an adult force you to have sex, at least once	9.8%	5.9%	6.2%
Experiencing 5 or more Adverse Childhood Experiences	13.4%	10.8%	11.7%

Source: Alaska Behavioral Risk Factor Surveillance System Data
Red text denotes statistically significant differences in the indicator identified.

The level of awareness that Mat-Su residents who completed the household survey (N=700) have with the term "Adverse Childhood Experiences" is illustrated in Figure 42. Just under one in five (19%) respondents indicated that they are very familiar with the term ACES. Slightly less than half (45%) of the respondents were not familiar with the term.

Figure 42 - Mat-Su Residents Awareness of Term "Adverse Childhood Experiences"



Source: Mat-Su Household Survey, McDowell Group, 2016

How Community Safety Impacts Health: Community Input

Focus group and interview participants talked extensively about safety, mostly in the context of domestic abuse and child abuse, although some expressed concern that the incidence of violent crime in the borough is increasing. Many of the professional groups discussed the role that adverse childhood experiences and trauma play in contributing to mental health, substance abuse, and chronic disease issues well into adulthood. Children who grow up in unsafe and/or unstable environments have trouble in school and contribute to drop out rates before high school graduation. The lack of police protection is also a concern in the borough as the rate of violent crime increases. One individual noted that there are only seven state police officers to cover geography the size of the state of West Virginia.

Some professionals noted that violence happens because of high levels of stress and lack of support systems to address individual and family needs. Many participants identified the need for parental education, as well as a sense of community connection and family supports to address these issues. Almost every focus group identified creating community connections, safe places for children/youth and/or parenting education, and family support as a goal for the region to address safety issues for children and families.

> *"We see people at their worst, in the context of divorce where the government hasn't intervened and where there is no primary care physician. They are not going to school, septic is an old buried truck. Parents are so angry and all the kids know is yelling; mental health is terrible. Domestic violence is the result when the frustration and stress levels are high from lack of resources. They haven't sought them out or they don't exist at that income point. The kid's primary response is to wish they would stop fighting."*
>
> – Mat-Su Judge

How Incarceration and Recidivism Impact Health

Inmates' overall physical health likely improves in some ways during incarceration, but deteriorates in others. For some people, incarceration can improve their health by providing available meals, a structured day, access to much needed treatment, and less access to alcohol, drugs, and cigarettes. But for others, prison environments may have adverse effects on health and exacerbate chronic health conditions, particularly in cases where the nutritional value of meals is far from ideal, violence is present, or overcrowding or reduced access to services are problems.

Being a prisoner has a public health impact on their families and communities, both while they are incarcerated and after their release. Upon release, these individuals' health needs continue, although their access to care can be interrupted or limited.[104]

According to the Alaska Department of Corrections, **Table 69** shows the total offender population by gender in 2015 for Mat-Su, Palmer, Wasilla and Alaska. In all cases there were more male offenders compared to female. Mat-Su (1,746) had a higher offender population when compared to Palmer (402) and Wasilla (1,344).

Table 69 - Offender Population, 2015

	Mat-Su	Palmer	Wasilla	Alaska
Male	1,734	390	1,344	4,405
Female	12	12	0	614
Total	1,746	402	1,344	5,019

Source: Alaska Department of Corrections

[104] Smith, Amy, Rapporteur. 2013. National Academies Press. "Health and Incarceration: A Workshop Summary," p.1.

Also reported by the Alaska Department of Corrections, **Table 70** shows information related to juvenile offenders aged 10-17 in Mat-Su, Alaska and the United States, where data is available. For the five-year average from 2008-2012, there were 407 juvenile delinquency referrals in Mat-Su. Overall Alaska (4,612) has a slightly lower juvenile arrest rate compared to the United States (4,889).

Table 70 - Juvenile (Ages 10-17) Offender Population

	Mat-Su	Alaska	United States
Juvenile Arrest Rates (Per 100,000) 2010		4,612	4,889
Unduplicated Juvenile Referrals to Alaska (Per 1,000) 2008-2012		35	
Juvenile Delinquency Referrals 2008-2012	407	4,602	

Source: Alaska Department of Corrections

Information related to juvenile offenders in Mat-Su and Anchorage and the type of offense is outlined in Table 71. Juveniles in the Mat-Su Borough have a higher percentage of involvement in crimes against property (48.7%) than drug/alcohol laws (17.0%) or crimes against persons (14.4%) when compared to Anchorage. Mat-Su juvenile offenses crime against property and against persons decreased in the most recent years reported.

Table 71 - Juvenile Delinquency Referrals Ages 10-17 By Type Of Crime (5-Year Average)

Location	Delinquency Type	Data Type	2006 - 2010	2007 - 2011	2008 - 2012	2009 - 2013	2010 - 2014
Anchorage	Other	Percent	27.2%	27.2%	25.5%	26.7%	27.4%
	Drug/Alcohol Laws	Percent	6.8%	7.5%	8.4%	9.8%	10.5%
	Crimes against Property	Percent	48.8%	48.0%	47.1%	45.6%	45.5%
	Crimes against Persons	Percent	17.2%	17.3%	19.0%	17.9%	16.5%
Matanuska-Susitna	Other	Percent	18.0%	18.1%	16.3%	16.9%	19.8%
	Drug/Alcohol Laws	Percent	14.4%	14.6%	15.7%	16.7%	17.0%
	Crimes against Property	Percent	51.5%	51.7%	52.0%	51.6%	48.7%
	Crimes against Persons	Percent	16.5%	15.6%	15.9%	14.9%	14.4%

Source: Kids Count

How Incarceration and Recidivism Impact Health: Community Input

The borough's judges and social service providers offered the most input on how incarceration and recidivism impacts health during the focus group discussions. Many young people end up in the justice system because of lack of resources and family/community supports. They don't have a job or strong family support; they are couch-surfing and then they end up in trouble. Those recently released from incarceration often lack access to primary care and health care resources and their health status suffers as a result.

On a positive note, the local churches and organizations, such as MyHouse working directly with this population, are seen as making a meaningful impact in preventing recidivism through their programming and support they provide individuals. Many positive comments were made in professional and community groups regarding the resources that are making a difference; most agree that there is need for additional resources and programming to be expanded.

How Access Impacts Health

There are eight main reasons why there are differences in health access:

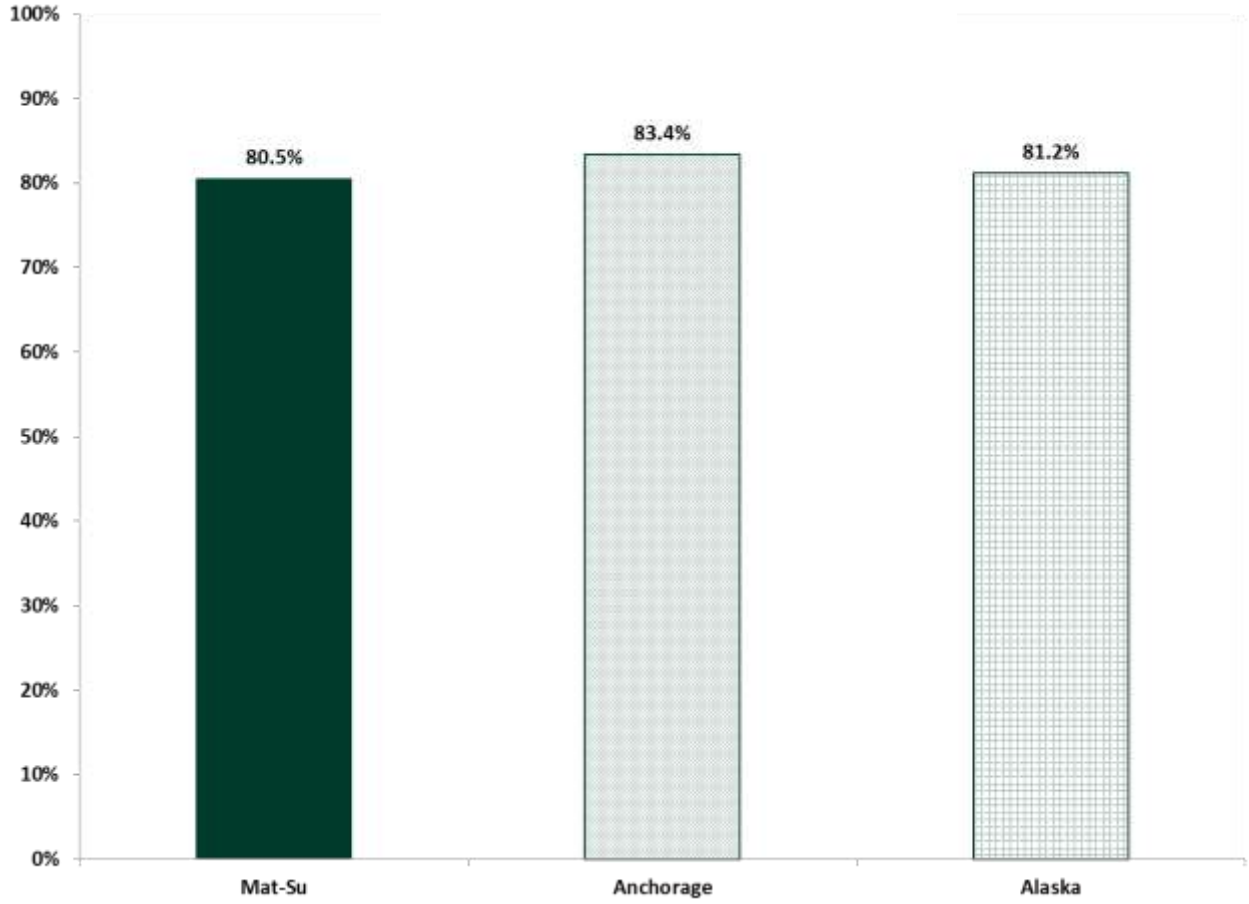
1. *Lack of health insurance* – Without health insurance, individuals are more likely to delay healthcare and to go without the necessary healthcare or medication they should have been prescribed.
2. *Lack of financial resources* – Lack of available finance is a barrier to healthcare for many Americans, but access to healthcare is reduced most among low income populations. Lack of financial resources often impacts the ability to access transportation, particularly in rural areas.
3. *Irregular source of care* –Without a regular healthcare source, people have more difficulty obtaining their prescriptions and attending necessary appointments.
4. *Legal obstacles* – Low-income immigrant groups are more likely to experience legal barriers. For example, insurance coverage through Medicaid is not available to immigrants who have been a resident in the U.S for less than five years.
5. *Structural barriers* – Examples of structural barriers include lack of transport to healthcare providers, inability to obtain convenient appointment times, and lengthy waiting room times. All of these factors reduce the likelihood of a person successfully making and keeping their healthcare appointment.
6. *Lack of healthcare providers* – In areas where minority populations are concentrated such as inner cities and rural areas, the number of health practitioners and diagnostic facilities is often inadequate.
7. *Language barriers* – Poor English language skills can make it difficult for people to understand basic information about health conditions or when they should visit their doctor.
8. *Age* – Older patients are often living on a fixed income and cannot afford to pay for their healthcare. Older people are also more likely to experience transport problems or suffer from a lack of mobility, factors that can impact on their access to healthcare. With 15% of the older adults in the U.S not having access to the internet, these individuals are also less likely to benefit from the valuable health information that can now be found on the internet.[105]

[105] "Disparities in Access to Health Care."http://www.news-medical.net/health/Disparities-in-Access-to-Health-Care.aspx. August 6, 2014.

Lack of Health Insurance

As reported in the Alaska Behavioral Risk Factor Surveillance Survey, Figure 43 shows the percentage of respondents in Mat-Su, Anchorage and Alaska who self-reported having health insurance during 2010-2014. A statistically significant difference was observed for respondents who self-reported having insurance. During this time, Mat-Su (80.5%) had fewer respondents report having health insurance when compared to Anchorage (83.4%) and the state (81.2%).

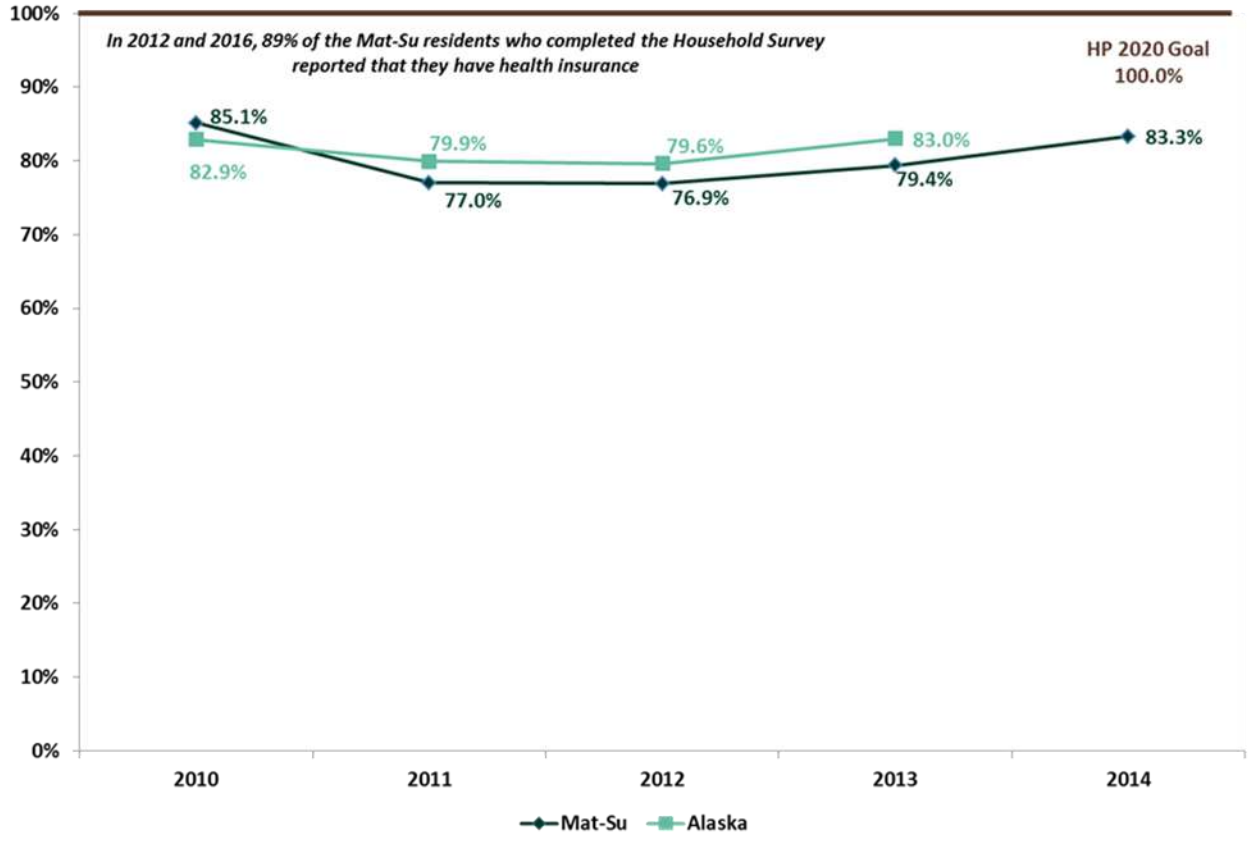
Figure 43 - Have Health Insurance, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

Also reported in the Alaska Behavioral Risk Factor Surveillance System, **Figure 44** illustrates the percentage of respondents in Mat-Su and Alaska who self-reported having health insurance in years 2010 through 2014. The percentage of Mat-Su respondents who report having health insurance has been increasing over the past few years and went from 76.9% of respondents with health insurance in 2012 to 83.3% in 2014. The percentage of respondents statewide who report having health insurance increased from 79.6% in 2012 to 83.0% in 2013. When comparing the percentage of respondents in Mat-Su who report having health insurance to the state, in 2013, Mat-Su (79.4%) had fewer insured respondents than the state (83.0%). Both Mat-Su and Alaska fall below the Healthy People 2020 goal to have 100% of residents with health insurance.

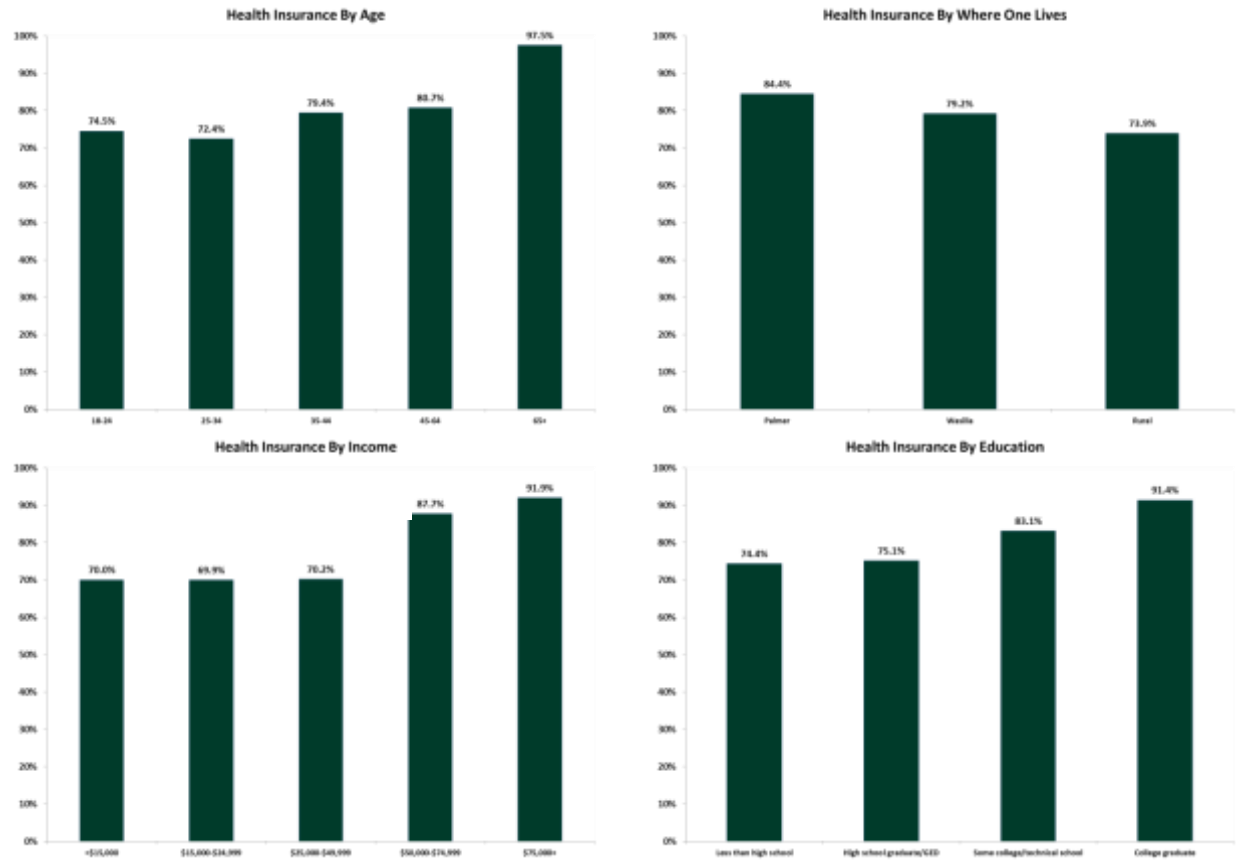
Figure 44 - Have Health Insurance, Trend 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data, Healthy People 2020

As reported in the Alaska Behavioral Risk Factor Surveillance System, Figure 45 illustrates the demographic factors where a statistically significant difference was observed for respondents who self-reported having health insurance. Almost all respondents over the age of 65 (97.5%) reported that they have health insurance and they are more likely to have health insurance than the other age groups. Rural respondents in Mat-Su (73.9%) were less likely to report they have health insurance then residents in Palmer (84.4%) or Wasilla (79.2%). The percentage of respondents who reported having health insurance increased with income and education, with respondents whose income is $75,000 or greater (91.9%), and college graduates (91.4%) were more likely to report that they have health insurance than their counterparts.

Figure 45 - Have Health Insurance, 2010-2014, Significant Differences



Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the 2016 Mat-Su Household Survey, **Table 72** shows the percentage of household survey respondents that report having each type of health insurance. The highest percentage of respondents in 2016 reported having private insurance (53%), although this is a decrease from 2012 (59%).

Table 72 - Mat-Su Residents Type of Insurance

Type of Insurance Household Survey (N=700)		
Type of Insurance/Coverage	2012	2016
Private	59%	53%
Medicare	16%	15%
Medicaid	11%	15%
Denali KidCare	8%	8%
Champus/Tricare	6%	6%
Tribal Health System/Indian Health Service	9%	5%
Veterans Administration	4%	3$
Workers Compensation	<1%	<1%
Other		<1%
None	11%	11%
Don't Know/Refused		8%

Source: Mat-Su Household Survey, McDowell Group, 2016

According to the Alaska Department of Health and Human Services, **Table 73** shows the number of residents in Alaska and the United States eligible to enroll in the marketplace during January 1, 2015 and February 1, 2016. A total of 26,682 residents applied for a 2016 health plan through the marketplace and were considered eligible to enroll. Most of those that applied were eligible to receive financial assistance or Medicaid/CHIP. A total of 23,029 residents actually applied for and were selected to receive a plan through the marketplace.

Alaska is a federally-facilitated marketplace using the HealthCare.gov Eligibility Enrollment Platform. Hawaii, Nevada, New Mexico and Oregon are state-based marketplaces using their own marketplace platforms.

Table 73 - Marketplace Enrollment, 2016 Plan

Location	Number Eligible to Enroll	Number Eligible to Enroll with Financial Assistance	Number Eligible for Medicaid/ CHIP	Number Selected a Marketplace Plan
United States	16,164,261	12,306,946	5,210,591	12,681,874
Alaska	26,682	21,820	4,249	23,029

Source: Department of Health and Human Services, 2016

Also reported by the Alaska Department of Health and Human Services, **Table 74** shows the percentage of enrollees selecting each plan. A higher percentage of residents in Alaska (45%) chose the Bronze Plan as compared to the nation (23%), while more residents across the rest of the country chose the Silver Plan (68% vs. 51%).

Table 74 - Marketplace Enrollment, 2016 Plan, by Plan Type

Location	Number Selected a Marketplace Plan	Bronze Plan	Silver Plan	Gold Plan	Platinum Plan	Catastrophic Plan
United States	12,681,874	23%	68%	6%	2%	1%
Alaska	23,029	45%	51%	3%	0%	1%

Source: Department of Health and Human Services, 2016

The Alaska Department of Health and Human Service data for Marketplace Enrollment outlined in **Table 75** shows the combined enrollment data for Mat-Su and Kenai Peninsula Boroughs for the 2014 and 2015 Plans. Twice as many residents signed up for coverage through the marketplace in 2015 (28%) when compared to 2014 (17%).

Table 75 - Marketplace Enrollment, 2015 Plan

Plan Year	Number Eligible to Enroll	Number Selected a Marketplace Plan	Potential Market Signed Up for Coverage
2014	16,801	2,825	17%
2015	17,435	4,810	28%

Source: Department of Health and Human Services, 2016

The 2014 CCS Early Learning Community reported the percentage of youth under the age of 19 in Mat-Su, Anchorage, Alaska and the United States who were uninsured during 2008 through 2012. This data is outlined in **Table 76.** The percentage of uninsured children in Mat-Su increased between 2011 (11.1%) and 2012 (13.8%). In 2012, Mat-Su (13.8%) had slightly more uninsured youth when compared to Anchorage (12.3%) and the United States (7.5%). Mat-Su had a comparable percentage of uninsured children compared to Alaska.

Table 76 - Uninsured Youth (Under the age of 19)

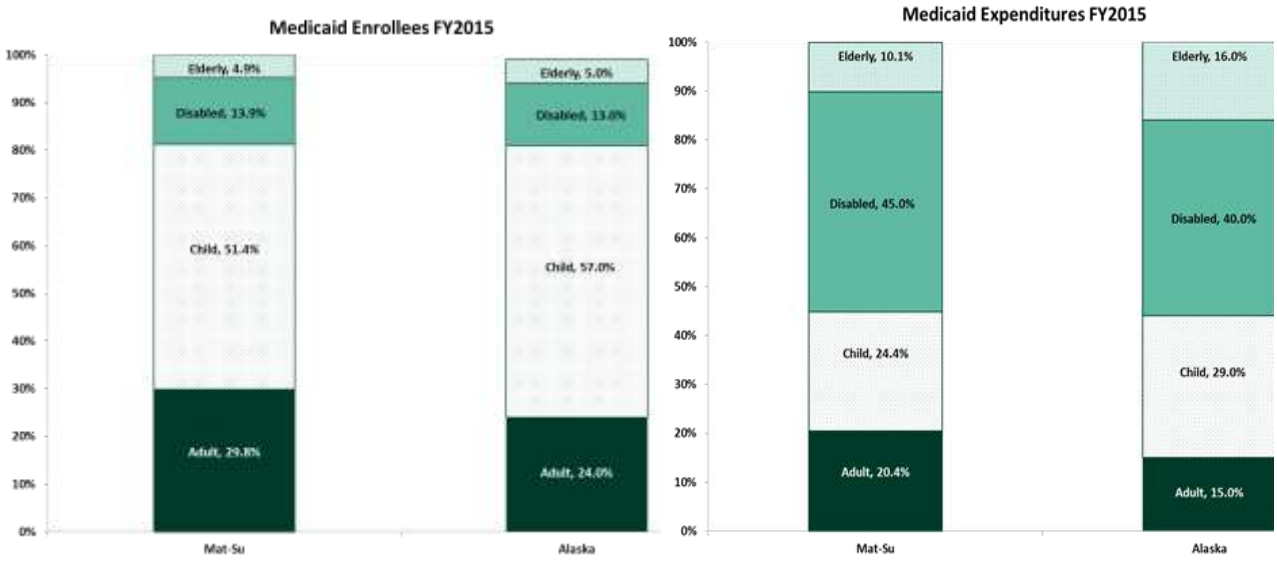
	Data Type	2008	2009	2010	2011	2012
United States	Percent	9.7%	9.0%	8.5%	7.9%	7.5%
Alaska	Percent	13.6%	14.4%	13.1%	11.6%%	13.5%
Mat-Su	Percent	13.1%	14.8%	13.0%	11.1%	13.8%
Anchorage	Percent	11.1%	12.9%	11.2%	9.6%	12.3%

Source: CCS Early Learning Community Assessment, 2014

Medicaid Profile

As published in the Alaska Medicaid Annual Report 2015, **Figure 46** illustrates Medicaid Enrollees and Expenditures for Fiscal Year 2015 for Mat-Su and Alaska. Mat-Su had a total of 20,785 Medicaid enrollees and expended $179 million, with the state paying more than $1.3 billion. Mat-Su had more adults enrolled (29.8%) compared to Alaska (24.0%), while the state had more children (57.0%) enrolled than Mat-Su (51.4%). The average cost per Medicaid recipient in Mat-Su was $8,653.09.

Figure 46 - Medicaid Enrollees and Expenditures, FY 2015



Source: Alaska Medicaid Annual Report, 2015

Table 77 shows the total Medicaid expenditures by service category for FY 2015. Almost one-third of the Medicaid expenditures in Mat-Su (28.8%) are for Home and Community Based services (HCB). Approximately one-fifth of the expenditures are for Physicians (21.7%) or Hospital services (19.8%).

Table 77 - Mat-Su Medicaid Expenditures by Category, FY 2015

Service Category	Mat-Su Category Expenses	Percent
HCB	$43,408,568.55	28.8%
Phys	$32,719,776.63	21.7%
Hospital	$29,856,261.73	19.8%
MH	$12,992,847.71	8.6%
Rx	$12,002,085.46	8.0%
Dental	$10,097,586.64	6.7%
IHS	$7,530,741.67	5.0%
Trans	$2,345,014.39	1.6%
Total	$150,952,882.78	

Source: Medicaid Profile

As reported by the McDowell Group, based on Medicaid data, Table 78 shows the total number of Medicaid recipients by demographic profile for Mat-Su and the rest of Alaska in FY 2015. In both Mat-Su and Alaska, there are more female Medicaid recipients than male. When looking at age, the highest number of recipients falls in the category of less than 18 years old for both Mat-Su and the rest of Alaska.

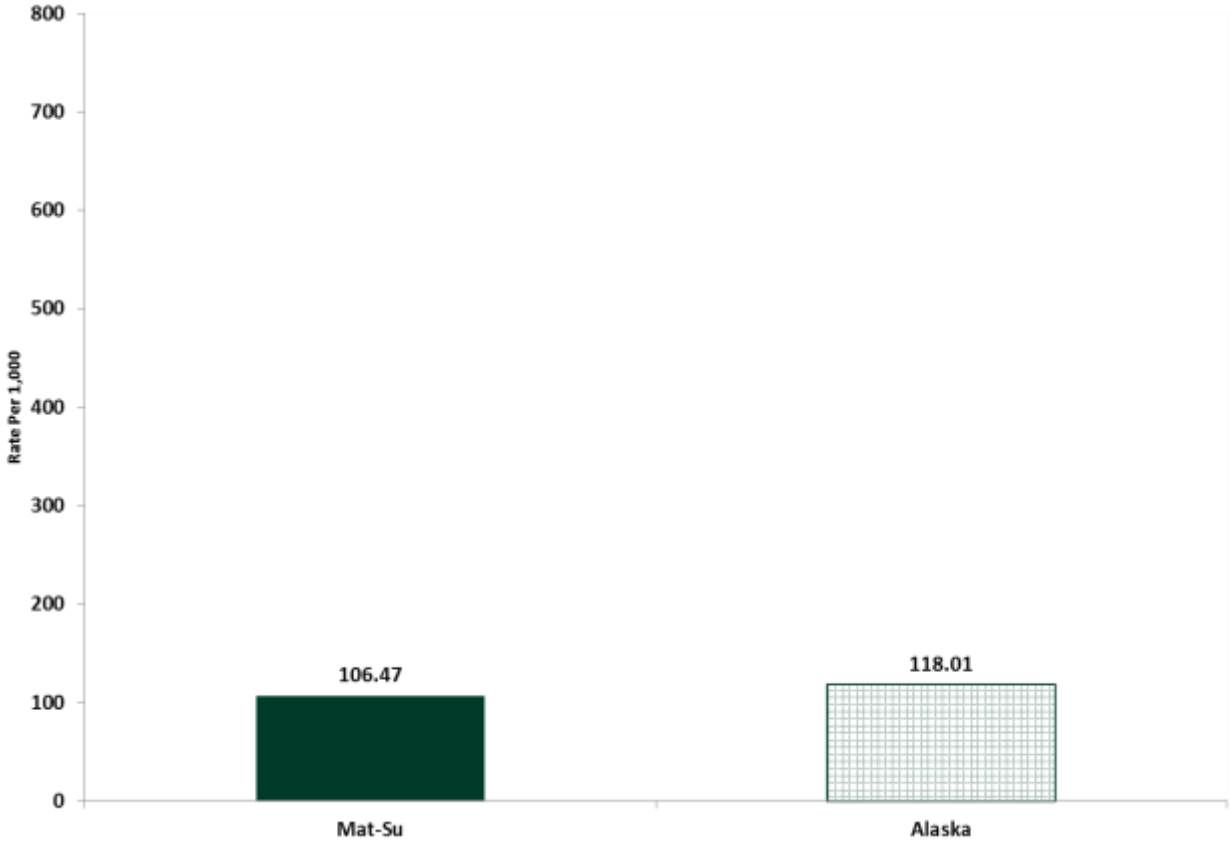
Table 78 - Medicaid Recipients Profile, FY 2015

Demographics	Mat-Su	Rest of Alaska
Female	11,549	72,495
Male	9,236	56,636
<18 years	11,084	66,476
18-64 years	8,512	52,803
65+ years	1,189	9,852

Source: Medicaid Profile

The Medicaid admission rate for Mat-Su and Alaska for fiscal year 2015 is shown below in **Figure 47**. When looking at the rate per 1,000, Mat-Su (106.47) had a lower Medicaid admission rate than the state (118.01).

Figure 47 - Medicaid Admission Rate, 2015



Source: Medicaid Profile

The top 10 Medicaid inpatient hospital admissions by primary diagnosis for Mat-Su in fiscal year 2015 are outlined in **Table 79**. The top three admissions relate to child birth, with single live born in hospital, delivered without C-Section being number one with 360 admissions.

Table 79 - Top 10 Primary Diagnosis, Medicaid Inpatient Hospitalizations, Mat-Su, FY 2015

Diagnosis ICD9 code	Diagnosis	# Admissions
V30.00	SINGLE LIVEBORN IN HOSP;DEL W/O C-SE	360
V30.01	SINGLE LIVEBORN IN HOSP;BY CESAREAN	133
654.21	PREV C-SECT NOS-DELIVER	65
314.01	ATTN DEFICIT W HYPERACT	33
648.91	OTH CURR COND-DELIVERED	54
38.9	SEPTICEMIA NOS	45
486	PNEUMONIA, ORGANISM NOS	40
296.33	RECUR DEPR PSYCH-SEVERE	25
491.21	OBSTRUCTIVE CHRONIC BRONCHITIS W/EXA	23
645.11	POST TERM PREGNANCY, DELIVERED	25

Source: Medicaid Profile

As reported in the 2016 Mat-Su Senior Services Environmental Scan, **Table 80** shows the summary of Medicare beneficiary indicators for Mat-Su, Alaska and the United States in 2012. Mat-Su had a higher percentage of imaging, Part B drugs, physician procedures and acute hospital readmissions when compared to the state, but was lower when compared to the rest of the country.

Table 80 - Summary of Medicare Beneficiary Indicators, 2012

Indicator	Mat-Su	Alaska	U.S.
Imaging Medicare utilization (percent)	60.9%	56.8%	68.1%
Part B drugs Medicare utilization (percent)	39.9%	35.9%	51.3%
Physician procedures Medicare utilization (percent)	49.9%	46.1%	61.2%
Acute hospital readmissions (percent)	15.3%	15.1%	18.6%
Hospice Medicare days (per 1,000 beneficiaries)	755	482	1,928
Hospice Medicare admissions (per 1,000 beneficiaries)	15	10	28
Long term care hospital Medicare admissions (per 1,000 beneficiaries)	3	2	4
Inpatient rehabilitation facility Medicare admissions (per 1,000 beneficiaries)	4	3	11
Durable medical equipment Medicare service events (per 1,000 beneficiaries)	1,592	1,181	1,932
Home health Medicare visits (per 1,000 beneficiaries)	936	771	3,166
Inpatient rehabilitation facility Medicare days (per 1,000 beneficiaries)	55	45	135
Test Medicare service events (per 1,000 beneficiaries)	6,579	5,312	9,624
Physician procedures Medicare service events (per 1,000 beneficiaries)	3,534	2,865	4,636
Physician evaluation and management Medicare service events (per 1,000 beneficiaries)	8,683	8,123	13,354
Imaging Medicare service events (per 1,000 beneficiaries)	3,198	3,019	4,075
Home health Medicare episodes (per 1,000 beneficiaries)	55	54	186
Long term care hospital Medicare days (per 1,000 beneficiaries)	80	81	107
Hospital inpatient Medicare admissions (per 1,000 beneficiaries)	206	210	295
FQHC and Rural Health Clinic visits (per 1,000 beneficiaries)	340	337	405
Emergency department visit rate (per 1,000 beneficiaries)	549	564	658
Hospital inpatient Medicare days (per 1,000 beneficiaries)	967	1,091	1,597
Skilled nursing facility Medicare days (per 1,000 beneficiaries)	272	412	1,917
Skilled nursing facility Medicare admissions (per 1,000 beneficiaries)	12	17	71
Ambulatory surgical center Medicare service events (per 1,000 beneficiaries)	85	122	158
Dialysis Medicare visits (per 1,000 beneficiaries)	693	1,047	1,355
Hospital outpatient Medicare visits (per 1,000 beneficiaries)	3,150	4,222	4,204

Source: Mat-Su Senior Services Environmental Scan, McDowell Group, 2016

MSRMC Emergency Department (ED) Frequent Users

In Mat-Su, as in many other communities in the United States, there are a group of individuals who frequent the emergency department as patients. These are not always the same individuals over time and they have complex physical, behavioral, and social needs that are not met by outpatient services and supports in the community. Learning more about how the current health care system does not meet their needs and understanding what they are dealing with can help shed a light on factors that impact health in Mat-Su.

Ambulatory Care Sensitive Conditions

Ambulatory Care Sensitive (ACS) conditions are illnesses that can often be managed effectively on an outpatient basis and generally do not result in hospitalization or emergency department utilization if managed properly. **Tables 81** outlines the Mat-Su Regional Medical Center (MSRMC) Emergency Department utilization for selected ACS conditions from January 1, 2013 through September 30, 2015. Overall, the hospital saw between 1,734 and 1,845 visits for ambulatory care sensitive conditions, although the 2015 data includes only three quarters. Utilization has been slightly increasing over the past three years for diabetes and hypertension related conditions, as well as bacterial pneumonia. Utilization for severe ear, nose and throat conditions has been decreasing.

It should also be noted that there are a number of primary care sensitive conditions that have had no emergency department utilization during this time period. These include:

- Congenital Syphilis – Secondary DX for newborns only
- Failure to Thrive < 1 year – Primary DX
- Hemophilus Meningitis – Primary DX
- Convulsions – Primary DX
- Dehydration – Primary DX
- Pelvic Inflammatory Disease – Primary DX
- Asthma – Primary DX
- Grand Mal & Other Epileptic Conditions – Primary DX
- Tuberculosis – Primary DX
- Pulmonary Tuberculosis – Primary DX

Table 81 - Select Ambulatory Care Sensitive Conditions, MSRMC Emergency Department, 2013-2015

Dental Conditions - Primary DX 2013		
ICD 9 DX Code	ICD DX Description	Total
5224	AC APICAL PERIODONTITIS	13
5225	PERIAPICAL ABSCESS	103
5226	CHR APICAL PERIODONTITIS	1
52100	DENTAL CARIES NOS	13
	Subtotal	130

Dental Conditions - Primary DX 2014		
ICD 9 DX Code	ICD DX Description	Total
5224	AC APICAL PERIODONTITIS	1
5225	PERIAPICAL ABSCESS	109
52100	DENTAL CARIES NOS	62
52181	CRACKED TOOTH	1
	Subtotal	173

Dental Conditions - Primary DX 1/1/2015-9/30/2015 (3 quarters)		
ICD 9 DX Code	ICD DX Description	Total
5224	AC APICAL PERIODONTITIS	1
5225	PERIAPICAL ABSCESS	88
52100	DENTAL CARIES NOS	34
52130	EROSION NOS	1
	Subtotal	124

Vaccine Preventable Conditions - Primary DX 2013		
ICD 9 DX Code	ICD DX Description	Total
529	VARICELLA UNCOMPLICATED	2

Vaccine Preventable Conditions - Primary DX 2014		
ICD 9 DX Code	ICD DX Description	Total
529	VARICELLA UNCOMPLICATED	5

Vaccine Preventable Conditions - Primary DX 1/1/2015-9/30/2015		
ICD 9 DX Code	ICD DX Description	Total
529	VARICELLA UNCOMPLICATED	3

Iron Deficiency Anemia - Primary/Secondary DX 2013		
ICD 9 DX Code	ICD DX Description	Total
2808	IRON DEFIC ANEMIA NEC	2
2809	IRON DEFIC ANEMIA NOS	127
	Subtotal	129

Iron Deficiency Anemia - Primary/Secondary DX 2014		
ICD 9 DX Code	ICD DX Description	Total
2809	IRON DEFIC ANEMIA NOS	157
	Subtotal	157

Iron Deficiency Anemia - Primary/Secondary DX 1/1/2015-9/30/2015		
ICD 9 DX Code	ICD DX Description	Total
2808	IRON DEFIC ANEMIA NEC	1
2809	IRON DEFIC ANEMIA NOS	60
	Subtotal	61

Nutritional Deficiencies Primary/Secondary DX 2013		
ICD 9 DX Code	ICD DX Description	Total
261	NUTRITIONAL MARASMUS	5
262	OTH SEVERE MALNUTRITION	9
	Subtotal	14

Nutritional Deficiencies Primary/Secondary DX 2014		
ICD 9 DX Code	ICD DX Description	Total
261	NUTRITIONAL MARASMUS	4
262	OTH SEVERE MALNUTRITION	13
2680	RICKETS, ACTIVE	1
	Subtotal	18

Nutritional Deficiencies Primary/Secondary DX 1/1/2015-9/30/2015		
ICD 9 DX Code	ICD DX Description	Total
261	NUTRITIONAL MARASMUS	11
262	OTH SEVERE MALNUTRITION	14
2680	RICKETS, ACTIVE	1
	Subtotal	26

Cancer of the Cervix - Primary DX 2013		
ICD 9 DX Code	ICD DX Description	Total
1809	MAL NEO CERVIX UTERI NOS	1

Cellulitis - Primary DX 1/1/2015-9/30/2015		
ICD 9 DX Code	ICD DX Description	Total
683	ACUTE LYMPHADENTIS	1

Gastroenteristis -Primary DX 2013		
ICD 9 DX Code	ICD DX Description	Total
5589	NONINF GASTROENTERIT NEC	153

Gastroenteristis -Primary DX 2014		
ICD 9 DX Code	ICD DX Description	Total
5589	NONINF GASTROENTERIT NEC	162

Gastroenteristis -Primary DX 1/1/2015-9/30/2015		
ICD 9 DX Code	ICD DX Description	Total
5589	NONINF GASTROENTERIT NEC	143

Bacterial Pnumonia -Primary DX 2013		
ICD 9 DX Code	ICD DX Description	Total
481	PNEUMOCOCCAL PNEUMONIA	8
486	PNEUMONIA, ORGANISM NOS	298
4822	H.INFLUENZAE PNEUMONIA	1
4829	BACTERIAL PNEUMONIA NOS	5
	Subtotal	312

Bacterial Pnumonia -Primary DX 2014		
ICD 9 DX Code	ICD DX Description	Total
485	BRONCHOPNEUMONIA ORG N	1
486	PNEUMONIA, ORGANISM NOS	345
4829	BACTERIAL PNEUMONIA NOS	17
	Subtotal	363

Bacterial Pnumonia -Primary DX 1/1/2015-9/30/2015		
ICD 9 DX Code	ICD DX Description	Total
481	PNEUMOCOCCAL PNEUMONIA	1
485	BRONCHOPNEUMONIA ORG NO	1
486	PNEUMONIA, ORGANISM NOS	345
4829	BACTERIAL PNEUMONIA NOS	32
	Subtotal	379

Hypoglycemia - Primary DX 2013		
ICD 9 DX Code	ICD DX Description	Total
2512	HYPOGLYCEMIMA NOS	6

Hypoglycemia - Primary DX 2014		
ICD 9 DX Code	ICD DX Description	Total
2512	HYPOGLYCEMIMA NOS	12

Hypoglycemia - Primary DX 1/1/2015-9/30/2015		
ICD 9 DX Code	ICD DX Description	Total
2512	HYPOGLYCEMIMA NOS	6

Source: Mat-Su Regional Medical Center Emergency Department data

Hospital Utilization Data

Table 82 below outlines the inpatient data over the past several years from Mat-Su Regional Medical Center for ACS conditions. Over the past few years, inpatient care for ACS conditions has been decreasing. For the first nine months of 2016, the highest number of inpatient ACS conditions included Reproductive Disorder (267), Pneumonia (251), Complications-Baby (240) and Hypertension (218).

Table 82 - Inpatient Ambulatory Care Sensitive Conditions

	2013	2014	2015	2016 (9mos)
Reproductive Disorder	3	565	348	267
Pneumonia	118	459	403	251
Complications (Baby)	120	576	396	240
Hypertension	12	949	545	218
Drug & Alcohol	53	421	230	185
COPD	113	463	266	163
Bronchitis & Asthma (over 18)	12	1026	527	154
Congestive Heart Failure	92	190	159	115
Bronchitis & Asthma (under 18)	19	356	226	65
Breast Cancer & Mastectomy	5	127	94	42
Cancer	10	65	39	26
Fracture (age >65)	9	17	5	14
TOTAL	566	5214	3238	1740

Source: Mat-Su Regional Medical Center inpatient data

According to patient data from MSRMC, tobacco use and alcohol withdrawal were consistently the most frequent inpatient and outpatient mental health diagnoses over the past three years (2013-2015). Table 83 outlines the various conditions that were treated most frequently during this period, and includes both primary and secondary diagnosis. Tobacco use disorder was by far the most frequent diagnosis, followed by alcohol withdrawal. The CDC reported that "adults with mental illness or substance use disorders smoke cigarettes more than adults without these disorders."[106] Because of this correlation and the fact that tobacco use is a core measure that became a screening requirement from CMS in 2015, MSRMC began screening all patients for tobacco, which would account for the high number of tobacco use disorders reported. Opioid dependence has become one of the top diagnoses in the past two years. The "all other" category includes all other diagnoses with less than 10 patients.

Table 83 - Mental Health Primary and Secondary Diagnoses, Mat-Su Regional Medical Center Inpatient Data

Mental Health

1/1/2013 - 12/31/2013		1/1/2014 - 12/31/2014		1/1/2015 - 9/30/2015	
ICD9 Diagnosis	Total	ICD9 Diagnosis	Total	ICD9 Diagnosis	Total
3051 TOBACCO USE DISORDER	8,351	3051 TOBACCO USE DISORDER	11,709	3051 TOBACCO USE DISORDER	8,330
29181 ALCOHOL WITHDRAWAL	117	29181 ALCOHOL WITHDRAWAL	123	29181 ALCOHOL WITHDRAWAL	80
30521 CANNABIS ABUSE-CONTIN	33	30401 OPIOID DEPENDENCE-CONTIN	69	30401 OPIOID DEPENDENCE-CONTIN	46
30393 ALCOH DEP NEC/NOS-REMISS	31	30393 ALCOH DEP NEC/NOS-REMISS	47	30393 ALCOH DEP NEC/NOS-REMISS	41
29281 DRUG-INDUCED DELIRIUM	28	29512 HEBEPHRENIA-CHRONIC	46	29512 HEBEPHRENIA-CHRONIC	38
30522 CANNABIS ABUSE-EPISODIC	28	30501 ALCOHOL ABUSE-CONTINUOUS	40	2949 MENTAL DISOR NOS OTH DIS	37
29512 HEBEPHRENIA-CHRONIC	22	30521 CANNABIS ABUSE-CONTIN	38	30522 CANNABIS ABUSE-EPISODIC	25
30503 ALCOHOL ABUSE-IN REMISS	19	30522 CANNABIS ABUSE-EPISODIC	26	30501 ALCOHOL ABUSE-CONTINUOUS	24
30392 ALCOH DEP NEC/NOS-EPISOD	15	29281 DRUG-INDUCED DELIRIUM	23	30521 CANNABIS ABUSE-CONTIN	22
30501 ALCOHOL ABUSE-CONTINUOUS	12	30593 DRUG ABUSE NEC-IN REMISS	18	29281 DRUG-INDUCED DELIRIUM	15
All Other*	91	30301 AC ALCOHOL INTOX-CONTIN	13	30593 DRUG ABUSE NEC-IN REMISS	13
GRAND TOTAL	8,747	30503 ALCOHOL ABUSE-IN REMISS	12	30503 ALCOHOL ABUSE-IN REMISS	12
		30502 ALCOHOL ABUSE-EPISODIC	11	30553 OPIOID ABUSE-IN REMISS	12
		30491 DRUG DEPEND NOS-CONTIN	10	30301 AC ALCOHOL INTOX-CONTIN	11
		All Other*	100	30392 ALCOH DEP NEC/NOS-EPISOD	10
		GRAND TOTAL	12,285	All Other*	57
				GRAND TOTAL	8,773

Source: Mat-Su Regional Medical Center

[106] https://www.cdc.gov/tobacco/disparities/mental-illness-substance-use/index.htm

Outlined below, **Table 84** outlines the payer source, age and top diagnoses of MSRMC Emergency Department (ED) frequent users (more than five visits per year).

In 2013:

- 564 Mat-Su residents visited the MSRMC ED 5 or more times
- They had 4,429 visits and had $13.3 million in facility charges
- 100 people visited the ED 10+ times (1,458 visits)
- 23 people visited 15+ times (557)

Table 84 - Payer Source, Age and Top Diagnoses of MSRMC ED Frequent Users (>5 visits/year)

Payer Source	Age	Diagnoses (top 25%)
31% Medicaid 25% Medicare 18% Self-pay 18% Private insurance 8% Other	0-19 year: 8% 20-54 years: 63% 55+ years: 29%	• Abdominal pain • Other nervous system disorder • Headache, including migraine • Nausea and vomiting • Nonspecific chest pain

Source: Mat-Su Regional Medical Center, 2013

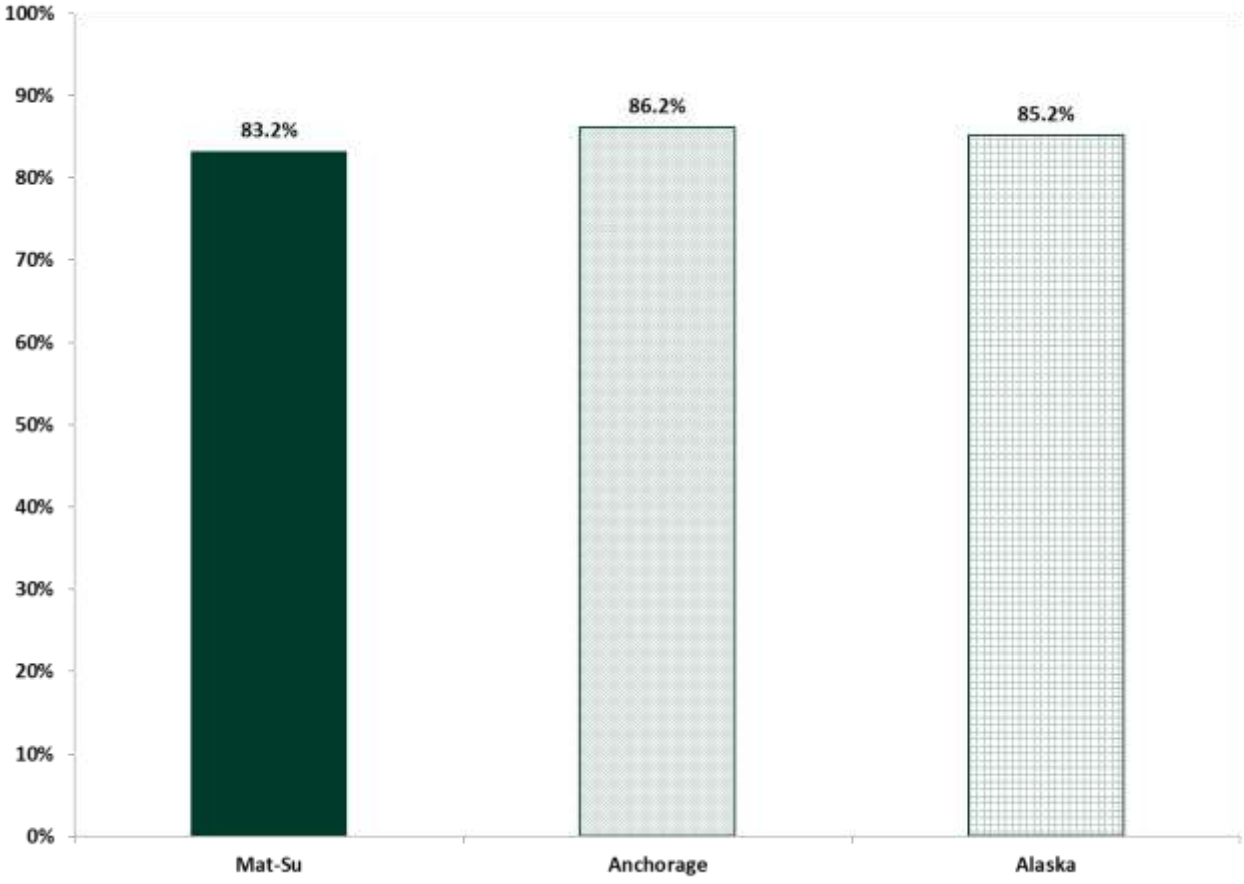
Fourteen patients who have visited the ED five or more times in the last year were interviewed during August 2016 to support the CHNA. The ED High Utilizer Interview guide can be found in Appendix J. Feedback from these patients included:

- The reason for their last visit ranged from a condition that started within the last week to one that began when the patient was 12 years old.
- They were seen at the ED for chronic conditions like kidney stones, nerve pain, diabetes, pancreatitis, diverticulitis, and epilepsy. Some had acute conditions like pain due to a recent surgery, finger infection, hemorrhaging, and an abscess on a leg.
- Others had an injury from domestic violence and a fall. One woman was seen for a complication of a pregnancy.
- They all had different home circumstances – some had a lot of support (best friend and fiancée; husband and tons of friends; lots of nice people) others had minimal support (no one, a sister who pops in once in a while, no – all by myself).
- The things the High Utilizers said that could have prevented the most recent visit were: "use a cane," "stay out of jail," take care of this cut," "have something for this pain."
- When asked why they go to the ED and not a doctor's office or urgent care, their answers had three themes:
    - "I couldn't get an appointment."
    - "I needed care when the doctor's office was closed (at night or on weekend)."
    - "It is easier to get to the ED (transportation issue)."
- When asked if they have a regular medical provider, there were three themes:
    - "I don't have a general provider – just a specialist."
    - "I don't have a doctor right now."
    - "I have a primary doctor and other specialists."
- One patient said they have a case manager, one said they have an advocate, and one was going to get a case manager.
- When asked what would help them to be healthier, the High Utilizers interviewed mentioned the following as things they could do to help them be healthier:
    - Quit smoking
    - Eat better
    - Exercise
    - Quit doing drugs and stop making the choices i make
    - Love life more
    - My children coming back home would make me healthier
    - Keep Jesus in my life
    - Get to the root of my problems
    - Stop drinking

Access to Care Limited Due to Cost

As reported in the Alaska Behavioral Risk Factor Surveillance System, Figure 48 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who self-reported that their access to medical care was not limited due to cost during 2010-2014. A statistically significant difference was observed for respondents who self-reported care was not limited due to cost. During that time, Mat-Su respondents (83.2%) were more likely to forgo medical care due to cost when compared to respondents in Anchorage (86.2%) and Alaska (85.2%).

Figure 48 - Access to Medical Care Was Not Limited Due to Cost, 2010-2014

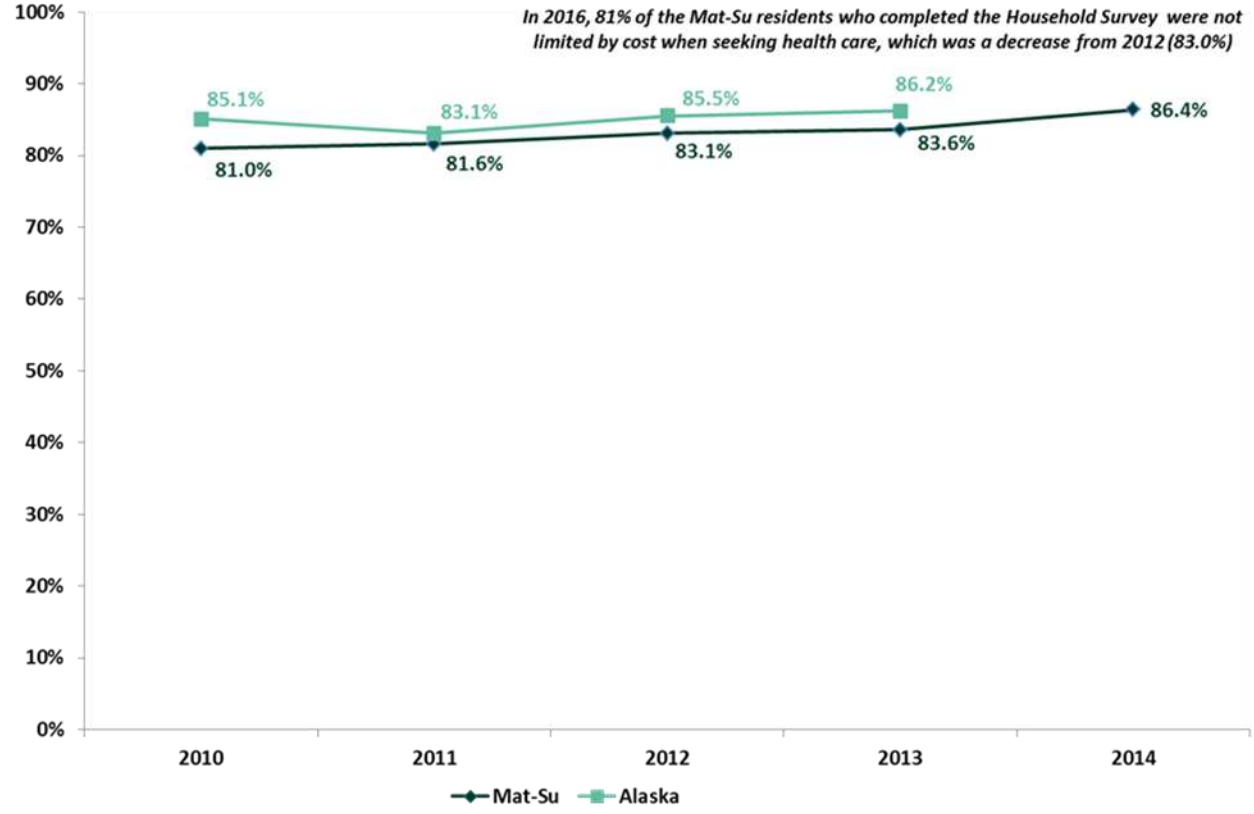


Original Question: Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?

Source: Alaska Behavioral Risk Factor Surveillance System Data

The five-year trend of respondents in Mat-Su and Alaska who self-reported that they did not experience cost as a barrier to accessing medical care is illustrated in Figure 49. The percentage of respondents in Mat-Su who reported their medical care was not limited due to cost has been increasing over the five-year period, suggesting that cost has become less of a barrier to accessing needed health care in recent years. Alaska has also been seeing an increase in the percentage of respondents who report their medical care is not limited due to cost. In 2013, a higher percentage of Mat-Su respondents (83.6%) reported they were not limited by cost when seeking health care cost when compared to respondents in Alaska (86.2%). In 2016, 81.0% of Mat-Su residents who completed the Household Survey reported that they were not limited by cost when seeking health care which was a decrease from 2012 (83.0%).

Figure 49 - Access to Medical Care Was Not Limited Due to Cost, Trend, 2010-2014

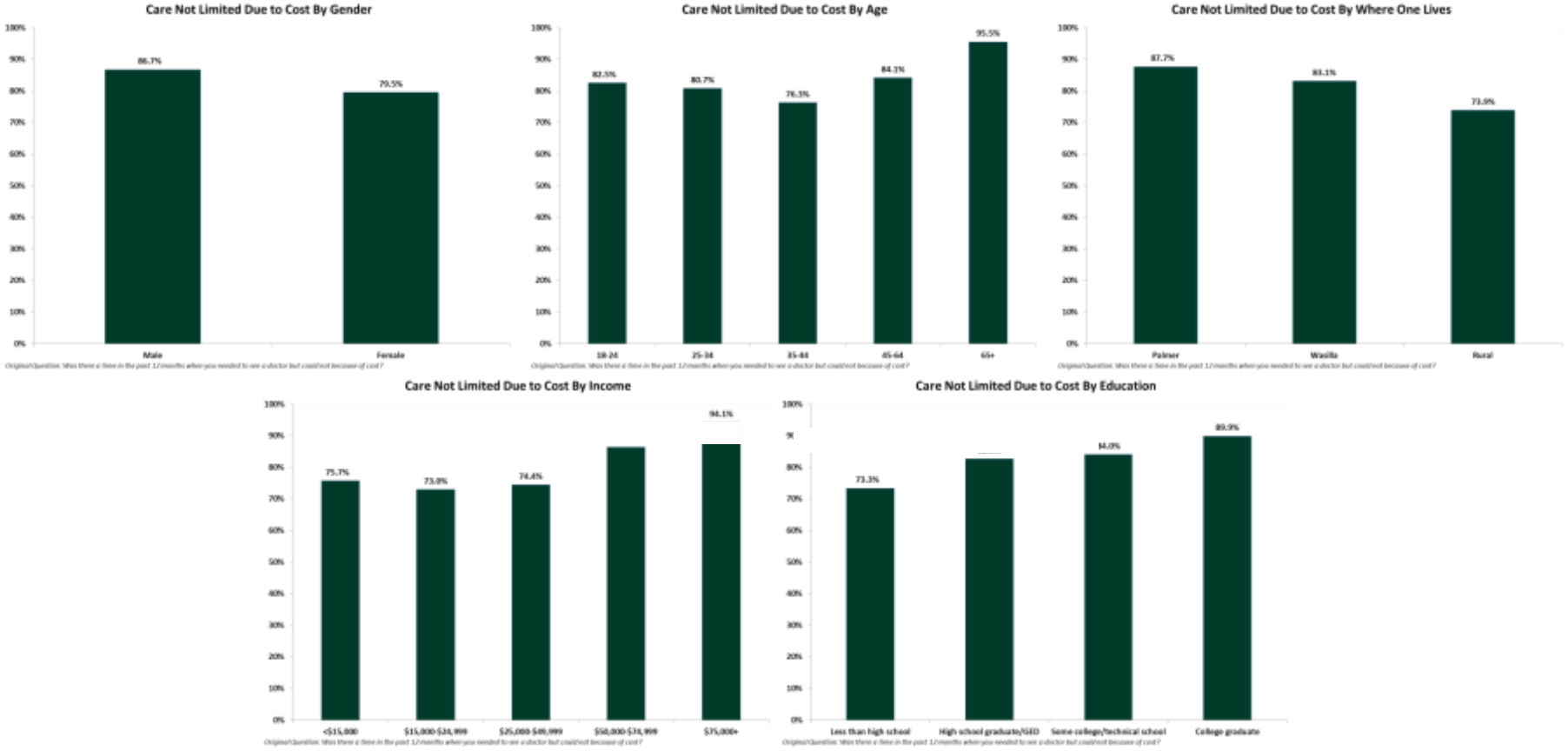


Original Question: Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?

Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System, **Figure 50** illustrates the demographic factors where a statistically significant difference was observed for residents who self-reported that their access to medical care was not limited due to cost for 2010-2014. Male respondents (86.7%) reported that they were more likely not to forgo medical care due to cost than female respondents (79.5%). Older respondents (95.5%) reported that they were more likely to receive the care they needed, compared to respondents age 35-44 (76.3%) who reported they received the medical care they needed. Rural respondents (73.9%) reported that they were less likely to receive the medical care they needed than respondents in Palmer (87.7%) or Wasilla (83.1%).

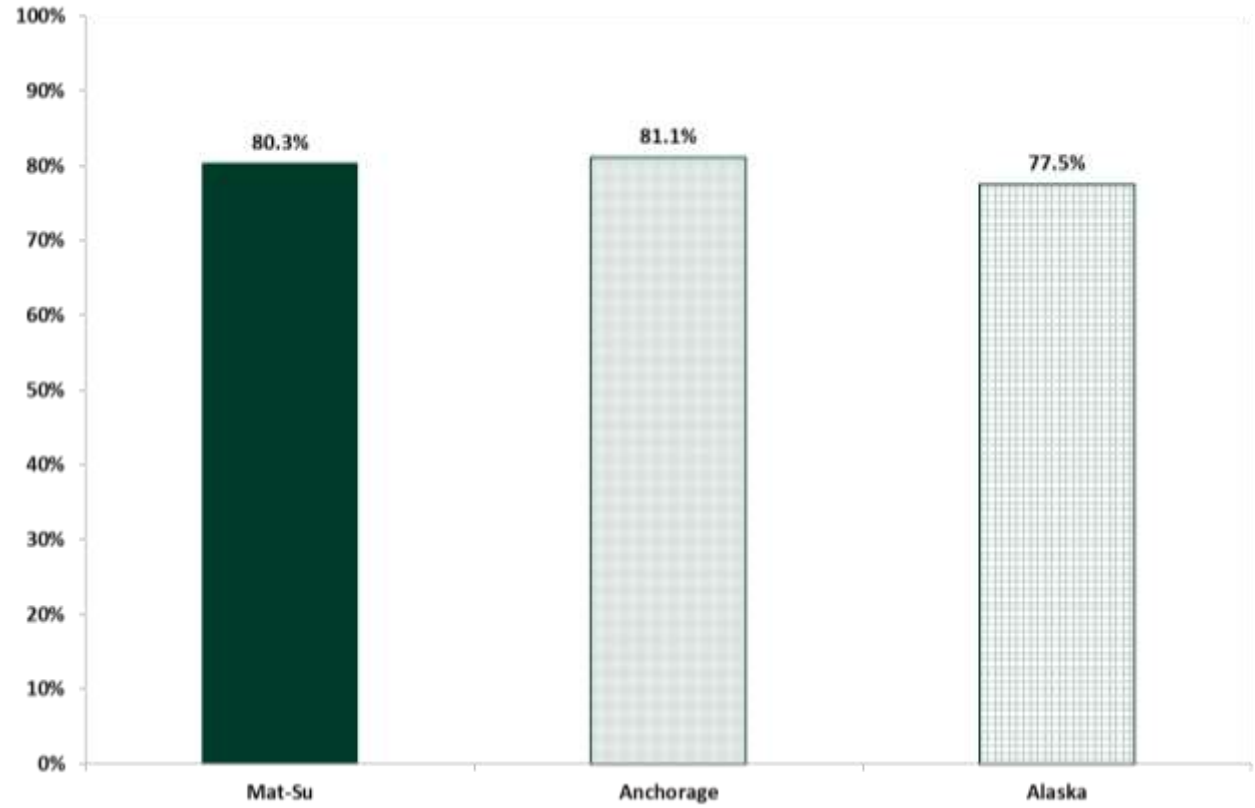
Figure 50 - Access to Medical Care Was Not Limited Due to Cost, Significant Differences



Source: Alaska Behavioral Risk Factor Surveillance System Data

According to the Alaska Behavioral Risk Factor Surveillance System data, Figure 51 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who self-reported they received medical care when they needed it in 2013-2014. A comparable percentage of respondents in Mat-Su (80.3%) and Anchorage (81.1%) received medical care when needed, which was higher when compared to the state (77.5%).

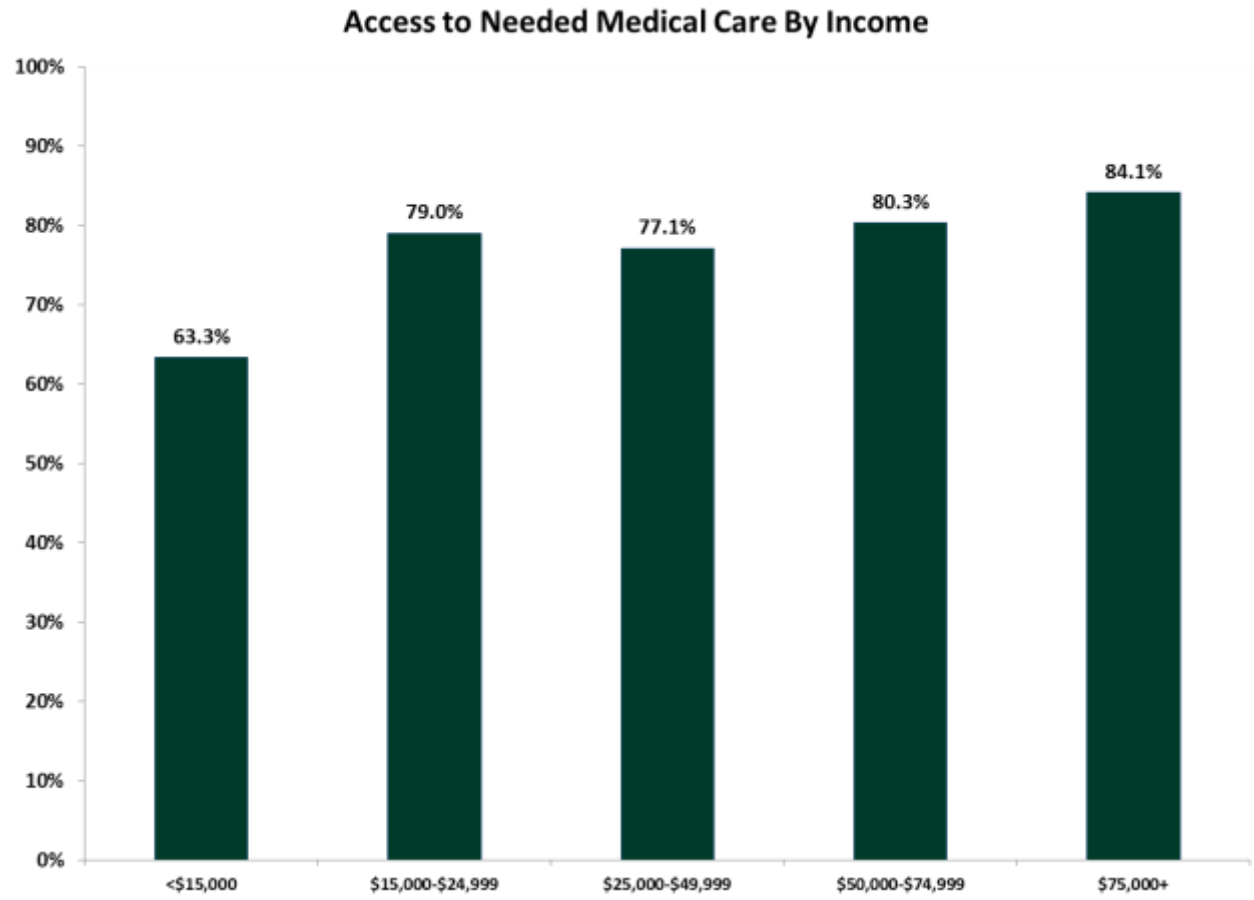
Figure 51 - Receive Medical Care When Needed, 2013-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

The impact income has on the ability to access medical care when needed is illustrated in Figure 52, with a statistically significant difference observed based on income. During 2013-2014, respondents in Mat-Su with annual incomes of $15,000 or less self-reported that they were less likely to receive medical care when they needed it compared to respondents with higher income levels.

Figure 52 - Residents Received Medical Care When Needed, Significant Differences, 2013-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

Legal Obstacles Can Impact Health Care Access

A U.S. Department of Health and Human Services-funded pilot Medical-Legal Partnership study concluded that "…civil legal aid services can positively impact individual and population health," including a "significant reduction in stress and improvement in health and wellbeing after receiving [legal] services" such as for housing, public and disability benefits, employment, and debt collection problems. Access to legal services has been shown to be critical to individuals suffering from health problems that are caused all or in part by social issues. For example, an asthmatic child's health problems may be exacerbated by the mold infesting her apartment, but the landlord is ignoring the parents' request to fix the problem. A lawyer can bring an action to compel the landlord to fix the problem, or negotiate to allow the family to move out without any legal or financial repercussions. Another example is when domestic violence is present in a household, both a spouse and the children can experience physical and mental injuries as a direct result of abuse. In this case, a lawyer can assist the victim with obtaining a protective order and other orders to stabilize the family, including possession of the family home and child support.

In Mat-Su, the Alaska Legal Services Clinic located in Palmer identified four types of legal issues they assist residents with that impact health:

1. Medicaid issues that involve seniors, disabled individuals or both who were denied or terminated from their healthcare benefits.
2. Family law matters including domestic violence, sexual assault, and/or child abuse.
3. Housing matters including eviction and foreclosure defense.
4. Consumer protection including defense in collection matters and other debt relief issues.

> *"Our Mat-Su office sees a large number of elderly and disabled individuals being denied or terminated from their healthcare benefits for erroneous or invalid reasons. Access to these benefits can oftentimes mean the difference between life and death, e.g. getting cancer treatment or receiving the necessary help to take life-saving medication. We are only able to serve about 50% of the residents who request our services."*
>
> - Supervising Attorney, Alaska Legal Service Corporation"

Mat-Su Healthcare Workforce

The Mat-Su Borough includes a number of designated Health Professional Shortage Areas, as outlined in Table 85. The borough needs primary care, dental health and mental health professionals.

Table 85 – Health Professional Shortage Areas, 2014

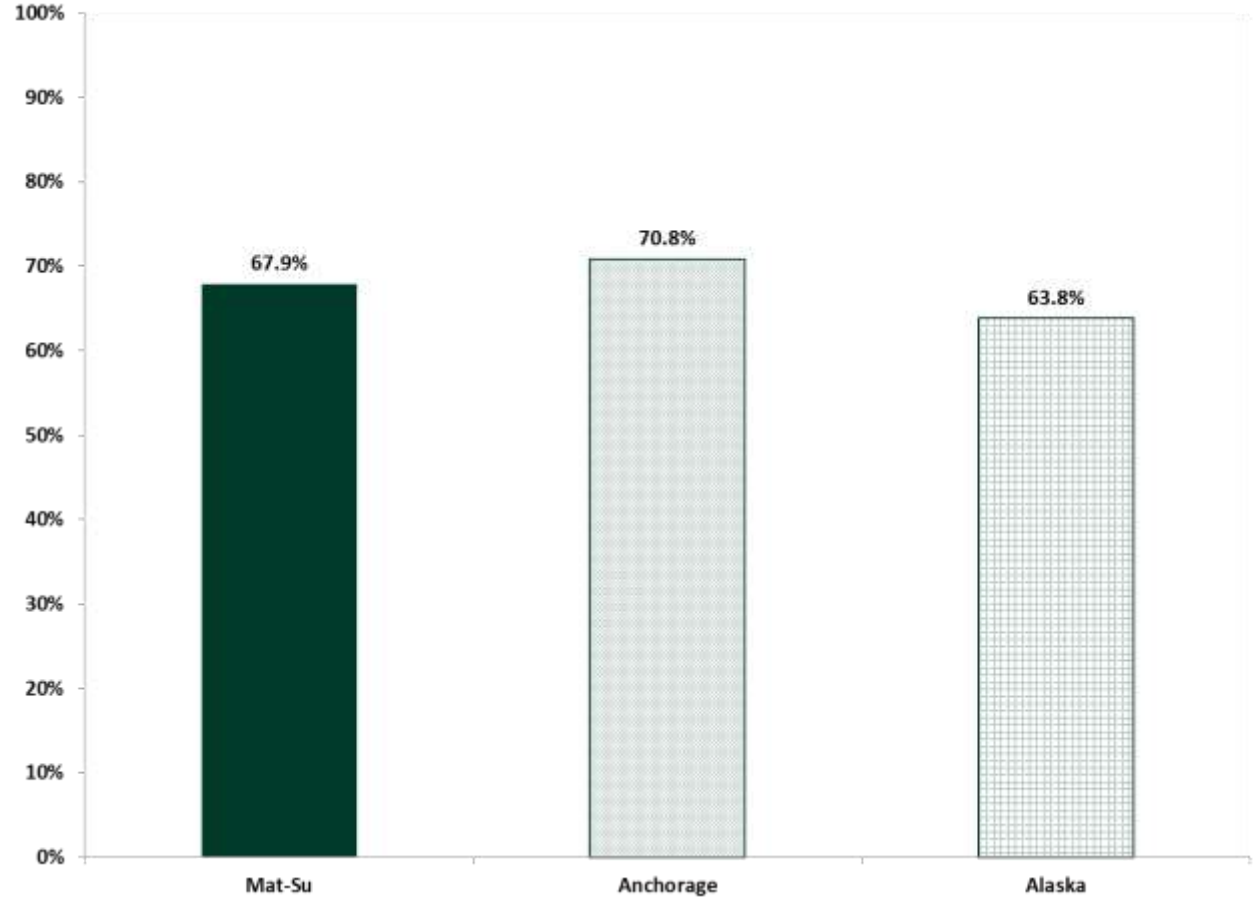
County Name	HPSA Name	HPSA Discipline	Designation Type	HPSA FTE	HPSA Score	HPSA Status	HPSA Designation Last Update Date
Matanuska-Susitna Borough	Matanuska-Susitna Borough	Mental Health	HPSA Geographic	0.00	17	Designated	4/21/2014
County Name	**HPSA Name**	**HPSA Discipline Class**	**Designation Type**	**HPSA FTE**	**HPSA Score**	**HPSA Status**	**HPSA Designation Last Updated Date**
Matanuska-Susitna Borough	Matanuska-Susitna	Mental Health	Single County			Designated	4/21/2014
Matanuska-Susitna Borough	Sunshine Community Health Center	Primary Care	Comprehensive Health Center		5	Designated	6/16/2003
Matanuska-Susitna Borough	Mat-Su Health Services	Primary Care	Comprehensive Health Center		13	Designated	10/22/2014
Matanuska-Susitna Borough	Chickaloon Native Village	Primary Care	Native American Tribal Population		7	Designated	7/28/2011
Matanuska-Susitna Borough	Knik Tribal Council	Primary Care	Alaskan Native Tribal Population		9	Designated	8/15/2011
Matanuska-Susitna Borough	Scf Valley Native Primary Care Center	Primary Care	Alaskan Native Tribal Population		15	Designated	1/3/2013
Matanuska-Susitna Borough	Sunshine Community Health Center	Dental Health	Comprehensive Health Center		10	Designated	6/23/2003
Matanuska-Susitna Borough	Mat-Su Health Services	Dental Health	Comprehensive Health Center		21	Designated	10/22/2014
Matanuska-Susitna Borough	Scf Valley Native Primary Care Center	Dental Health	Alaskan Native Tribal Population		17	Designated	1/3/2013
Matanuska-Susitna Borough	Talkeetna/Trapper Creek	Primary Care	HPSA Geographic	0.00	16	Designated	3/24/2014
County Name	**HPSA Name**	**HPSA Discipline Class**	**Designation Type**	**HPSA FTE**	**HPSA Score**	**HPSA Status**	**HPSA Designation Last Updated Date**
Matanuska-Susitna Borough	1.01	Primary Care	Census Tract			Designated	3/24/2014
Matanuska-Susitna Borough	1.02	Primary Care	Census Tract			Designated	3/24/2014
Matanuska-Susitna Borough	4.01	Primary Care	Census Tract			Designated	3/24/2014
Matanuska-Susitna Borough	4.02	Primary Care	Census Tract			Designated	3/24/2014
Matanuska-Susitna Borough	Sunshine Community Health Center	Mental Health	Comprehensive Health Center		7	Designated	7/14/2003
Matanuska-Susitna Borough	Mat-Su Health Services	Mental Health	Comprehensive Health Center		19	Designated	10/22/2014
Matanuska-Susitna Borough	Scf Valley Native Primary Care Center	Mental Health	Alaskan Native Tribal Population		19	Designated	1/3/2013
Matanuska-Susitna Borough	Northern Matanuska Susitna	Dental Health	HPSA Geographic	2.00	14	Designated	5/12/2014
County Name	**HPSA Name**	**HPSA Discipline Class**	**Designation Type**	**HPSA FTE**	**HPSA Score**	**HPSA Status**	**HPSA Designation Last Updated Date**
Matanuska-Susitna Borough	1.01	Dental Health	Census Tract			Designated	5/12/2014
Matanuska-Susitna Borough	1.02	Dental Health	Census Tract			Designated	5/12/2014
Matanuska-Susitna Borough	4.01	Dental Health	Census Tract			Designated	5/12/2014
Matanuska-Susitna Borough	4.02	Dental Health	Census Tract			Designated	5/12/2014
Matanuska-Susitna Borough	5.01	Dental Health	Census Tract			Designated	5/12/2014
Matanuska-Susitna Borough	5.02	Dental Health	Census Tract			Designated	5/12/2014

Source: Health Resources and Services Administration Data Warehouse, 2014

Irregular Source of Care

According to the Alaska Behavioral Risk Factor Surveillance System data, Figure 53 illustrates the percentage of residents in Mat-Su, Anchorage and Alaska who had a primary health care provider during 2010-2014. A statistically significant difference was observed for respondents who self-report having a personal care provider. Fewer respondents in Mat-Su (67.9%) report having a primary health care provider when compared to Anchorage (70.8%), while more respondents in Mat-Su report they had a provider when compared to Alaska (63.8%) respondents.

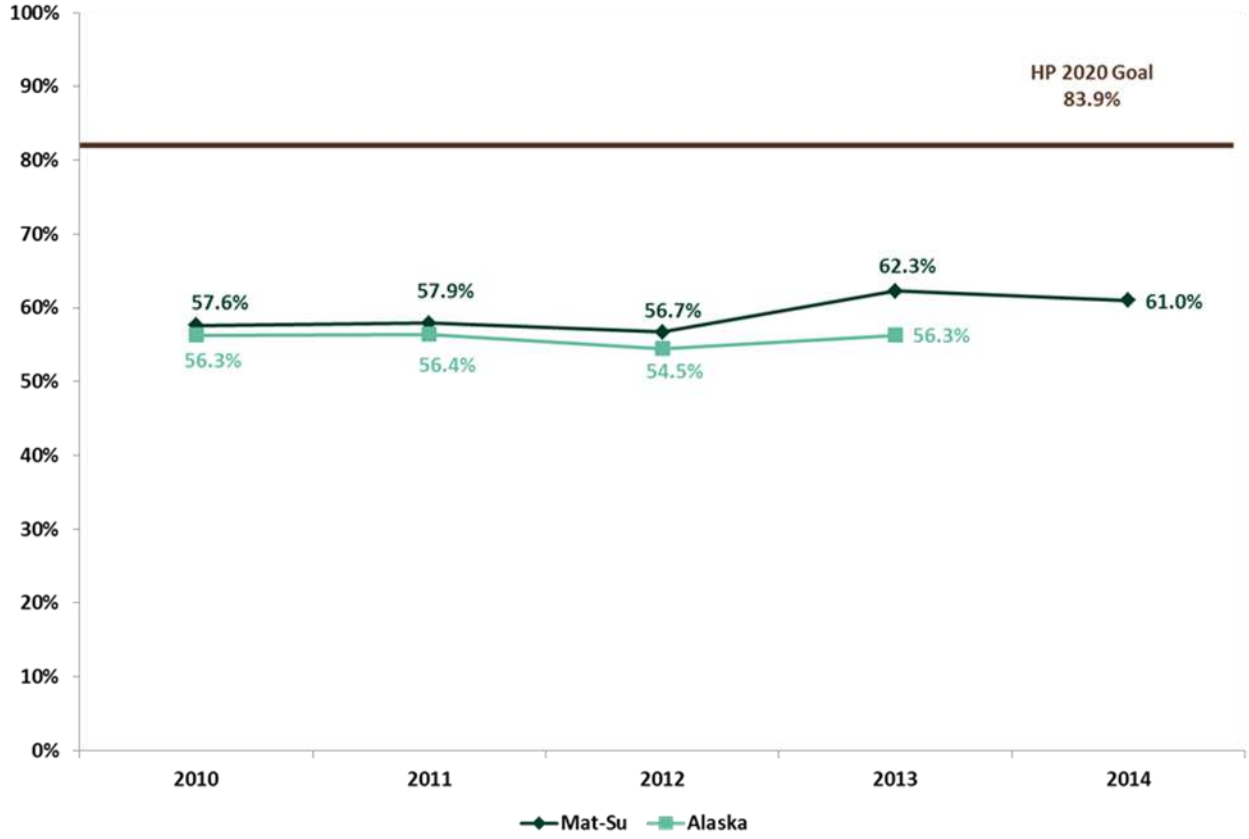
Figure 53: Residents Have a Primary Health Care Provider, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

The percentage of respondents in Mat-Su and Alaska who self-reported that they have a primary health care provider for years 2010-2014 is illustrated in Figure 54. The percentage of respondents in Mat-Su who report they have a primary health care provider has fluctuated over the five years. When looking at the most recent years, in 2013 (62.3%), the percentage increased only to decrease the following year (61.0%). For all four years where state data is available, Mat-Su had a higher percentage of respondents report having a primary health care provider compared to the state. Both Mat-Su and Alaska fall below the Healthy People 2020 Goal to have 83.9% of residents with a primary health care provider.

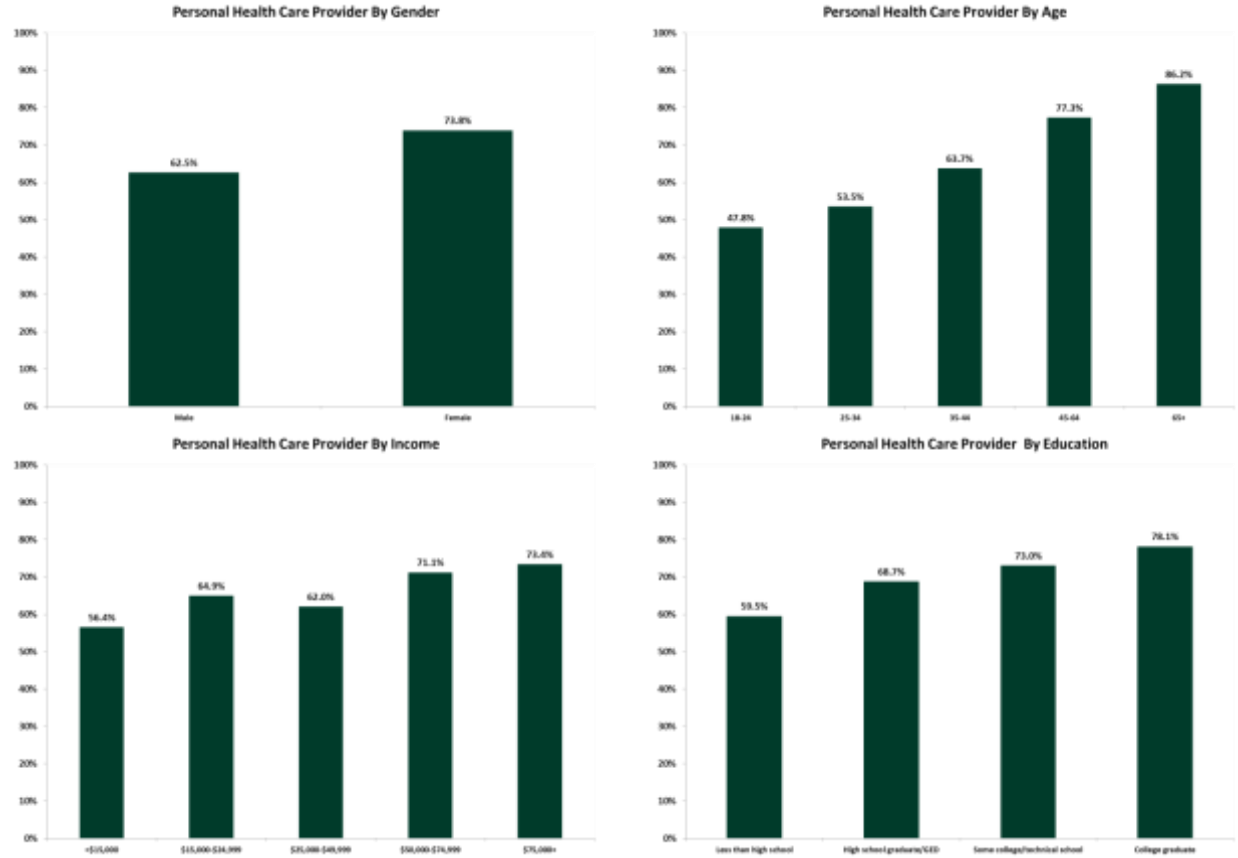
Figure 54: Have a Primary Health Care Provider, Trend, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data, Healthy People 2020 Goals

As reported in the Alaska Behavioral Risk Factor Surveillance System, Figure 55 illustrates the demographic variables where a statistically significant difference was observed for respondents who self-reported having a primary health care provider for 2010-2014. During this time, female respondents (73.8%) were more likely to report having a primary health care provider than male respondents (62.5%). The percentage of respondents who report having a primary health care provider increases with age in Mat-Su, with respondents age 65 and older (86.2%) more likely to report having a primary health care provider than younger respondents. Respondents with household incomes less than $15,000 (56.4%) were less likely to report having a primary health care provider than those with higher household incomes. Respondents who do not have a high school diploma (59.5%) were also less likely to report having a primary health care provider when compared to those with higher levels of educational attainment.

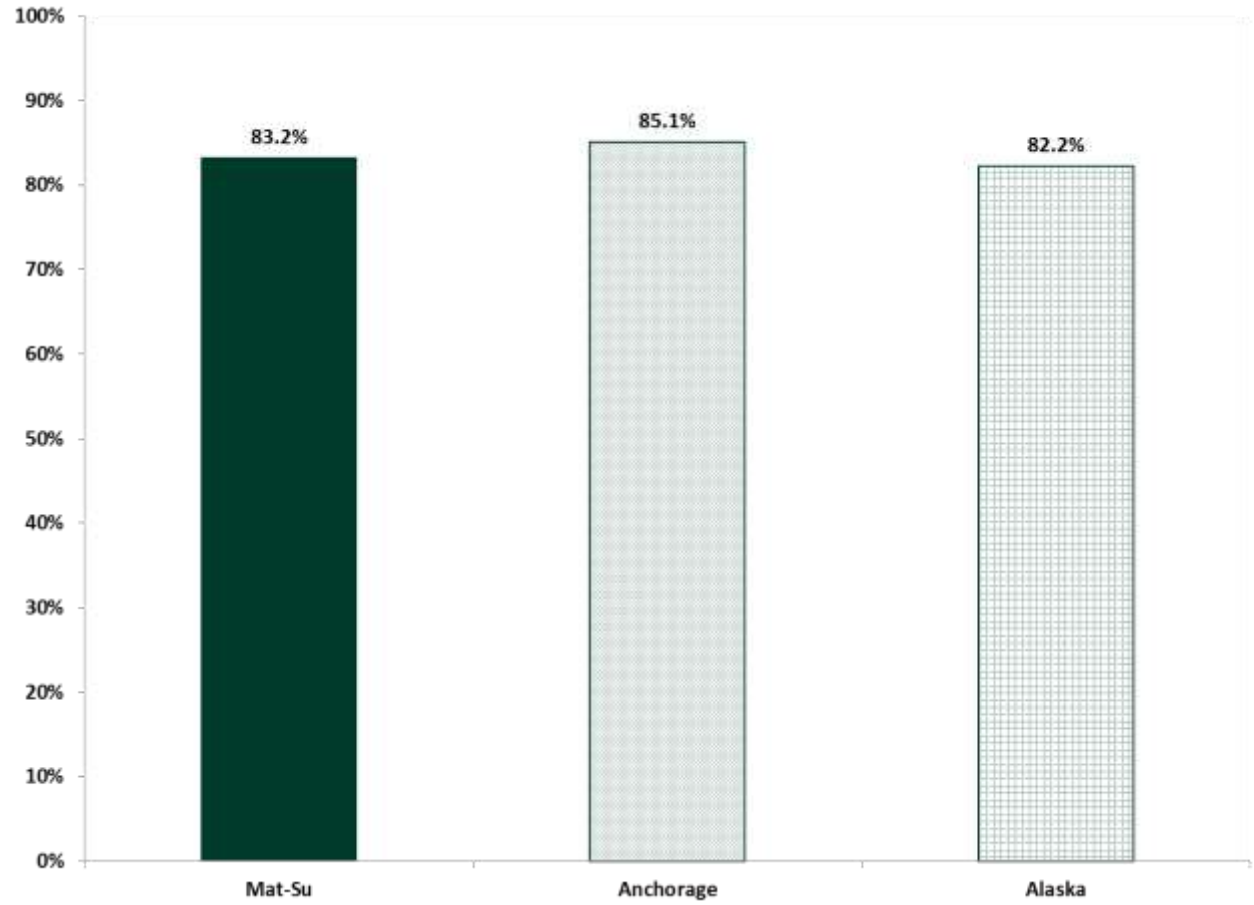
Figure 55 - Have a Primary Health Care Provider, Significant Differences, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

The percentage of respondents in Mat-Su, Anchorage and Alaska who reported that they visited a health professional in the past 12 months from the 2013-2014 data according the Alaska Behavioral Risk Factor Surveillance System is illustrated in Figure 56. A statistically significant difference was observed for respondents who report visiting a health professional in the past 12 months. A higher percentage of respondents in Mat-Su (83.2%) reported that they visited a health professional in the past 12 months when compared to the state (82.2%). Anchorage respondents (85.1%) had a higher percentage of respondents report visiting a health professional when compared to Mat-Su and Alaska.

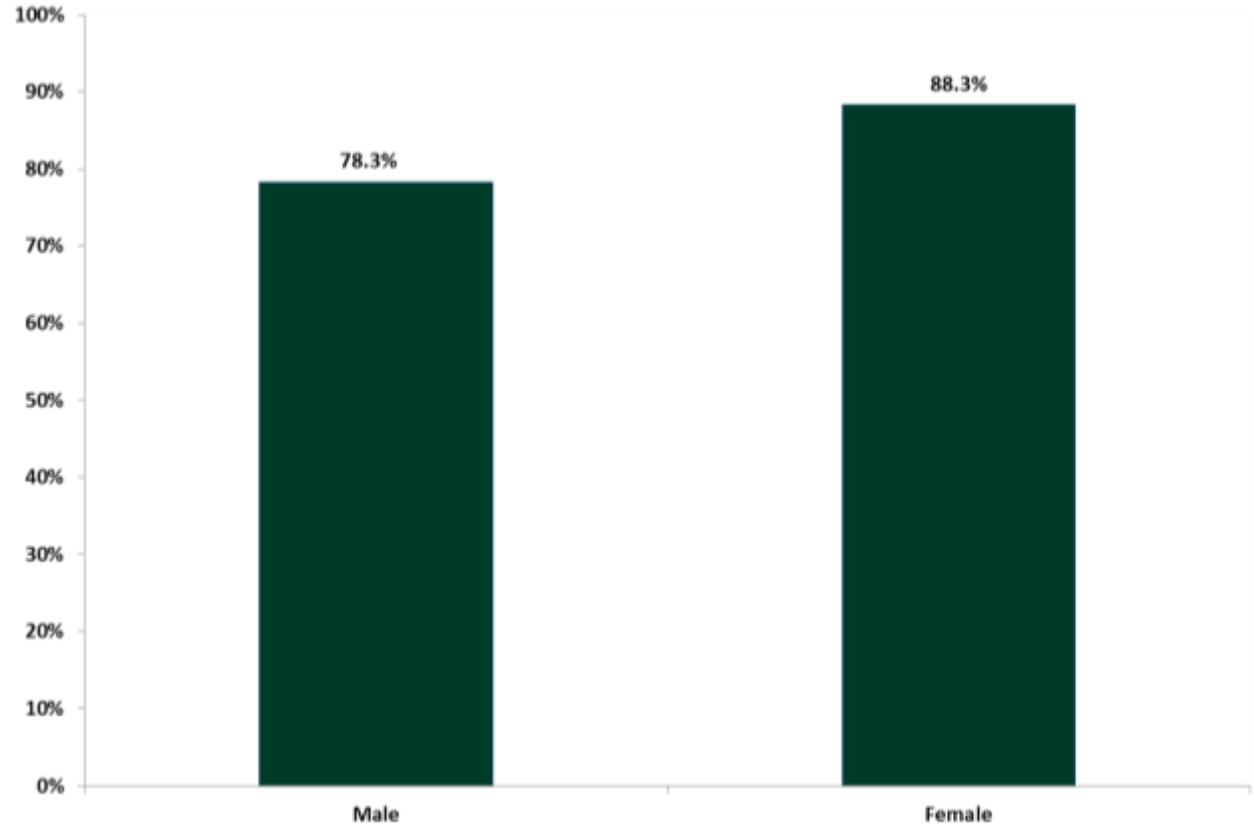
Figure 56 - Visited Health Professional, Past 12 Months, 2013-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

From the Alaska Behavioral Risk Factor Surveillance System, Figure 57 illustrates that there is a difference between males and females when it comes to visiting a health professional and the difference is statistically significant. Based on the 2013-2014 data, female respondents (88.3%) in Mat-Su self-reported that they were more likely to have visited a health professional in the past year when compared to male respondents (78.3%).

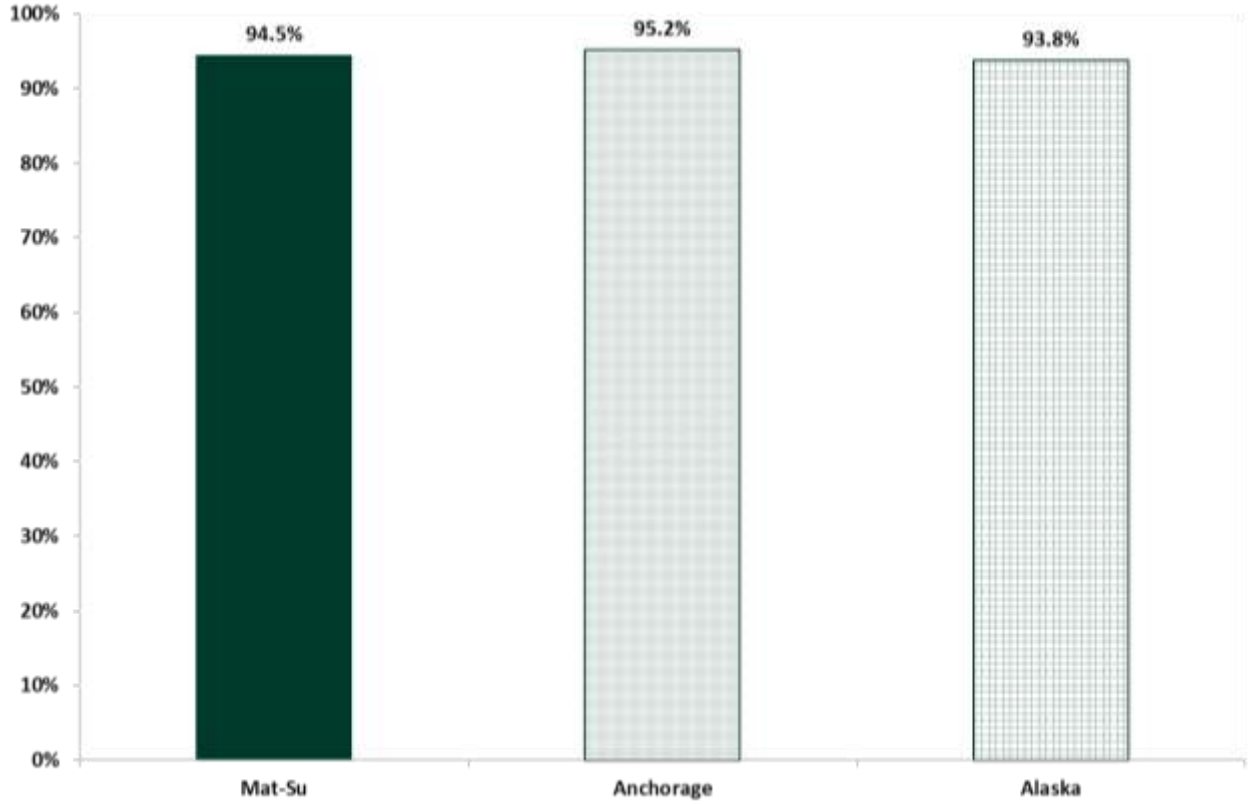
Figure 57 - Visited Health Professional by Gender, Past 12 Months, Significant Differences, 2013-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

The percentage of respondents in Mat-Su, Anchorage and Alaska who self-reported that they were satisfied with health care received in the 2013-2014 data from the Alaska Behavioral Risk Factor Surveillance System is illustrated in **Figure 58**. During this time, the majority of respondents in Mat-Su (94.5%), Anchorage (95.2%) and Alaska (93.8%) reported they were satisfied with the care they received.

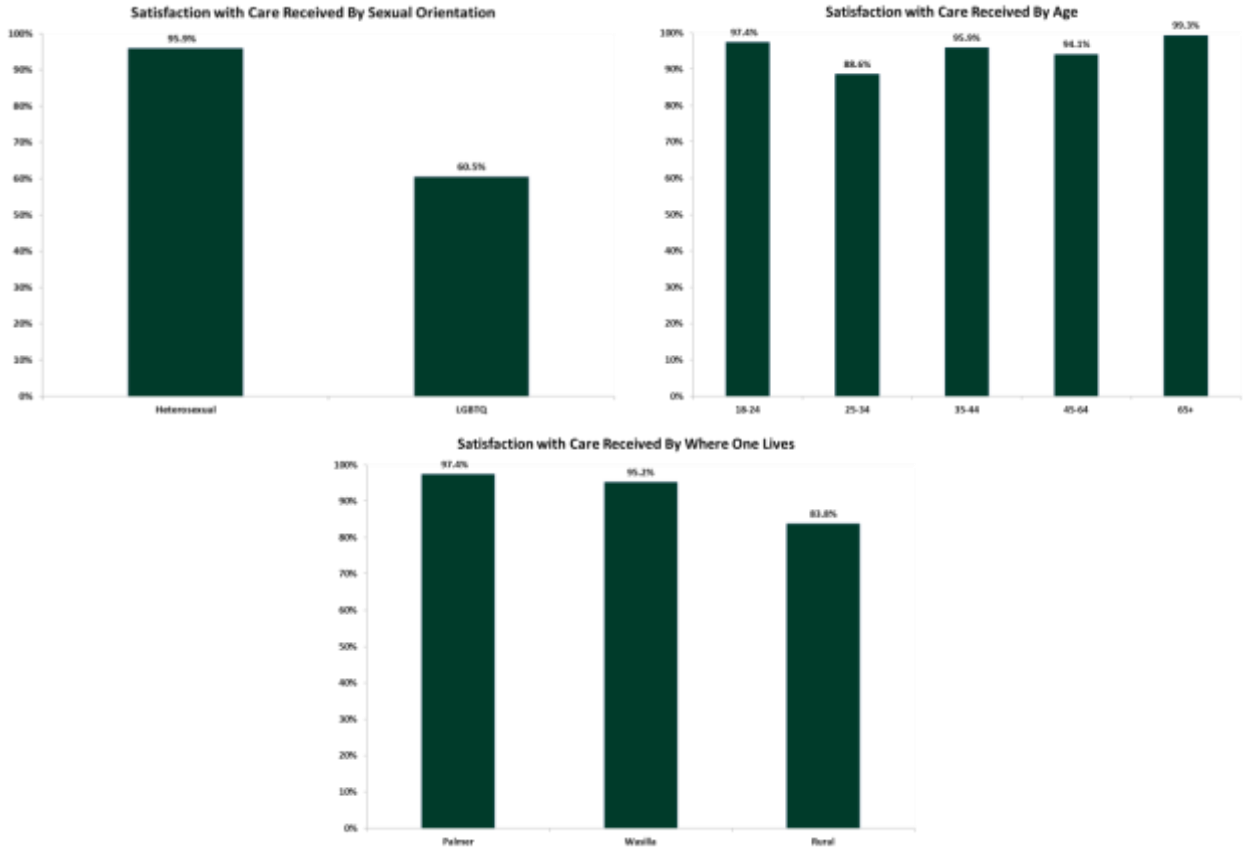
Figure 58 - Satisfied with Health Care Received, 2013-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System data, **Figure 59** illustrates the demographic factors where a statistically significant difference was observed for residents who self-reported satisfaction with health care received for data collected in 2013-2014. During this time, LGBTQ respondents (60.5%) were less satisfied with care received compared to heterosexual respondents (95.9%). Respondents between the ages of 25-34 (88.6%) were less satisfied with care received than other age groups. Rural respondents (83.8%) were less satisfied with care received compared to those in Palmer (97.4%) or Wasilla (95.2%).

Figure 59 - Satisfied with Health Care Received, Significant Differences, 2013-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

According to the findings of the Mat-Su Household Survey conducted by the McDowell Group in 2016, Table 86 shows the percentage of Mat-Su residents who completed the household survey (N=700) who indicated that have gone without care or basic needs in the past 12 months. Just under one in five (17%) respondents have gone without dental services in the past year, which is more when compared to the 2012 survey data. More than one in ten respondents have also gone without needed health care services (13%) or needed prescriptions or medications (12%).

Table 86 - Gone Without Care or Basic Needs, Past 12 Months

	2012	2016
Needed dental services	12%	17%
Needed health care services	12%	13%
Needed prescriptions or medications	9%	12%
Reliable transportation	7%	7%
Food	4%	3%
Housing	3%	3%
Utilities, such as heat or electricity, for your home	3%	3%

Source: Mat-Su Household Survey, McDowell Group, 2016

The percentage of Mat-Su residents who completed the Mat-Su Household Survey (N=700) that reported that they have experienced barriers in accessing care in the past 12 months is outlined in Table 87. Slightly fewer than one in five respondents (19%) did not seek health care because they could not afford it. Approximately one in ten respondents was unable to get an appointment that was convenient for them (11%) or did not know where to go for care (10%).

Table 87 - Mat-Su Residents Experiencing Barriers to Care, Past 12 Months

	2012	2016
Not seeking health care because could not afford it	17%	19%
Inability to get a health care appointment at a time that worked for your household	14%	11%
Not knowing where to go for care	7%	10%
Inability to get information because you didn't have access to a computer	N/A	7%
Not being able to get transportation to medical or other health appointment	7%	6%
Not knowing where to go for mental health care	N/A	7%
Not knowing where to go to get help with substance abuse problem	N/A	5%

Source: Mat-Su Household Survey, McDowell Group, 2016

Alaska Family Services (AFS) offers the Families First Work Services Program for families who have applied for, or who are currently receiving cash benefits from the State of Alaska's Temporary Assistance Program. Families First Work Services Program offers intensive case management and other support services in an effort to assist families who experience significant barriers in becoming more self-sufficient. The program offers resource and referrals to help in removing barriers, in learning work readiness skills, and in obtaining paid employment. These efforts result in families who are more self-sufficient and less reliant on public assistance programs. Table 88 lists the number of services received by individuals and case managers through Families First Work Services Program reports generated from April of 2014 through March of 2016.

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Over 500 records were analyzed, with some clients receiving multiple services. Most clients were able to access needed services within 90 days of their referral to the Families First Work Services Program, with the majority of clients accessing the referrals provided prior to 45 days following their intake. Aside from the "Other" category, behavioral health treatment was the most common referral followed by job development and health assessment for work capacity. According to the AFS staff members, the "Other" types of referrals included heating assistance, legal services, health care, education, and other forms of assistance.

Table 88 - Alaska Family Services Family Progress Program Referrals

Client Services	Number Receiving
Other	175
Behavioral health treatment	85
Job development	47
Health assessment for capacity to work	44
Children's other services	32
Housing subsidy/public housing	21
Behavioral health assessment	19
Alcohol/substance abuse treatment	17
Children's behavioral health service	14
Alcohol/substance abuse assessment	12
GED classes/tutoring	7
Homeless shelter	7
Domestic violence counseling	5
Family counseling	5
Children's infant learning	3
Work experience placement	3
Children's respite	1
Domestic violence shelter	1
GED testing	1
Transitional housing	1

Source: Alaska Family Services

At six month intervals during the course of the program, case managers assess client progress using a standardized tracking tool developed by the State of Alaska. Table 89 lists the case managers' assessment of client involvement and outcomes through the Family Progress Program. Data was available for 449 clients, which could include the same client reported multiple times while participating in the program. The data illustrates that the majority of clients (81.9%) complete tasks. A little over half of the clients were reported as stable (55.7%) or can plan and overcome challenges (53.7%). A lower percentage of clients (39.3%) are reported to accept guidance.

Table 89 - Alaska Family Services Family Progress Program Client Involvement

Client Involvement	% Almost Always
Client completes tasks	81.9%
Client is stable	55.7%
Client plans and overcomes challenges	53.7%
Client follows through	49.7%
Client is on time and prepared	48.8%
Client maintains health	47.2%
Family is progressing	46.9%
Client understands workplace expectations	42.0%
Client accepts guidance	39.3%

Source: Alaska Family Services

According to the case managers, over the past three years of the Family Progress Program, 50% of the clients that have been referred to the Job Center actually got jobs. Table 90 shows the results from the Alaska Family Services, Family Progress client self-report. There were a total of 177 clients with multiple records included in the analysis.

Overall, 40.1% of clients made progress on two or more areas, while 28.2% relapsed in two or more areas and 31.6% did not make any progress. Case managers also noted that client outcomes percentages would be higher if more resources were available in the community for clients to take advantage of. For example, lack of affordable housing, transportation, access to specialty medical care, and mental health services often prevent clients from following through on referrals. It is also important to note that the data tracking methodology does not include an "exit assessment" that provides an assessment of client status upon completion of the program. Because of the absence of this exit report, the outcomes data does not capture the number or percentage of clients who successfully close their cases in between the measurement intervals.

Table 90 - Client Progress

Progress	#	%
Progress on 2 or more goals	71	40.1%
Relapsed on 2 or more goals	50	28.2%
No change/Inconsistent Progress	56	31.6%
Total	177	

Source: Alaska Family Services

Based on data from the Alaska Behavioral Risk Factor Surveillance System, **Table 91** shows the comparison for the combined years of 2010-2014 for Mat-Su compared to Anchorage, Alaska, the United States and Healthy People 2020 Goal, where data is available. The table also shows Palmer and Wasilla compared to Mat-Su, where data is available. The table indicates where indicators are at least 1.0 higher (↑), 1.0 lower (↓) or about the same (↔).

When compared to Alaska, much of the data is comparable. However, a higher percentage of respondents in Mat-Su report having a primary health care provider, as well as reporting they went without medical care due to cost when compared to the state overall. Compared to Anchorage, Mat-Su respondents were not as healthy, less likely to have a primary health care provider, more likely to limit care due to cost, and less likely to have health insurance.

Table 91 - Factors That Impact Health Where We Live, Comparison 2010-2014

FACTORS THAT IMPACT HEALTH WHERE WE LIVE					
Indicator	Palmer compared to Mat-Su	Wasilla compared to Mat-Su	Mat-Su compared to Anchorage	Mat-Su compared to Alaska	Mat-Su compared to the U.S.
Community Health Status					
Residents who report they are healthy (2010-2014)			↓	↔	
Economic Security					
Residents living above poverty level (2010-2014)	↔	↔		↔	↑
Median household income (2010-2014)	↓	↓		↔	↑
Health Care Access					
Have primary health care provider (2010-2014)			↓	↑	
Access to doctor was not limited by cost, past 12 months (2010-2014)			↓	↓	
Have health insurance (2010-2014			↓	↔	

Source: Alaska Behavioral Risk Factor Surveillance System Data, Healthy People 2020

From the Alaska Behavioral Risk Factor Surveillance System data, **Table 92** shows the trend over the years of 2010-2014 for Mat-Su and Alaska. The table indicates where the trend for the indicators are at least 1.0 higher (↑), 1.0 lower (↓) or about the same (↔).

Mat-Su is showing a positive trend for the following indicators:

- Residents who report they are healthy
- Drinking water violations
- Have a primary health care provider

- Access to a doctor not limited due to cost
- Have health insurance
- Preventable hospital stays
- Diabetic monitoring

Table 92 - Factors That Impact Health Where We Live, Trend 2010-2014

FACTORS THAT IMPACT HEALTH WHERE WE LIVE		
Indicator	Mat-Su	Alaska
Community Health Status		
Residents who report they are healthy (2010-2014)	↑	↓
Food Security		
Food environment index (2014-2016)	↓	↓
Access to healthy food (2011-2012)	↔	↓
Housing		
Severe housing problems (2014-2016)	↔	↔
High housing costs (2009-2014)	↓	↓
Health Care Access		
Have a primary health care provider (2010-2014)	↑	↑
Access to a doctor was not limited by cost, past 12 months (2010-2014)	↑	↑
Have health insurance (2010-2014)	↑	↔

Source: Alaska Behavioral Risk Factor Surveillance System Data

How Access Impacts Health: Community Input

Much of the discussion in all of the focus groups and interviews regarding the factors that impact health were related to topics and issues around access. Healthy lifestyles lead to better health. Participants identified many types of resources that support healthy lifestyles that exist in the Valley including information, nutrition, a variety of health care and social service programs, physical activity, indoor and outdoor recreation options, relationships, and financial resources that make access to these resources possible. Those who have the financial and other means to access these resources are able to lead a heathy lifestyle and enjoy good health as a result.

> *"Fear is a big part of motivation (to seek help). There is a fear of opening up and fear of what family stuff is going to come out. Once you start peeling back the layers, it can be really scary. A lot of families are afraid that if open up that their children will get taken away."*
>
> - School Counselor

Participants noted that access to care has improved in recent years with the expansion of primary care services including transportation to the Sunshine Health Clinic in Talkeetna and Willow, as well as the opening of the *C'eyiits' Hwnax* Life House in Sutton. And while participants cited numerous other assets, resources and support services that exist in the Valley, depending on their circumstances, residents can also experience many barriers to access. Independence and pride often become barriers to asking for help when experiencing other barriers.

> *"Fear of the unknown (impacts health). Some people won't seek medical attention because if they don't hear it, it is not happening to me. Some people wait until the last minute and if they had gone earlier, something could have been done about it."*
>
> - Talkeetna Resident

High insurance co-pays and deductibles are making medical care unaffordable for many, even when they have insurance. There are waiting lists for many of the critically needed services including drug detoxification, drug and alcohol rehabilitation, transitional housing and other housing support services, as well as specialty medical care. Providers cited numerous stories of those struggling with drug and alcohol problems were ready to seek care but could not because a bed was unavailable. Additionally, although the Valley has some urgent care centers that recently opened to improve access, they are not open on Sundays, and do not provide continuity of care with other providers.

Residents that lack appropriate access to primary and other care because of financial, insurance or transportation barriers struggle to appropriately manage chronic conditions if they have them, and often end up over utilizing the Emergency Department and/or receiving diagnoses of advanced stage disease.

In the Mat-Su region, fear of being found or being found out is a factor that impacts access to care and ultimately health. Many professional participants in the focus groups described stories of clients who were hiding from an abusive partner either locally or in another state. Those who were local did not want the authorities to know what was happening to them or their children for fear that their children would be taken away. Those hiding after fleeing other states just don't want to be found.

There is another aspect to fear that is also an impediment to accessing care, according to some of the focus group participants. Some people don't want to find out that something is wrong with them, so they avoid going to the doctor all together.

While participants of several different focus groups discussed that local physicians often address symptoms and don't address the root cause of problems, the focus group participants who were of Hispanic decent were particularly vocal about the fragmentation of the health care system, the cost of care and the difficulty that people experience trying to find a doctor that would address their need. Some participants indicated that they went to Mexico and other countries to get care because it was easier and cheaper.

> *"Here there are great services, music, cool tricks and all that. But after three or four hours when they find a problem, nothing gets fixed and you to go see another specialist. By the time you see the doctors, you could go to Mexico cheaper. One doctor gets it done in one visit."*
>
> – Hispanic resident

Factors That Impact Health Where We Learn

How Education Impacts Health

Education also plays a role in the health and well-being of a population. "People with higher levels of education and higher income have lower rates of many chronic diseases compared to those with less education and lower income levels."[107]

"Health disparities are also related to inequities in education. Dropping out of school is associated with multiple social and health problems. Individuals with less education are more likely to experience a number of health risks, such as:

- obesity
- substance abuse
- intentional and unintentional injuries.

Higher levels of education are associated with:

- a longer life
- increased likelihood of obtaining or understanding basic health information and services needed to make appropriate health decisions.

At the same time, good health is associated with academic success. Health risks such as teenage pregnancy, poor dietary choices, inadequate physical activity, physical and emotional abuse, substance abuse, and gang involvement have a significant impact on how well students perform in school."[108]

Education levels and overall literacy also impact an individual's health literacy. Health literacy is "a set of skills that people need to function effectively in the health care environment. These skills include the ability to read and understand text and to locate and interpret information in documents (print literacy); use quantitative information for tasks, such as interpreting food labels, measuring blood glucose levels, and adhering to medication regimens (numeracy); and speak and listen effectively (oral literacy). [109] "Approximately 80 million Americans have limited health literacy, which puts them at greater risk for poorer access to care and poorer health outcomes."[110]

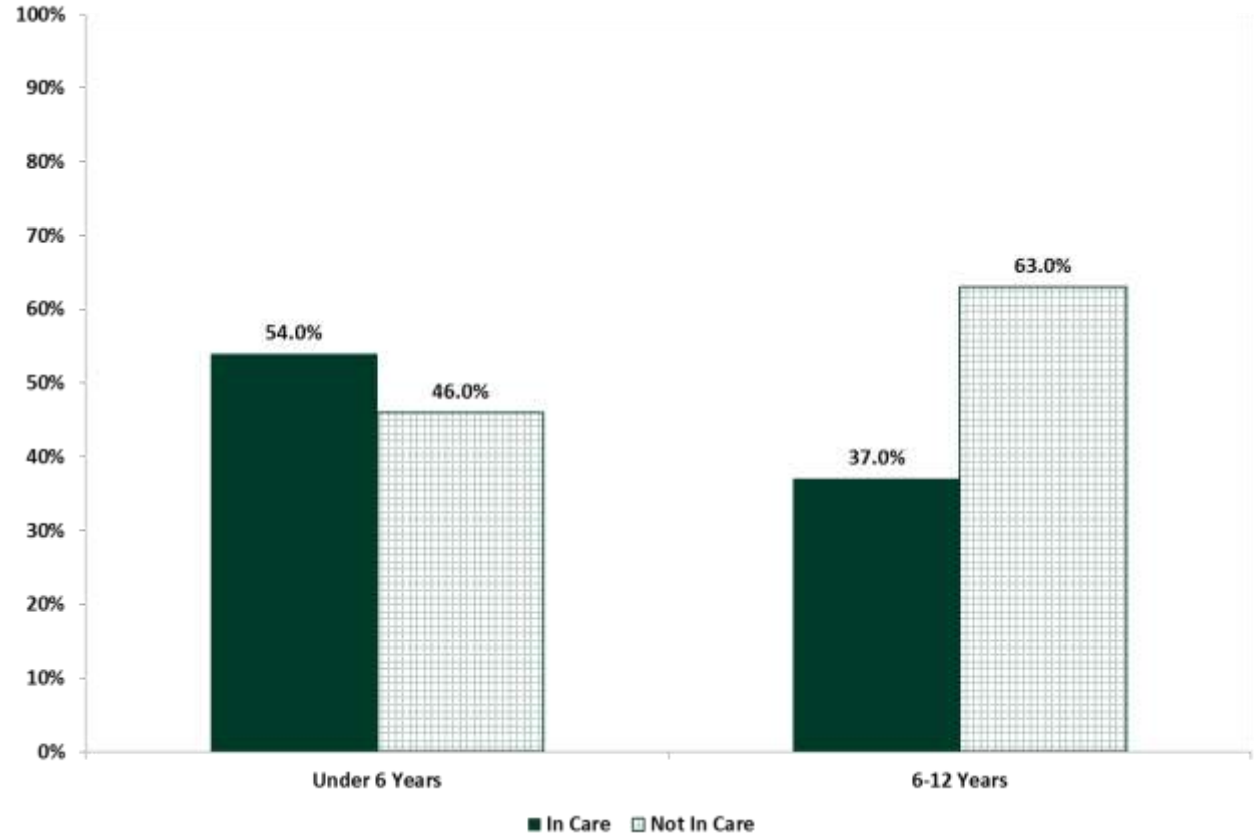
[107] "CDC Online Newsroom - Press Release - Higher Education and Income Levels Keys to Better Health, according to Annual Report on Nation's Health May 16, 2012." http://www.cdc.gov/media/releases/2012/p0516_higher_education.html. May 16, 2012.
[108] "Disparities | Adolescent and School Health | CDC." http://www.cdc.gov/healthyyouth/disparities/. September 1, 2015.
[109] Berkman Nancy D., PhD; Sheridan Stacey L., MD, MPH; Donahue Katrina E., MD, MPH; Halpern David J., MD, MPH; and Crotty Karen, PhD, MPH. "Low Health Literacy and Health Outcomes: An Updated Systematic Review." Annals of Internal Medicine. 2011.
[110] Ibid.

Early Care and Learning Education Indicators

In April 2015, 200 households with children under 13 years of age (398 children) in Mat-Su were surveyed about their use and need for early care and learning services, as well as the impact of early care and learning needs on households. **Figures 60 through 63** illustrate key findings from the study.

Based on the families who responded, just over half (54.0%) of the children under the age of six received early care and learning services by someone other than a parent or guardian as illustrated in **Figure 60** below. Well over half (63.0%) of children ages 6-12 are not in the care of someone other than their parent or guardian.

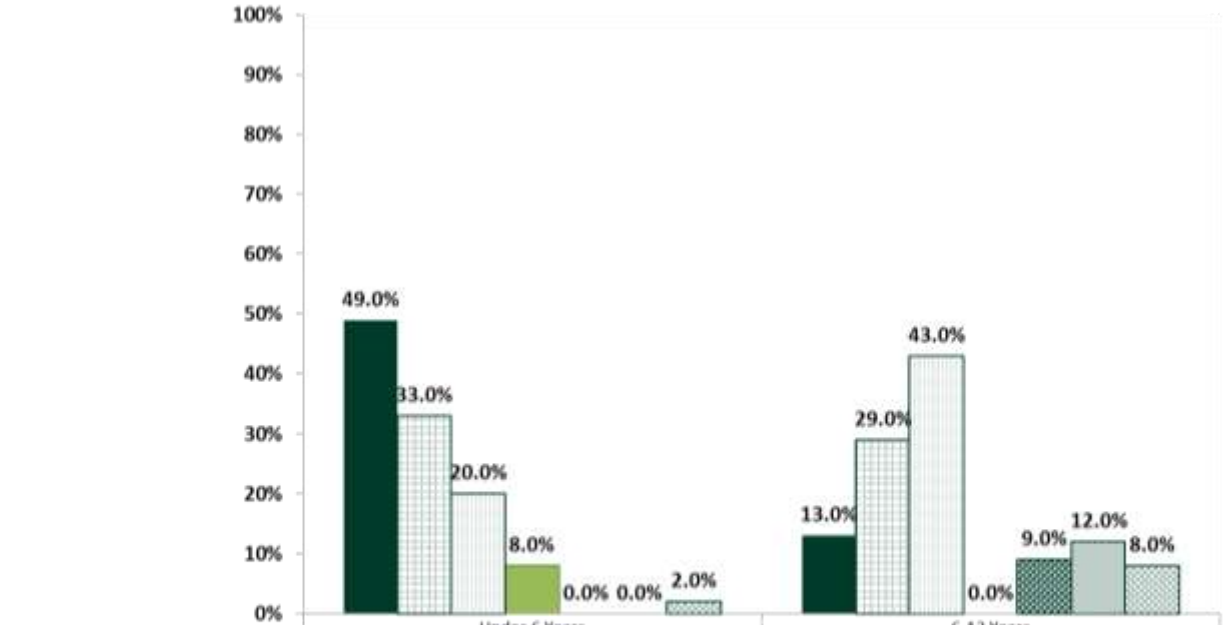
Figure 60 - Use of Early Care and Learning Services



Source: Early Care and Learning in the Matanuska-Valley: Survey of Mat-Su Families, McDowell Group, 2015

From the Early Care and Learning in the Matanuska-Valley: Survey of Mat-Su Families conducted by the McDowell Group in 2015, **Figure 61** illustrates that just under half (49.0%) of children under the age of six whose families responded to the survey are in a pre-elementary/center-based program. Based on the completed surveys, the highest percentage (43.0%) of children ages six through twelve are receiving care in their own home.

Figure 61 - Early Care and Learning Services Utilized

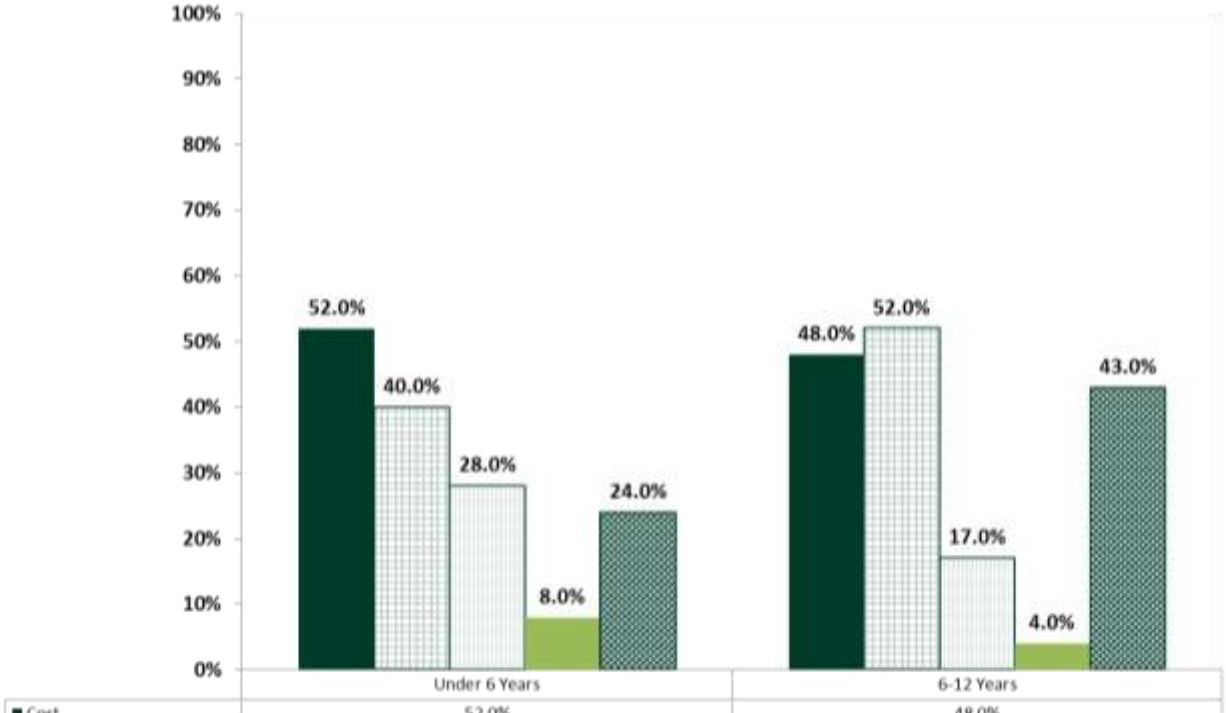


	Under 6 Years	6-12 Years
Pre-Elementary/Center-Based	49.0%	13.0%
Someone's Home	33.0%	29.0%
Own Home	20.0%	43.0%
Early Head Start/Head Start	8.0%	0.0%
School Sponsored Before/After Care	0.0%	9.0%
Other Before/After Care	0.0%	12.0%
Other	2.0%	8.0%

Source: Early Care and Learning in the Matanuska-Valley: Survey of Mat-Su Families, McDowell Group, 2015

As illustrated in **Figure 62,** cost was a barrier for over half (52.0%) of families with children under the age of six who completed the survey, followed by availability/lack of a provider (40.0%) when accessing early care and learning services. Over half (52.0%) of the families who responded with children ages six through twelve noted availability/lack of provider as a barrier followed closely by cost (48.0%).

Figure 62 - Barriers to Accessing Early Care and Learning Services

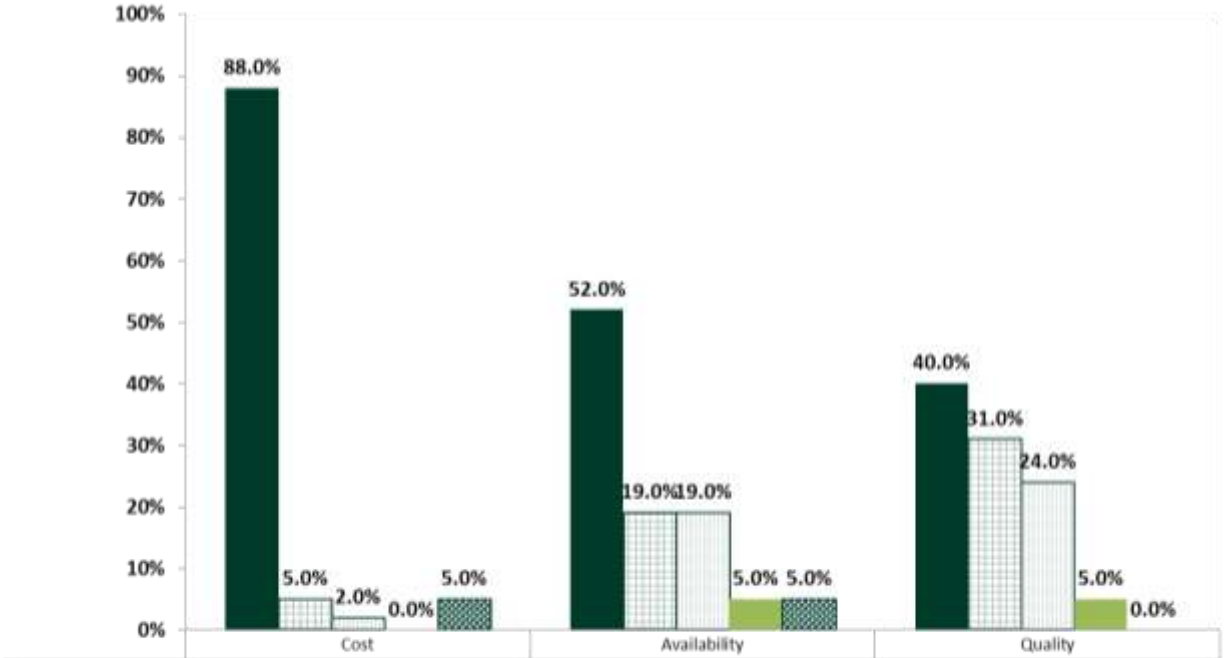


	Under 6 Years	6-12 Years
Cost	52.0%	48.0%
Availability/Lack of Provider	40.0%	52.0%
Quality	28.0%	17.0%
Convenience	8.0%	4.0%
Other	24.0%	43.0%

Source: Early Care and Learning in the Matanuska-Valley: Survey of Mat-Su Families, McDowell Group, 2015

As illustrated in **Figure 63,** the majority of families (88.0%) responding to the Early Care and Learning in the Matanuska-Valley: Survey of Mat-Su Families conducted by the McDowell Group in 2015 indicated that cost of early care and learning had a major impact on their ability to work or work more hours. Just over half (52.0%) of the respondents indicated that availability of providers had a major impact on their ability to work or work more hours.

Figure 63 - Impact of Barriers in Accessing Early Care and Learning Services



	Cost	Availability	Quality
Major Impact	88.0%	52.0%	40.0%
Minor Impact	5.0%	19.0%	31.0%
No Impact	2.0%	19.0%	24.0%
Does Not Apply	0.0%	5.0%	5.0%
Don't Know/Refused	5.0%	5.0%	0.0%

Source: Early Care and Learning in the Matanuska-Valley: Survey of Mat-Su Families, McDowell Group, 2015

The Alaska Department of Education and Early Development conducts an annual Development Profile. Teachers rate kindergarten students on 13 goals, which are averaged to provide a statewide profile. Goals are rated on the following criteria as seen in Table 93 below:

Table 93 - Alaska Development Profile Criteria

Rating	Category	Definition
2	Consistently Demonstrates	Student demonstrates the indicated skills or behaviors on a consistent basis (80% or more of the time). Students should be given this rating if they are *generally able* to demonstrate these skills most of the time. Students are not required to successfully demonstrate each skill and behavior all of the time to receive this rating.
1	Progressing	Student demonstrates the indicated skills or behaviors on an inconsistent basis. Students should be given this rating if they demonstrate the indicated skills or behaviors on an inconsistent basis **OR** if they are unable to consistently demonstrate *most* of the indicated skills and behaviors (i.e., for students who demonstrate only *some* of the indicated skills or behaviors consistently).
0	Does Not Demonstrate	Student does not demonstrate the indicated skills or behaviors (20% or less of the time). Students should be given this rating if they are *generally unable* to successfully demonstrate these skills most of the time.

Source: Alaska Department of Education and Early Development

From data published by the Alaska Department of Education and Early Development, **Table 94** shows the results for the Alaska Development Profile for the Mat-Su school district in comparison to the state and some of the other local districts. Although a lower percentage of students in Mat-Su (61.0%) attended preschool compared to the state (64.0%), Mat-Su school district had higher development profile scores on all 13 goals.

Table 94 - Alaska Development Profile, Mat-Su

Alaska Developmental Profile 2014-2015 Suppressed		Count of Students	Percent Who Attended Preschool	Physical Well-Being, Health and Motor Development		Social and Emotional Development		Approaches to Learning		Cognition and General Knowledge		Communication, Language and Literacy				
				Demonstrates strength and coordination of large motor muscles.	Demonstrates strength and coordination of small motor muscles.	Participates positively in group activities.	Regulates their feelings and impulses.	Shows curiosity and interest in learning new things and having new experiences.	Sustains attention to tasks and persists when facing challenges.	Demonstrates knowledge of numbers and counting.	Sorts, Classifies, and organizes objects.	Uses receptive communication skills.	Uses expressive communication skills.	Demonstrates phonological awareness.	Demonstrates awareness of print concepts.	Demonstrates knowledge of letters and symbols (alphabet knowledge).
Statewide Averages		**10,057**	**64%**	**1.56**	**1.47**	**1.43**	**1.37**	**1.44**	**1.35**	**1.44**	**1.39**	**1.51**	**1.43**	**1.26**	**1.34**	**1.36**
District ID	**District Name**															
22	Juneau Borough	320	78%	1.61	1.50	1.43	1.37	1.59	1.40	1.59	1.54	1.58	1.54	1.40	1.46	1.47
23	Kake City	11	*	1.73	1.36	1.09	1.09	0.91	1.09	0.91	0.82	0.91	0.91	0.73	0.82	0.91
55	Kashunamiut	31	*	1.55	1.35	1.58	1.13	1.55	1.29	1.16	1.16	1.48	1.26	1.13	1.32	1.13
24	Kenai Peninsula Borough	694	64%	1.64	1.58	1.56	1.48	1.58	1.46	1.56	1.59	1.60	1.59	1.41	1.46	1.44
25	Ketchikan Gateway Borough	142	81%	1.75	1.48	1.47	1.28	1.46	1.35	1.40	1.38	1.45	1.39	1.20	1.30	1.37
27	Klawock City	12	*	1.25	1.25	1.08	1.08	1.08	0.92	1.17	1.08	1.25	1.25	1.00	1.00	1.00
28	Kodiak Island Borough	195	75%	1.77	1.59	1.57	1.53	1.52	1.49	1.74	1.62	1.61	1.48	1.33	1.44	1.45
29	Kuspuk	38	84%	1.61	1.61	1.47	1.42	1.42	1.47	1.29	1.42	1.42	1.24	0.89	1.26	1.39
30	Lake and Peninsula Borough	25	*	1.88	1.80	1.76	1.72	1.68	1.60	1.84	1.88	*	*	*	*	*
31	Lower Kuskokwim	348	63%	1.63	1.51	1.36	1.37	1.22	1.28	1.29	1.21	1.41	1.20	1.09	1.16	1.18
32	Lower Yukon	198	76%	1.70	1.59	1.37	1.38	1.26	1.31	1.15	1.15	1.37	1.14	0.97	1.18	1.19
33	Mat-Su Borough	1,320	61%	1.65	1.56	1.54	1.48	1.63	1.48	1.60	1.56	1.65	1.60	1.41	1.46	1.48
34	Nenana City	58	55%	1.83	1.81	1.79	1.57	1.79	1.53	1.72	1.79	1.78	1.81	1.69	1.59	1.84
35	Nome Public	57	89%	1.49	1.47	1.26	1.21	1.26	1.12	1.26	1.21	1.39	1.26	1.30	1.19	1.39
36	North Slope Borough	160	94%	1.78	1.82	1.71	1.65	1.63	1.56	1.58	1.52	1.76	1.69	1.44	1.59	1.63
37	Northwest Arctic Borough	194	91%	1.70	1.65	1.46	1.43	1.30	1.38	1.42	1.44	1.51	1.28	1.32	1.44	1.43
39	Petersburg Borough	33	91%	1.88	1.85	1.73	1.73	1.85	1.73	1.61	1.61	1.88	1.88	1.48	1.55	1.27
40	Pribilof	7	*	1.57	1.57	1.29	1.14	1.29	1.00	*	*	1.57	1.57	1.43	1.43	1.43
46	Saint Mary's	14	*	1.71	1.57	1.57	1.71	1.64	1.50	1.57	1.50	1.64	1.43	1.36	1.50	1.50
42	Sitka Borough	117	79%	1.22	1.17	1.11	1.10	1.15	1.12	1.20	1.09	1.28	1.24	1.09	1.09	1.07
43	Skagway	11	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Source: Alaska Department of Education and Early Development

The Alaska Development Profile for school years 2011-2012 through 2015-2016 are illustrated in Table 95. While statewide development profile scores have fluctuated over the past few years for all goal areas, there is an overall decrease for every indicator over the five-year period.

Table 95 - Alaska Development Profile

Statewide Developmental Profile: 2011-2012 through 2015-2016

	Physical Well-Being, Health, and Motor Development		Social and Emotional Development		Approaches to Learning		Cognition and General Knowledge		Communication, Language and Literacy				
	Demonstrates strength and coordination of large motor muscles.	Demonstrates strength and coordination of small motor muscles.	Participates positively in group activities.	Regulates their feelings and impulses.	Shows curiosity and interest in learning new things and having new experiences.	Sustains attention to tasks and persists when facing challenges.	Demonstrates knowledge of numbers and counting.	Sorts, classifies, and organizes objects.	Uses receptive communication skills.	Uses expressive communication skills.	Demonstrates phonological awareness.	Demonstrates awareness of print concepts.	Demonstrates knowledge of letters and symbols (alphabet knowledge).
2011-2012	1.58	1.51	1.48	1.42	1.48	1.40	1.48	1.43	1.56	1.47	1.30	1.37	1.40
2012-2013	1.58	1.49	1.45	1.38	1.44	1.37	1.48	1.39	1.52	1.44	1.25	1.35	1.36
2013-2014	1.58	1.51	1.46	1.40	1.46	1.38	1.48	1.40	1.52	1.45	1.28	1.35	1.38
2014-2015	1.56	1.47	1.43	1.37	1.44	1.35	1.44	1.39	1.51	1.43	1.26	1.34	1.36
2015-2016	1.54	1.48	1.44	1.37	1.45	1.36	1.45	1.39	1.51	1.44	1.24	1.31	1.33

Source: Alaska Department of Education and Early Development

Early Care and Education Underserved Communities

CCS defines an under-served community as those where CCS Head Start services are currently available but CCS is not serving all income-eligible children. Table 96 compares the number of families on Alaska Temporary Assistance (ATAP) in areas that CCS serves, compared to the number of children that are currently being served. The data in the collection is for comparison only and does not account for families with multiple children or those children enrolled in Head Start that are not part of an ATAP family. Based on this definition, Wasilla, Big Lake, Houston, Sutton and Palmer are considered underserved communities.

Table 96 - CCS Underserved Communities

Current CCS Services Child Slots	Communities Served	# of 0-5 children 2010 Census	# of families on ATAP July 2013	child slots divided by number of ATAP families*		Determination
				2013	2010	
Wasilla Head Start 100 children Wasilla Early Head Start 27 children	Wasilla (99654)	4,410	462	198 / 526 = 38%	44%	Under served
Meadow Lakes Head Start 60 children Meadow Lakes Early Head Start 11 children	Big Lake (99652)	238	43			
	Houston (99694)	125	21			
Sutton-Palmer Head Start 40 children Palmer Early Head Start 11 children	Sutton (99674)	91	10	51 / 184 = 29%	38%	Under served
	Palmer (99645)	1,774	174			
Chugiak Head Start 60 children Chugiak Early Head Start 11 children	Chugiak (99567)	606	31	71 / 85 = 83%	107%	Adequate level of services
	Eagle River (99577)	1,927	54			

Data on ATAP Families provided by the Division of Public Assistance

Source: CCS Early Learning Community Assessment, 2014

From the data highlighted in the 2014 CCS Early Learning Assessment, Table 97 shows the number of income eligible children ages 3 and 4 who were on the CCS wait list in February 2014. Overall, there were 100 children on the wait list with the highest number of 3 year olds on the list in Wasilla and the highest number of 4 year olds on the list in Sutton-Palmer.

Table 97 - Income Eligible Children on CCS Wait List, 2014

	Chugiak		Meadow Lakes		Sutton-Palmer		Wasilla		Entire Agency	
Age	3yr	4yr	3yr	4yr	3yr	4yr	3yr	4yr	3yr	4yr
Income Eligible	8	10	9	6	10	19	26	12	53	47

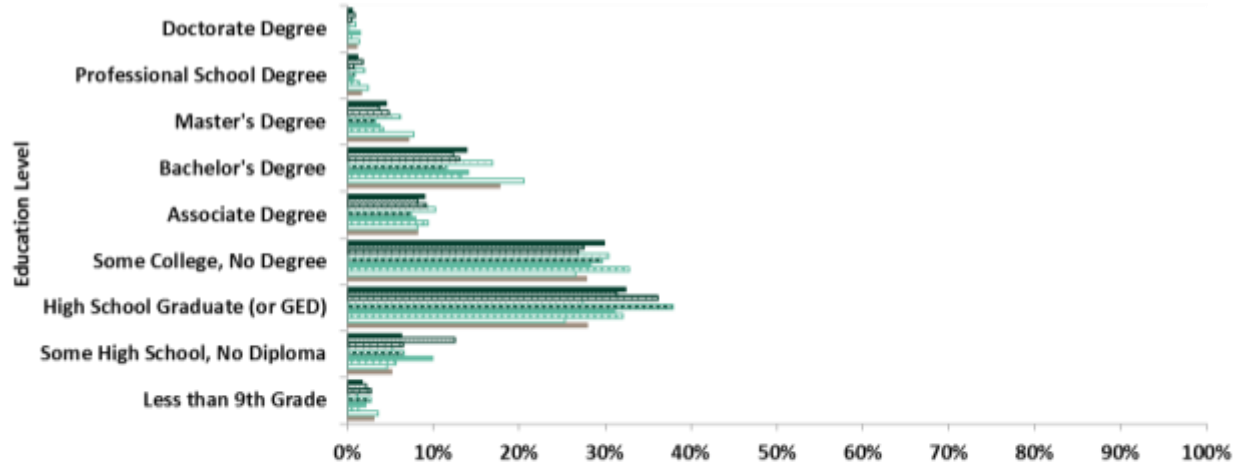
EHS Home Based				EHS Cent Based
Chugiak	Mead. Lks	Sutton-Palmer	Wasilla	Wasilla
3	5	2	5	21

Source: CCS Early Learning Community Assessment, 2014

Education Attainment

Based on the U.S. Census data, **Figure 64** shows the education level for Mat-Su Borough, borough clusters, Anchorage and Alaska. In 2016, slightly more than one quarter of the population in Mat-Su Borough (32.4%), Glenn Highway (31.3%), Knik Goosebay Road (36.1%), Palmer (27.3%), Parks Highway (37.9%), Upper Susitna Valley (31.2%), Wasilla (32.0%) and Alaska (28.0%) had their highest education attainment graduating from high school or receiving a GED, with all areas having a higher percentage of high school graduates than Anchorage (26.6%). More than one-quarter of the population has received an associate degree, bachelor's degree or other advanced degree. Less than 12.1% of the population in sub-region has less than a 9th grade education or did not receive a high school diploma.

Figure 64 - Education Levels by Select Areas, Mat-Su Borough and Anchorage

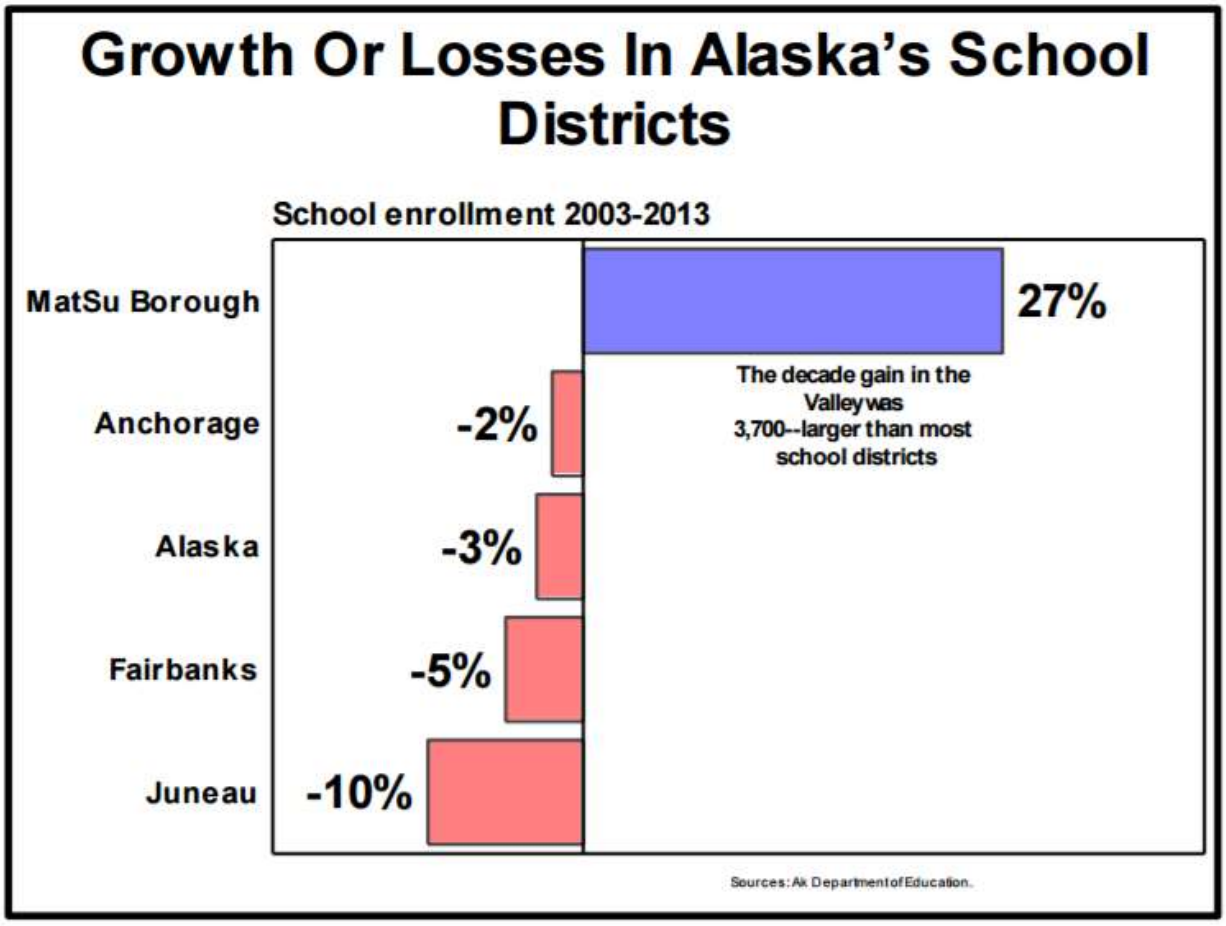


	Less than 9th Grade	Some High School, No Diploma	High School Graduate (or GED)	Some College, No Degree	Associate Degree	Bachelor's Degree	Master's Degree	Professional School Degree	Doctorate Degree
Mat-Su	1.8%	6.4%	32.4%	30.0%	9.1%	13.9%	4.6%	1.3%	0.6%
Glenn Highway	2.2%	12.5%	31.3%	27.4%	8.1%	12.3%	3.7%	1.8%	0.8%
Knik Goosebay Road	2.7%	6.5%	36.1%	26.8%	9.1%	13.0%	4.7%	0.7%	0.4%
Palmer	1.1%	5.2%	27.3%	30.3%	10.2%	16.8%	6.2%	2.0%	1.0%
Parks Highway	2.7%	6.6%	37.9%	29.6%	7.4%	11.6%	3.2%	0.9%	0.1%
Upper Susitna Valley	2.1%	10.0%	31.2%	28.4%	8.0%	14.2%	3.8%	0.8%	1.6%
Wasilla	1.2%	5.6%	32.0%	32.7%	9.3%	13.2%	4.1%	1.4%	0.4%
Anchorage	3.6%	4.6%	25.3%	26.6%	8.1%	20.5%	7.7%	2.4%	1.3%
Alaska	3.1%	5.2%	28.0%	27.9%	8.2%	17.7%	7.1%	1.7%	1.2%

Source: U.S. Census Bureau, 2016

The growth or loss of student enrollment in Alaska's School Districts between 2003 and 2013 is illustrated in Figure 65. The Mat-Su Borough School District was the only distrct experiencing growth during this time period. Mat-Su experienced a 27% gain, or an increase of 3,700 students in ten years. Mat-Su Borough has the second highest student enrollment in the state, while Anchorage has the highest enrollment.

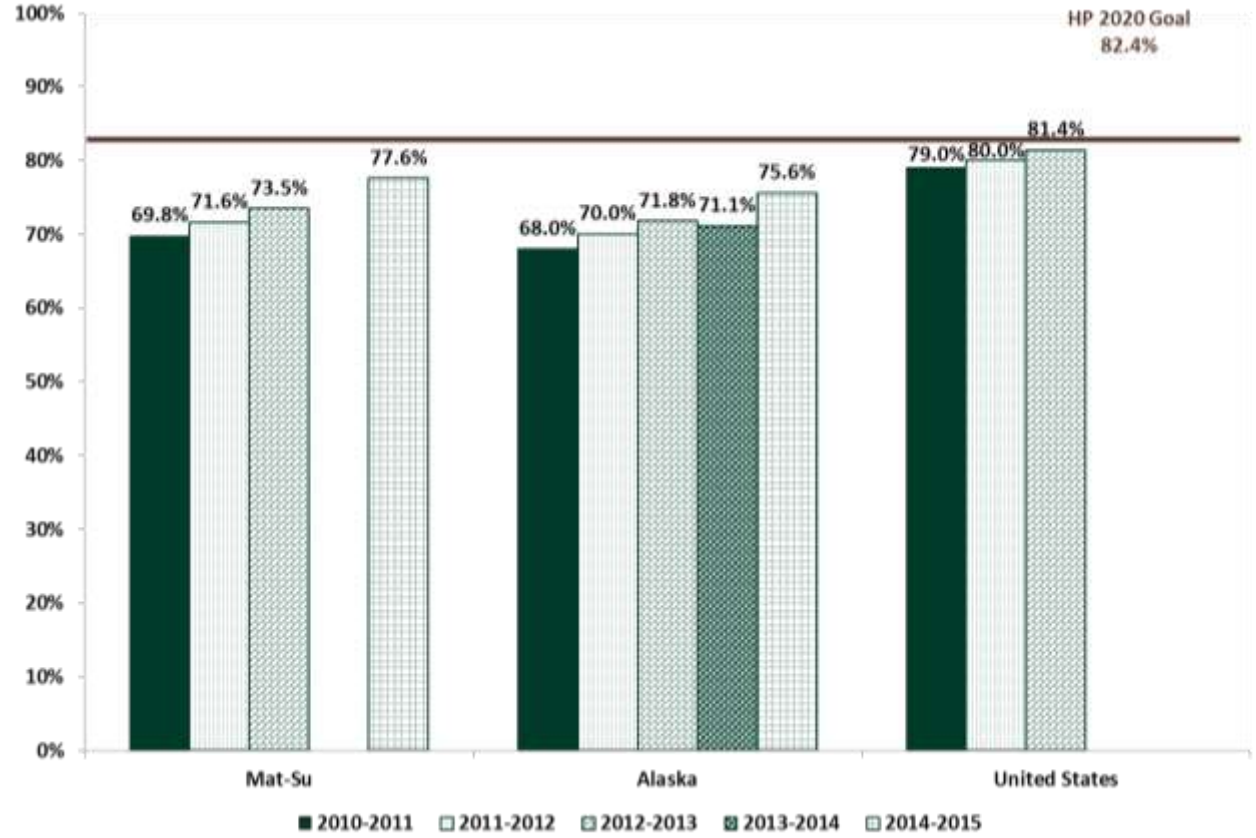
Figure 65 - School Enrollment Growth/Losses, 2003-2013



Source: CCS Early Learning Community Assessment, 2014

According to the National Center for Education Statistics, **Figure 66** illustrates the percentage of students in Mat-Su, Alaska and the United States who graduated on time for the 2010-2011 through 2014-2015 school years, where data is available. The percentage of students in Mat-Su who graduated on time has been increasing and, during the 2014-2015 school year (77.6%), was higher than Alaska (75.6%) but below the nation (81.4%). Mat-Su, Alaska and the United States fall just below the Healthy People 2020 Goal to have 82.4% of students who graduate on time.

Figure 66 - Residents Graduate High School in 4 Years



Source: National Center for Education Statistics, Healthy People 2020 Goals

Based on data from the Alaska Department of Education and Early Development, **Table 98** shows the percentage of 3rd grade students proficient in reading and math in Mat-Su and Alaska during the 2015-2016 school year. Mat-Su had a slightly higher percentage of students proficient in both reading and math when compared to the state.

Table 98 - 3rd Grade Proficiency, 2015-2016

	Mat-Su Borough	Alaska
Reading	36.8%	35.5%
Math	44.7%	40.6%

Source: Alaska Department of Education and Early Development

Based on the Alaska Behavioral Risk Factor Surveillance System data, **Table 99** shows the comparison for the combined years of 2010-2014 for Mat-Su compared to Anchorage, Alaska, the United States and Healthy People 2020 Goal, where data is available. The table indicates where indicators are at least 1.0 higher (↑), 1.0 lower (↓) or about the same (←→).

Mat-Su has higher 3rd grade proficiency scores and on-time graduation rates when compared to the state, but fewer enrollments in Pre-K Counts.

Table 99 - Factors that impact health where we learn, Comparison

FACTORS THAT IMPACT HEALTH WHERE WE LEARN	
Indicator	Mat-Su compared to Alaska
Education	
3rd grade reading proficiency (2015-2016)	↑
3rd grade math proficiency (2015-2016)	↑
On-time graduation rates (2010-2015)	↑

Source: Alaska Behavioral Risk Factor Surveillance System Data, National Center for Education Statistics, Healthy People 2020

Based on data from the National Center for Education Statistics, **Table 100** outlines the comparative trend of on-time graduation rates from 2010-2015. The table indicates where the trend for the indicators are at least 1.0 higher (🡅), 1.0 lower (🡇) or about the same (🡄🡆).

Mat-Su, Alaska and the United States are all showing an increasing percentage of students graduating on time.

Table 100 - Factors That Impact Health Where We Learn

FACTORS THAT IMPACT HEALTH WHERE WE LEARN			
Indicator	Mat-Su	Alaska	United States
Education			
On-time graduation rates (2010-2015)	🡅	🡅	🡅

Source: National Center for Education Statistics

The indicators where a significant difference was observed in how education impacts health are outlined in **Table 101**. For the majority of indicators, those residents who have less than a high school education are less likely to have access to health care and health insurance, maintain a healthy weight, and have a negative impact on their health status. Those residents having some college/technical school education are more likely to ever be told they had COPD.

Table 101 - How Education Impacts Health

How Education Impacts Health				
Where We Live	Less than High School	High School Graduate/ GED	Some College/ Technical School	College Graduate
Residents have health insurance (2010-2014)	74.4%	75.1%	83.1%	91.4%
Access to medical care not limited due to cost (2010-2014)	73.3%	82.6%	84.0%	89.9%
Residents have a personal care provider (2010-2014)	59.5%	68.7%	73.0%	78.1%
Where We Play	Less than High School	High School Graduate/ GED	Some College/ Technical School	College Graduate
Residents are a healthy weight (2010-2014)	25.7%	28.8%	26.7%	32.1%
Health Status Impact	Less than High School	High School Graduate/ GED	Some College/ Technical School	College Graduate
Residents who report they are healthy (2010-2014)	63.4%	83.4%	84.5%	90.9%
Residents report no physical, mental, or emotional limitations (2010-2014)	63.1%	76.0%	70.4%	78.2%
Residents are physically healthy (2010-2014)	44.3%	62.3%	62.2%	65.4%
Reports no poor mental health days in last month (2010-2014)	56.2%	70.9%	66.9%	67.0%
Thoughts of suicide or harming self (2011 & 2013)	9.7%	0.1%	4.8%	2.6%
Ever told have asthma (2010-2014)	11.3%	9.2%	6.7%	7.4%
Residents ever told had COPD (2011-2014)	7.9%	7.8%	8.9%	3.5%
Non-Smoking residents (2010-2014)	48.3%	72.0%	78.0%	94.7%
Ever told had diabetes (2010-2014)	13.0%	8.6%	7.9%	7.6%
Ever told had high blood pressure (2009, 2011, 2013, 2014)	39.5%	33.7%	30.2%	25.8%
Ever told had arthritis (2011-2014)	33.9%	29.1%	32.5%	24.3%

Source: Alaska Behavioral Risk Factor Surveillance System Data

How Education Impacts Health: Community Input

Almost every focus group and interview had some discussion regarding the role of education impacting health both directly and indirectly in the Mat-Su Valley. Many of the professionals participating told stories of their clients and how they struggle financially if they lack the education that gives them the ability to get a job that pays a living wage. Income levels impact the ability to get and/or afford insurance, as well as the financial means to afford accessing care and/or the other resources that support living a healthy lifestyle.

Education level also directly relates to overall literacy. The ability to read impacts health literacy, as well as the ability to understand and follow health care instructions. Health literacy also can have a huge impact on whether individuals are able to navigate the health care system to get the care and the resources they need to address health and related issues.

Several groups also talked about the role that early care and education play in health and the ability to get a healthy start in life. The Headstart program is viewed as a great community resource, but only serves a fraction of the need in the area.

Education as it relates to health is not just about formal education. This also includes awareness, education, and understanding of various topics related to risky behaviors and their impact on health. Numerous people talked about how the lack of education on various topics is harmful to the health of the local community. This includes lack of awareness of the need for immunizations for young children, parenting skills of new parents, understanding of the new synthetic and other drugs that are laced with harmful chemicals and understanding the risks associated with sexual behavior.

A few participants also commented on the importance of broadband access to support learning, noting that internet service is still not available in some areas of the borough. Access to technology is seen as helpful to support education, especially in remote areas that do not have as many educational resources.

How Broadband Impacts Health

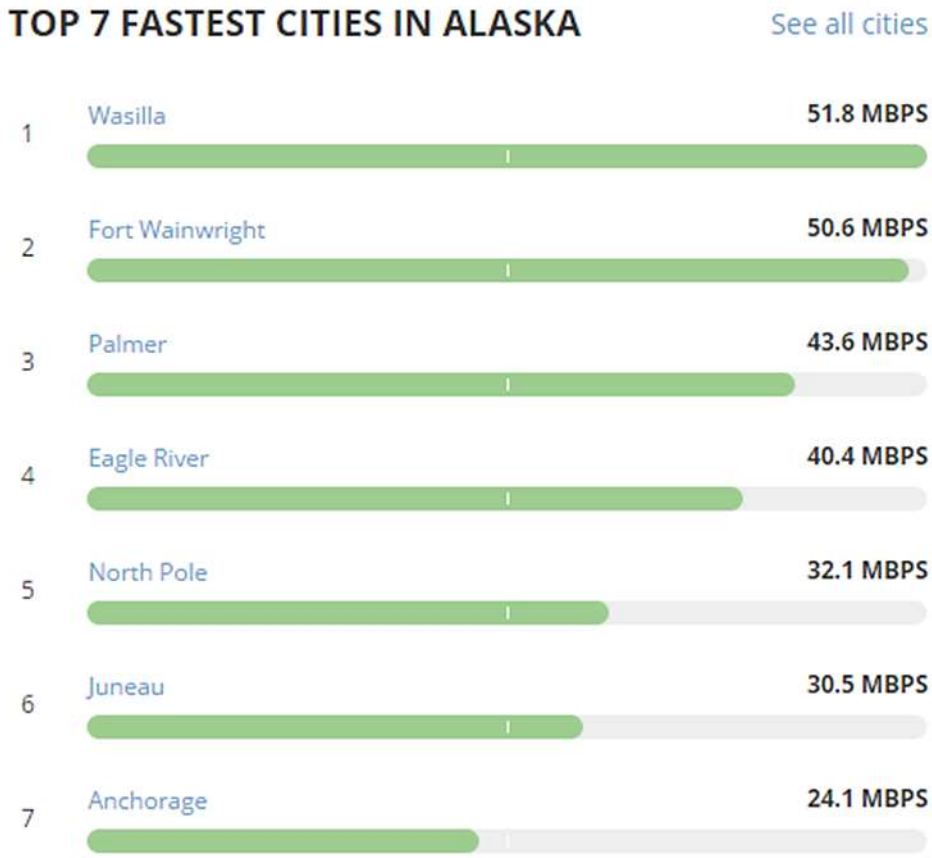
Digital technology can reduce the gap in health between the rich and poor but getting access to this technology can be a challenge. Even with the federal government providing financial incentives for medical providers to automate their medical records, many cannot afford the investment in electronic records. Many believe that electronic health record technology can provide the biggest benefits to improve care for the poorest because uninsured and minority patients routinely receive poorer care—in part, because they often bounce between hospitals and clinics. They also have higher rates of chronic illnesses like hypertension and diabetes that technology can help manage.

Telemedicine applications that enable real-time clinical care between providers and patients in geographically distant locations can bring the highest quality of care right to the community. Telehealth now offers opportunities for consultations with the best specialists anywhere in the world for chronic ailments and conditions, and provides the ability for patients to still get the treatment that they need when transportation is an issue. Remote monitoring made possible by broadband can even facilitate post-operative care and chronic disease management without hospitalization or institutionalization.[111]

[111]Ministerial Alliance Against the Digital Divide, 2014: "The Digital Divide in Healthcare," http://www.maadd.org/digital-divide-impacts-healthcare/

According to Broadband Now, **Figure 67** illustrates the seven cities with the fastest broadband speed in Alaska for 2016. Wasilla has the fastest broadband speed in Alaska, with Palmer having the third fastest.

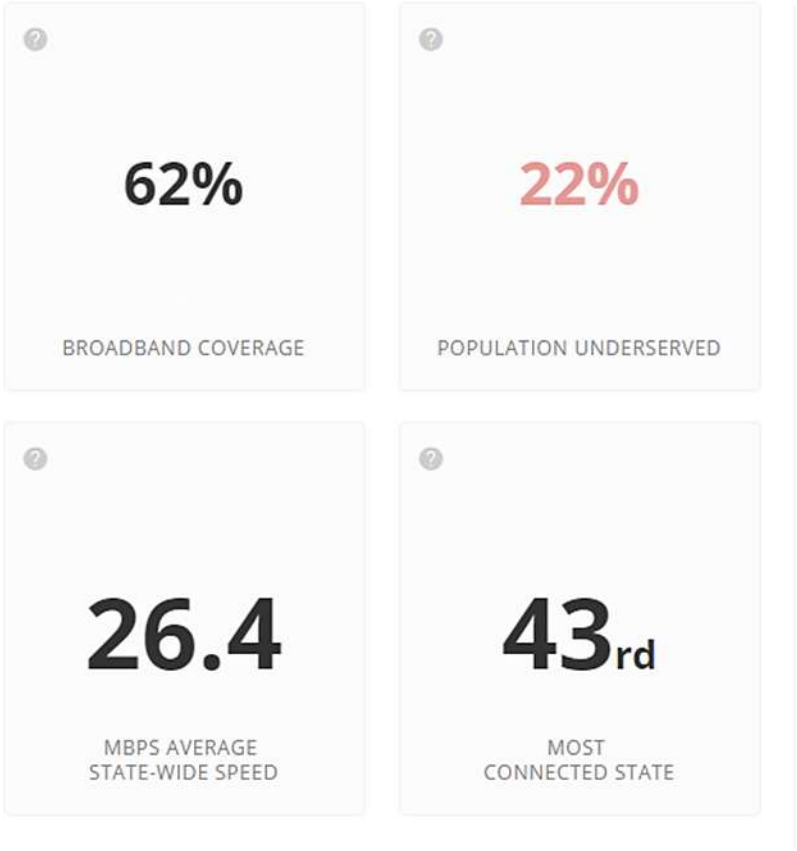
Figure 67 - Top 7 Fastest Cities in Alaska, Based on Broadband Speed



Source: Broadband Now, 2016

Data from Broadband Now, also illustrated in **Figure 68**, shows 2016 broadband coverage in Alaska. Over one-fifth (22%) of Alaska's population is underserved. According to Broadband Now, no one in Mat-Su has access to fiber optic broadband connection and only 2% have access to fixed wireless internet service.

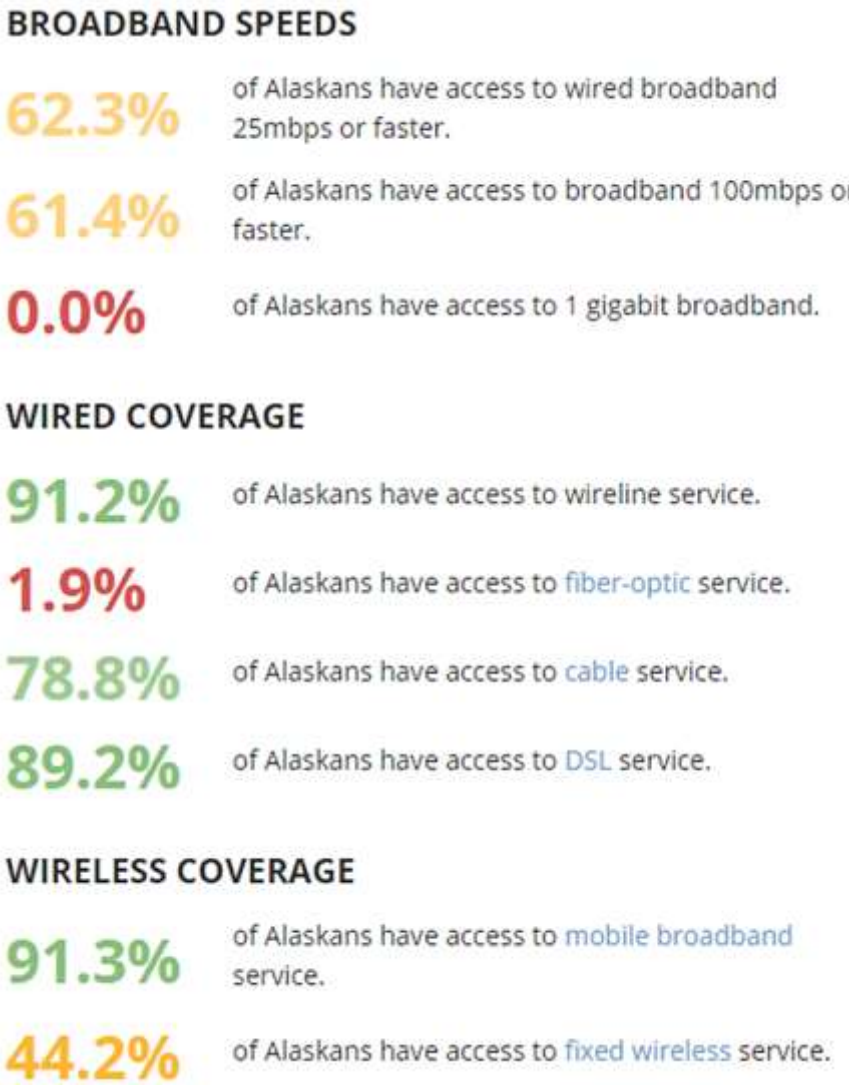
Figure 68 - Broadband Coverage in Alaska



Source: Broadband Now, 2016

Broadband speeds based on data from Broadband Now are illustrated in Figure 69. According to Broadband Now, the majority of Alaska's residents have access to wireline service (91.2%) or mobile broadband (91.3%), but only 62.3% of Alaskans have access to broadband service of 25 mbps or faster.

Figure 69 - Broadband Coverage in Alaska, 2016



Source: Broadband Now, 2016

Factors that Impact Health Where We Work

How Employment Impacts Health

The Consortium of Universities for Global Health has identified that there is a direct link between a person's employment conditions and health in three different ways: behavioral, psychosocial, and physical. A study by Gordon Waddell and A. Kim Burton entitled *"Is Work Good for Your Health and Well-Being*," found that if a person is working, they are more likely to:

- have full participation in society,
- have their social and emotional needs met and have a positive self-image,
- have better physical and mental health as well as social status,
- Live a longer life.[112]

A person who is unemployed or working a low wage or an undesirable job is more at risk for health problems than those employees who are working full time. This may be partly a health selection effect, but it is also to a large extent cause and effect. There is strong evidence that unemployment is linked to early death, poorer general and mental health, psychological distress, and higher use of medications and medical services, as well as hospitalizations.[113]

[112] Waddell Gordon and Burton Kim A. "Is Work Good for Your Health and Well-Being." TSO. 2006.
[113] Ibid.

Employment Indicators

When looking at the data from the U.S. Census Bureau, **Table 102** shows that an estimated 56.4% of the population age 16 and older in Mat-Su Borough was identified in the category Civilian-Employed in 2016. Glenn Highway had the lowest percentage (38.5%) in this category, while Palmer had the highest at 60.8%. The Mat-Su Borough and borough clusters are all below Anchorage (68.5%) and Alaska (62.3%) for Civilian-Employed.

Table 102 - Employment Indicators by Select Areas, Mat-Su Borough and Anchorage*

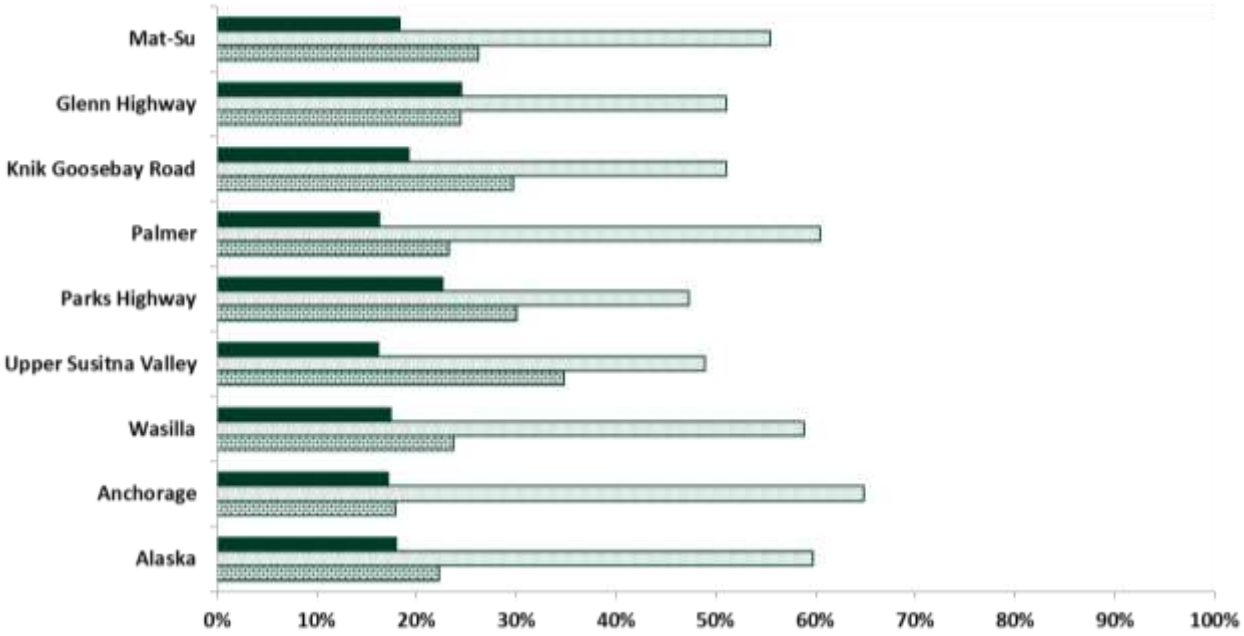
2016 DEMOGRAPHICS	MAT-SU	GLENN HIGHWAY	KNIK GOOSEBAY ROAD	PALMER	PARKS HIGHWAY	UPPER SUSITNA VALLEY	WASILLA	ANCHORAGE	ALASKA
2016 EST. POPULATION (AGE 16+) BY EMPLOYMENT STATUS	**71,807**	**2,883**	**13,586**	**19,896**	**11,688**	**4,017**	**19,737**	**194,355**	**574,097**
In Armed Forces	373	5	86	114	7	-	161	2,399	16,670
Civilian - Employed	40,524	1,111	7,838	12,090	6,081	1,856	11,548	133,044	357,401
Civilian - Unemployed	4,671	108	1,111	1,154	913	245	1,140	9,697	33,670
Non in Labor Force	26,239	1,659	4,551	6,538	4,687	1,916	6,888	49,215	166,356
% In Armed Forces	0.5%	0.2%	0.6%	0.6%	0.1%	0.0%	0.8%	1.2%	2.9%
% Civilian - Employed	56.4%	38.5%	57.7%	60.8%	52.0%	46.2%	58.5%	68.5%	62.3%
% Civilian - Unemployed	6.5%	3.8%	8.2%	5.8%	7.8%	6.1%	5.8%	5.0%	5.9%
% Non in Labor Force	36.5%	57.5%	33.5%	32.9%	40.1%	47.7%	34.9%	25.3%	29.0%

Source: U.S. Census Bureau

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

Based on U.S. Census data, Figure 70 illustrates the classifications of occupation by Mat-Su Borough, clusters within the borough, Anchorage and Alaska. There are more jobs in the white collar classification throughout the borough than blue-collar or service and farm classifications. Palmer had the highest percentage of white collar employment at 60.5%. The lowest service and farm employment (16.3%) was found in Palmer and the Upper Susitna Valley. Upper Susitna Valley also had the highest blue collar employment at 34.8%, while Glenn Highway had the highest service and farm employment at 24.5%.

Figure 70 - Estimated Population Percentage of Occupation Classification by Select Areas, Mat-Su Borough and Anchorage*



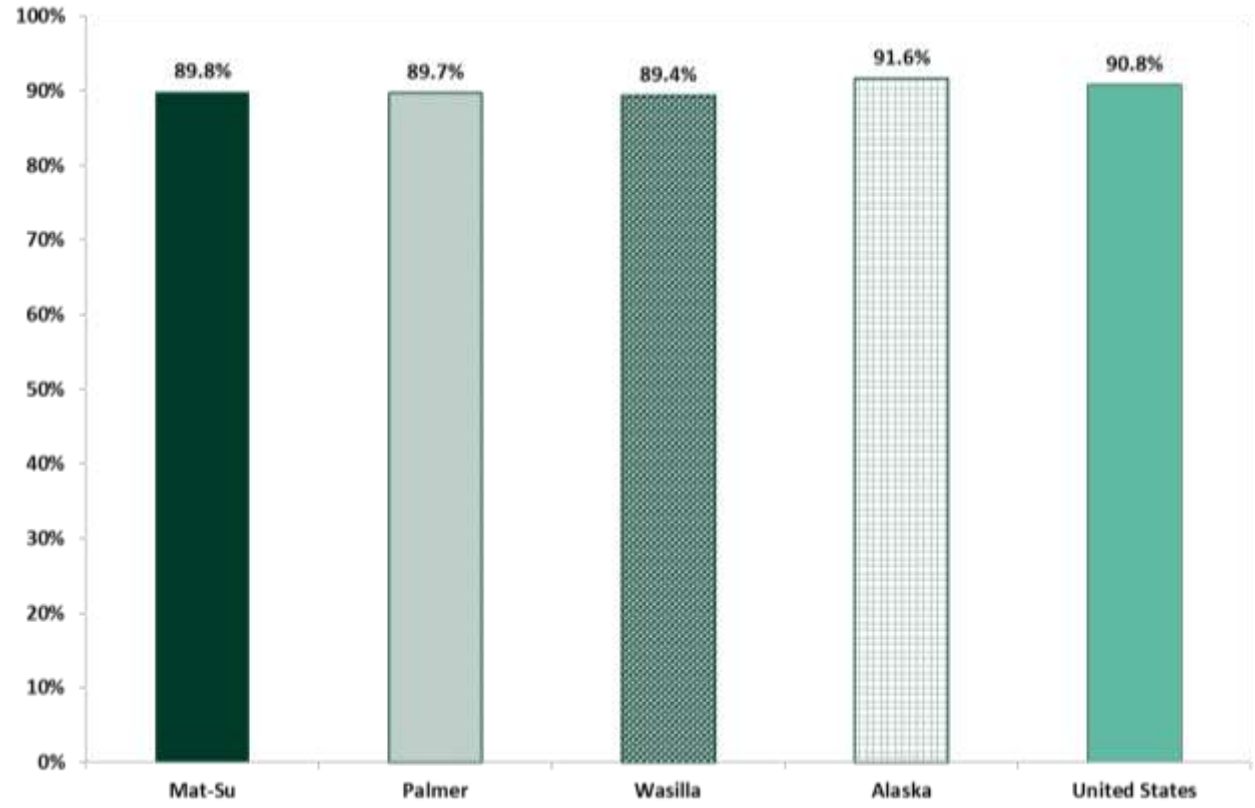
	Alaska	Anchorage	Wasilla	Upper Susitna Valley	Parks Highway	Palmer	Knik Goosebay Road	Glenn Highway	Mat-Su
Service and Farm	18.0%	17.2%	17.5%	16.3%	22.6%	16.3%	19.2%	24.5%	18.4%
White Collar	59.7%	64.9%	58.8%	48.9%	47.3%	60.5%	51.1%	51.1%	55.4%
Blue Collar	22.2%	17.9%	23.7%	34.8%	30.0%	23.3%	29.7%	24.4%	26.2%

Source: U.S. Census Bureau

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

From data collected in the American Community Survey, **Figure 71** illustrates the percentage of respondents in Mat-Su, Palmer, Wasilla, Alaska and the United States who reported they were employed during 2010-2014. Mat-Su (89.9%), Palmer (89.7%) and Wasilla (89.4%) had a comparable percentage of respondents reporting they were employed during this time, which was slightly less when compared to the state (91.6%) and nation (90.8%).

Figure 71 - Residents Are Employed (2010-2014)



U.S. Census American Community Survey

The living wage gap is the difference between the cost of living in a community and minimum wage. Residents in Mat-Su are making between $8/hour and $9/hour less than what is considered a living wage in the area.

Based on data from the Living Wage Calculator, **Figure 72** shows the living wage gap for residents in Mat-Su, Anchorage and Alaska in 2016. The living wage gap takes into consideration the cost of living in a community and looks at the difference between that and minimum wage. Mat-Su's living wage is estimated to be $8.37, which is slightly less than Anchorage ($8.99) or Alaska ($8.94).

Figure 72 - Living Wage Gap, 2016

Source: Living Wage Calculator, MIT

Related to the factors that impact health where we work, **Table 103** shows the comparison for residents who are employed for the combined years of 2010-2014 for Mat-Su compared to Alaska and the United States. The table also shows Palmer and Wasilla compared to Mat-Su. The table indicates where indicators are at least 1.0 higher (🡅), 1.0 lower (🡇) or about the same (🡄🡆).

Mat-Su has fewer residents who are employed compared to Alaska overall.

Table 103 - Factors that Impact Health Where We Work, Comparison 2010-2014

FACTORS THAT IMPACT HEALTH WHERE WE WORK				
Indicator	Palmer compared to Mat-Su	Wasilla compared to Mat-Su	Mat-Su compared to Alaska	Mat-Su Compared to the U.S.
Employment				
Resident who are employed (2016)	🡄🡆	🡄🡆	🡇	🡄🡆

Source: Alaska Behavioral Risk Factor Surveillance System Data, Healthy People 2020

How Employment Impacts Health: Community Input

There are several ways that employment impacts heath that were discussed by focus group and interview participants. The location, schedule and type of work, as well as income, all have the potential to impact health. In the Mat-Su area, many residents travel well outside of the local area to work. Long commutes impact the ability to get physical activity and spend adequate time with family. For the "sandwich generation," the adults who are caring for both children and elderly parents, there is little time for self-care. For those who work "on the slope," while they can make a decent income, they are away for weeks at a time, which can negatively impact family relationships, in addition to making it difficult to seek appropriate medical care.

Employment often means access to commercial health insurance. However, a number of social service professionals noted that the insurance offered by their employer does not cover many conditions and, with their income level, they struggle to afford out-o- pocket expenses. This has impacted their ability to access care. They also noted that the clients in some cases have better health insurance coverage than the professionals that serve them.

Some participants indicated that people must work two or more jobs in order to make ends meet and often have difficulty getting to a physician or other appointment because they cannot afford to take time off work. Seeing a specialist in Anchorage often means missing a full day of work because of the travel distance. This causes people to delay or avoid the care they need all together.

How Income Impacts Health

There is a direct correlation between low financial stability and poor health. As the World Health Organization reports, poverty [low financial stability] impacts health along with other human conditions. The poor often have greater personal and environmental health risks, have less information, and are less able to access health care and nutritious food; they thus have a higher risk of illness and disability. Conversely, illness can also perpetuate or increase poverty and adversely impact quality of life by reducing household savings, lowering learning ability, [and] reducing productivity.[114]

"Financial stability can mean different things to different people. In part, the way a person feels about money may affect their comfort level of financial stability. Their personal experiences will shape their thoughts on what they consider to be financially stable."[115] When looking at financial stability as it relates to health, if a person doesn't feel that they are financially stable to have money to pay for insurance copays, deductibles, medication or medical bills, they will forego the necessary treatment they need.

[114] "WHO | Poverty." Accessed April 12, 2016. http://www.who.int/topics/poverty/en/.
[115] Dinesen, Andia. "Pillars of Personal Financial Success – Tips to Achieve Financial Stability." http://www.ambahq.org/index.php/blog-quick-link/item/157-pillars-of-personal-financial-success-tips-to-achieve-financial-stability.

How Housing and Income Impact Health

As outlined in **Table 104** with data from the U.S. Census Bureau, in 2016, there were an estimated 33,891 households in Mat-Su Borough. From 2000-2016, the number of households increased in Mat-Su Borough by 68.2% and the borough cluster areas of Glenn Highway by 46.3%, Knik Goosebay Road by 134.7% (which is the largest increase), Palmer by 62.0%, Parks Highway by 108.9%, Upper Susitna Valley by 8.2% (which had the smallest increase), and Wasilla by 49.5%, along with Anchorage by 15.2% and Alaska by 21.7%. Upper Susitna Valley has the smallest projected household growth between 2016 and 2021 at 1.2%, while Knik Goosebay Road is projected to have the highest household growth for the period at 12.2%. Almost one-third of the households in Mat-Su Borough, borough clusters, Anchorage and Alaska have household incomes between $50,000 and $99,999, with Upper Susitna Valley having the highest percentage at 36.9% and Glenn Highway having the lowest percentage at 30.4%. Just under half of the households in Glenn Highway (44.7%) and Upper Susitna Valley (44.6%) have household incomes less than $50,000, while approximately one in four of the households in Knik Goosebay Road (25.6%), Palmer (27.5%), Anchorage (28.7%), and Alaska (25.0%) have household incomes less than $50,000.

Table 104 - Households and Household Income by Select Areas, Mat-Su Borough and Anchorage*

2016 POPULATION	MAT-SU	GLENN HIGHWAY	KNIK GOOSEBAY ROAD	PALMER	PARKS HIGHWAY	UPPER SUSITNA VALLEY	WASILLA	ANCHORAGE	ALASKA
HOUSEHOLDS									
2000 Census	19,277	703	2,432	5,484	2,529	2,044	6,085	81,193	221,600
2010 Census	29,684	960	5,161	7,938	4,802	2,189	8,634	90,843	258,058
2016 Estimate	33,891	1,053	6,322	9,302	5,712	2,214	9,288	93,874	271,691
2021 Projection	36,673	1,118	7,095	10,122	6,295	2,241	9,802	96,397	282,129
Growth 2000-2010	54.0%	36.6%	112.2%	44.8%	89.9%	7.1%	41.9%	11.9%	16.5%
Growth 2010-2016	14.2%	9.7%	22.5%	17.2%	19.0%	1.1%	7.6%	3.3%	5.3%
Growth 2016-2021	8.2%	6.2%	12.2%	8.8%	10.2%	1.2%	5.5%	2.7%	3.8%
2016 EST. HOUSEHOLDS BY HOUSEHOLD TYPE	**33,891**	**1,053**	**6,322**	**9,302**	**5,712**	**2,214**	**9,288**	**93,874**	**271,691**
Family Households	24,139	707	4,726	6,882	3,873	1,282	6,669	59,498	180,248

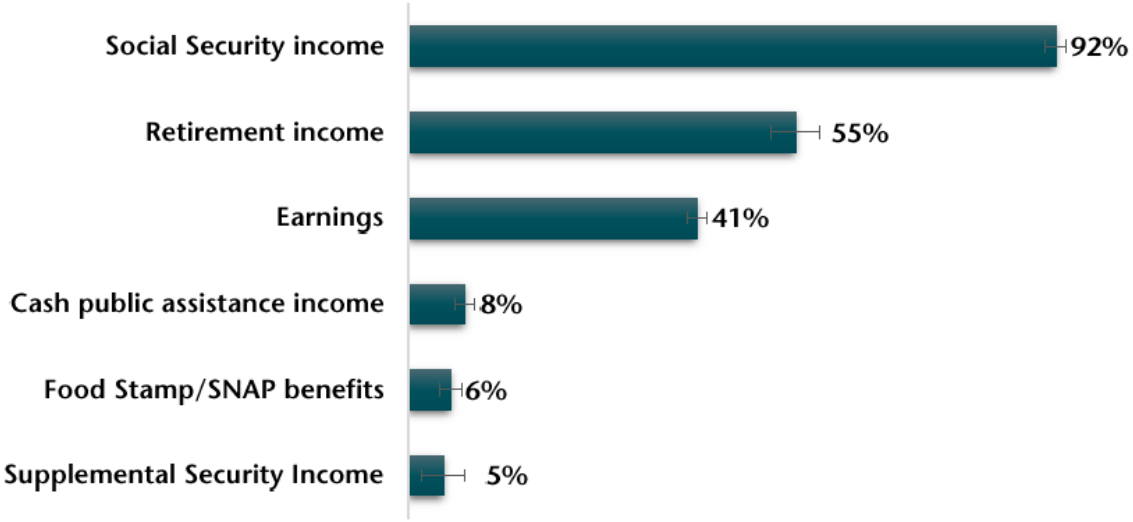
2016 POPULATION	MAT-SU	GLENN HIGHWAY	KNIK GOOSEBAY ROAD	PALMER	PARKS HIGHWAY	UPPER SUSITNA VALLEY	WASILLA	ANCHORAGE	ALASKA
Nonfamily Households	9,752	346	1,596	2,420	1,839	932	2,619	34,376	91,443
% Family Households	71.23%	67.14%	74.75%	73.98%	67.80%	57.90%	71.80%	63.38%	66.34%
% Nonfamily Households	28.77%	32.86%	25.25%	26.02%	32.20%	42.10%	28.20%	36.62%	33.66%
2016 EST. GROUP QUARTERS POPULATION	1,862	766	219	553	16	27	281	5,698	29,022
2016 EST. HOUSEHOLDS BY HOUSEHOLD INCOME	33,891	1,053	6,322	9,302	5,712	2,214	9,288	93,874	271,691
Income < $15,000	8.5%	10.0%	7.2%	5.7%	12.0%	14.3%	8.5%	4.9%	6.74%
Income $15,000 - $24,999	7.4%	12.6%	5.5%	5.4%	9.0%	11.8%	8.0%	5.9%	7.07%
Income $25,000 - 34,999	6.0%	9.7%	4.7%	5.5%	6.4%	7.3%	6.4%	5.5%	6.64%
Income $35,000 - $49,000	10.1%	12.4%	8.2%	10.9%	11.2%	11.2%	9.4%	12.4%	11.68%
Income $50,000 - $74,000	18.8%	17.3%	16.7%	18.5%	20.0%	22.0%	19.1%	17.3%	17.97%
Income $75,000 - $99,999	16.6%	13.1%	18.8%	17.5%	15.4%	14.9%	15.7%	14.7%	14.92%
Income $100,000 - $124,999	11.1%	10.1%	12.0%	12.6%	9.2%	9.4%	10.9%	11.6%	11.01%
Income $125,000 - $149,000	7.9%	5.0%	9.3%	9.2%	6.1%	3.4%	8.3%	8.6%	8.18%
Income $150,000 - $199,000	8.0%	5.7%	10.4%	8.7%	6.7%	3.6%	7.9%	9.8%	8.54%
Income $200,000 >	5.6%	4.1%	7.3%	6.2%	3.9%	2.3%	5.8%	9.4%	7.26%

Source: U.S. Census Bureau

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

As reported in the Mat-Su Senior Services Environmental Scan, Figure 73 illustrates the income breakdown for Mat-Su residents age 65 and older during 2010-2014. The majority (92%) of this population's income comes from Social Security income. Just over half (55%) comes from Retirement income, followed by wages earned (41%).

Figure 73 - Mat-Su Population 65+, Income Past 12 Months, 2010-2014 Estimate

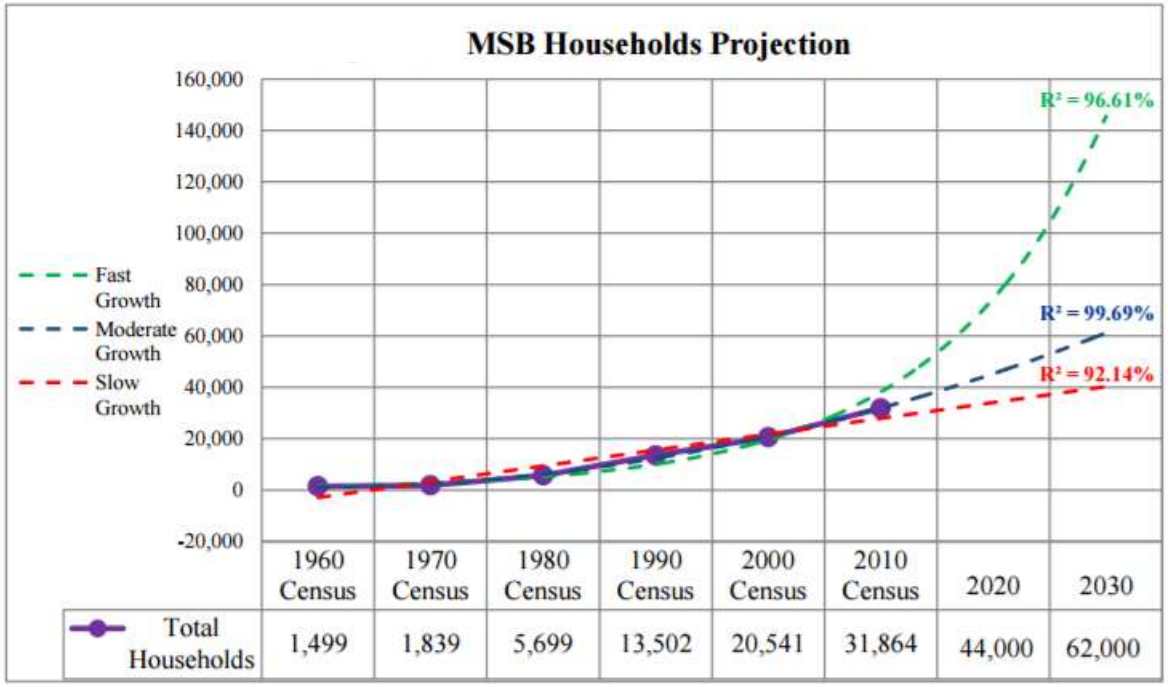


Note: Earnings include wages and salaries, and self-employment. Wages and salaries are defined as total money earnings received for work performed as an employee during the income year. It includes wages, salary, Armed Forces pay, commissions, tips, piece-rate payments, and cash bonuses earned, before deductions are made for taxes, bonds, pensions, union dues, and so forth. Earnings for self-employed persons in incorporated businesses are considered wage and salary. Self-employment is the combined income from farm and nonfarm self-employment.
Source: American Community Survey, 2010-2014 Five-Year Estimates.

Source: Mat-Su Senior Services Environmental Scan, McDowell Group, 2016

As reported in the Mat-Su Borough Housing Needs Assessment, 2014, Figure 74 illustrates the total number of households in the borough from the 1960, 1970, 1980, 1990, 2000 and 2010 Census with projections for 2020 and 2030. The number of households in the borough has been steadily increasing and is projected to continue to increase.

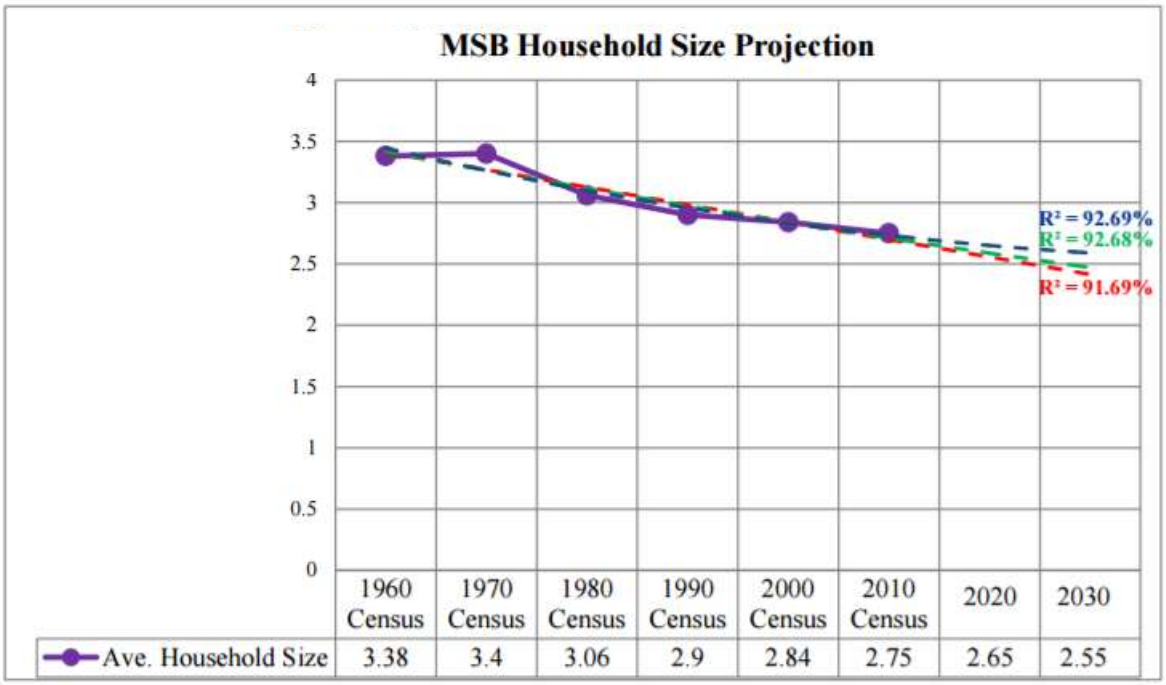
Figure 74 - Mat-Su Household Projection



Source: Mat-Su Borough Housing Needs Assessment, 2014

As reported in the Mat-Su Borough Housing Needs Assessment report in 2014, Figure 75 illustrates the average household size in the borough from the 1960, 1970, 1980, 1990, 2000 and 2010 Census with projections for 2020 and 2030. The average household size has been decreasing and is projected to continue to decrease over the next decade.

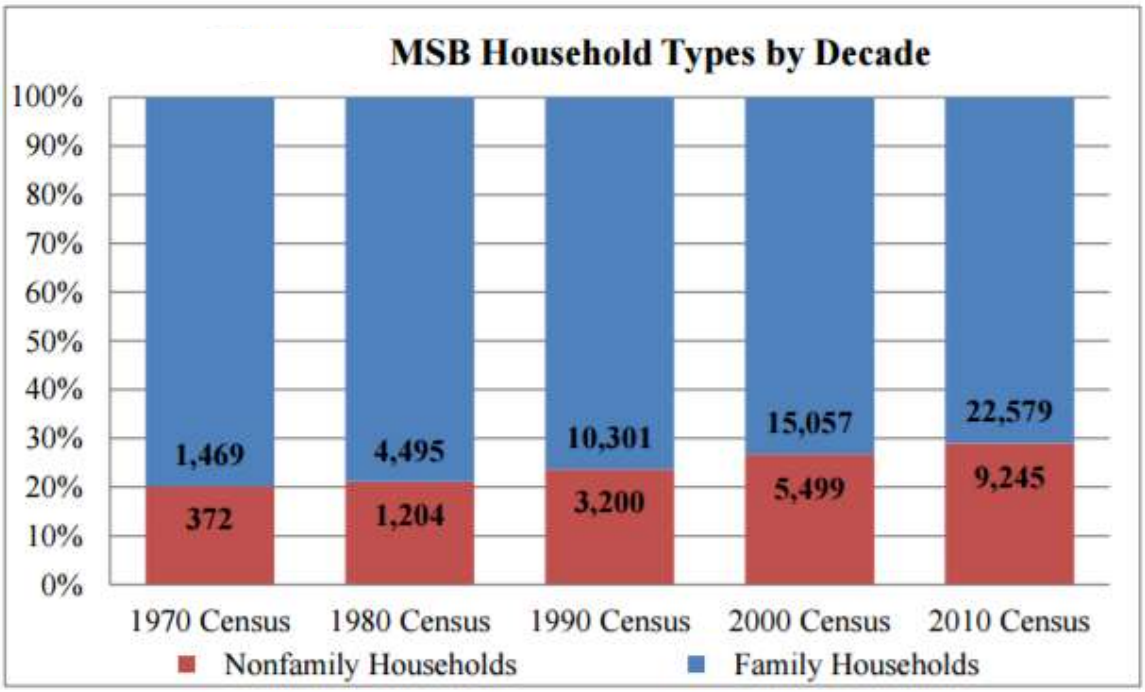
Figure 75 - Mat-Su Household Size Projection



Source: Mat-Su Borough Housing Needs Assessment, 2014

The U.S. Census defines a family household as a household that is a married, opposite sex couple with or without children, single parents, and same sex couples if they have a related child in the household. A nonfamily is a household of a single person, same sex couples without related children, non-married cohabitants, and nonrelated persons sharing a housing unit as roommates. Figure 76 illustrates household type in Mat-Su in years 1970, 1980, 1990, 2000, and 2010. The percentage of nonfamily households has been increasing each year compared to family households.

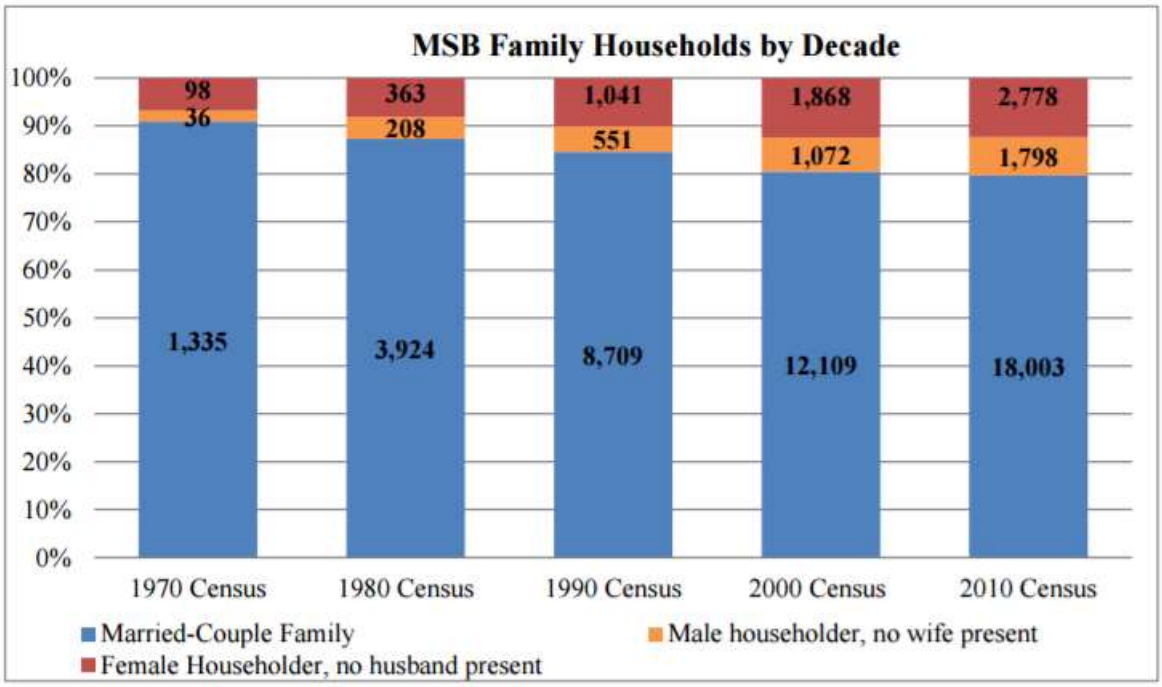
Figure 76 - Mat-Su Household Type



Source: Mat-Su Borough Housing Needs Assessment, 2014

The number of married couples, female householders, and male householders in Mat-Su in 1970, 1980, 1990, 2000 and 2010 is illustrated in Figure 77. The majority of family households are married-couple families. When looking at single heads of household, there are more female householder, no husband present, then male householder, no wife present.

Figure 77 - Mat-Su Household Composition



Source: Mat-Su Borough Housing Needs Assessment, 2014

The unmet housing needs in Mat-Su are outlined in Table 105. Half (50.39%) of the non-family households in Mat-Su are considered to have an unmet housing need, with 6.91% of the Mat-Su population impacted. Approximately one in five (20.39%) family households are considered to have an unmet need accounting for 17.07% of the population. Overall, 40.08% of the population in Mat-Su has an unmet housing need.

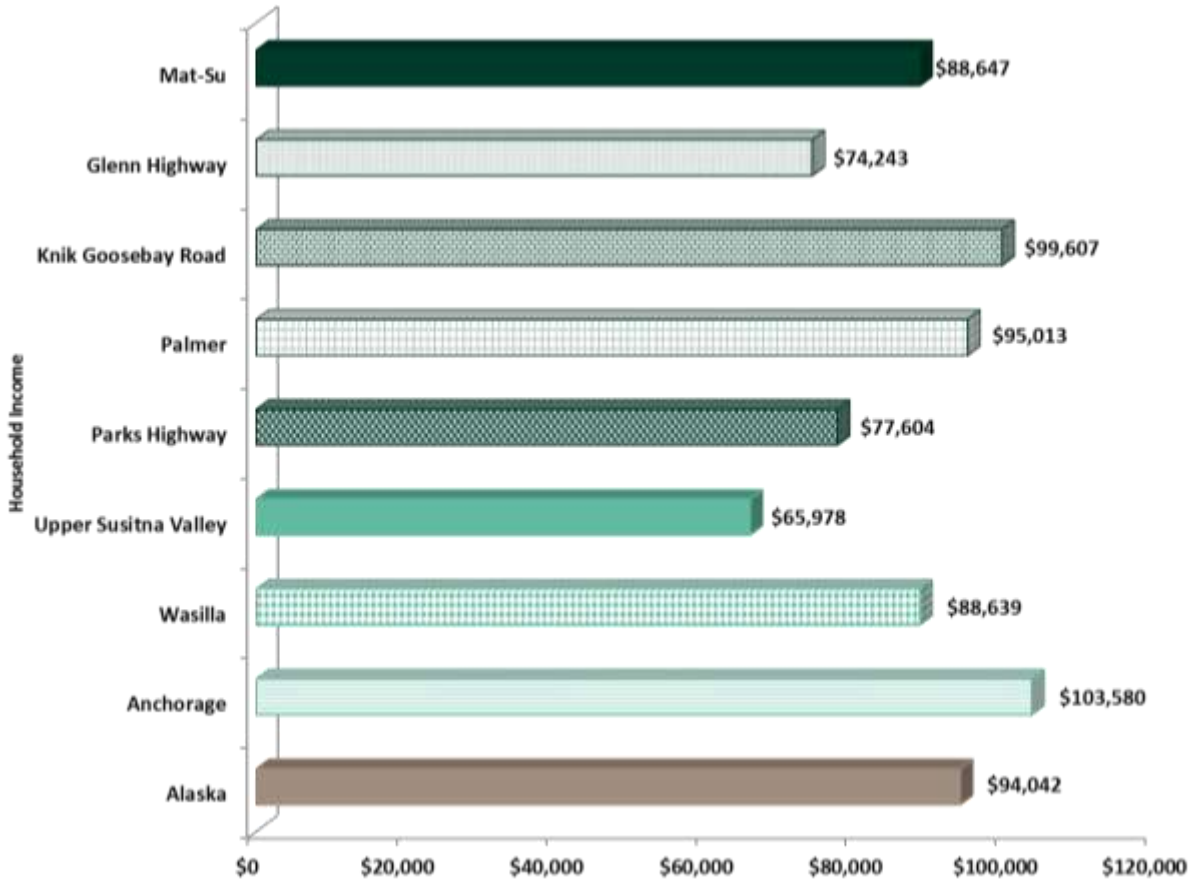
Table 105 - Mat-Su Unmet Housing Needs

	Nonfamily Household	Family Household	All Households
Households	9,245	22,579	31,123
Percentage Low-Income	0.52	0.22	0.42
Low Income Households	4,807	4,967	13,072
Housing Units Targeted to Low-Income Households	148	363	511
Estimate of Households with Unmet Need	**4,659**	**4,604**	12,561
Percentage of Household with Unmet Need	**50.39%**	**20.39%**	39.73%
Average Household Size	1.32	3.30	2.84
Estimate of Persons with Unmet Need	**6,150**	**15,194**	35,672
Percentage of MSB Population with Unmet Need	**6.91%**	**17.07%**	40.08%

Source: Mat-Su Borough Housing Needs Assessment, 2014

With data from the U.S. Census Bureau, **Figure 78** illustrates the range in average household income for Mat-Su Borough, borough clusters, Anchorage and Alaska in 2016. Residents in Knik Goosebay Road have the highest average household income ($99,607), while those living in Upper Susitna Valley have the lowest ($65,978), which is a difference of $33,629. The average annual household income for Mat-Su Borough is $88,647, which is lower than Anchorage ($103,580) and Alaska ($94,042).

Figure 78 - Average Household Income by Select Areas, Mat-Su Borough and Anchorage*

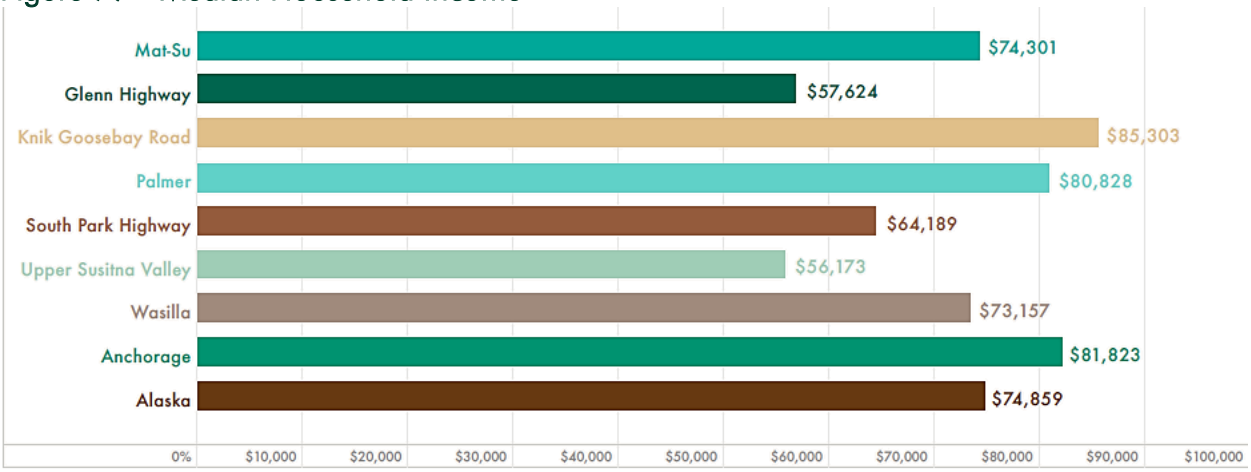


Source: U.S. Census Bureau

**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

Knik Goose Bay Road has the highest median household income at $85,303, while Upper Susitna Valley has the lowest median household income at $56,173, according to the U.S. Census Bureau data illustrated in **Figure 79** below.

Figure 79 - Median Household Income



Source: U.S. Census Bureau, 2016

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According to the US Census, American Community Survey, Table 106 shows the percentage of respondents in Mat-Su, Palmer, Wasilla, Alaska and the United States who were living above the poverty level in 2010-2014. The table also shows the median household income during that time. Mat-Su (89.8%) had a comparable percentage of respondents living above the poverty level compared to residents in Palmer (89.7%) and Alaska (89.9%). Mat-Su had a slightly higher percentage living above the poverty level compared to Wasilla (88.8%) and the United States (84.4%). Mat-Su had the highest median household income ($72,134), while Palmer ($60,365) had the lowest. The individual communities, the Mat-Su Borough and state had higher median household incomes when compared to the United States overall ($53,482).

Table 106- Poverty and Household Income by Region, 2010-2014*

	Mat-Su	Palmer	Wasilla	Alaska	United States
Residents Living Above Poverty Level	89.8%	89.7%	88.8%	89.9%	84.4%
Median Household Income	$72,134	$60,365	$62,622	$71,829	$53,482

Source: U.S. Census American Community Survey

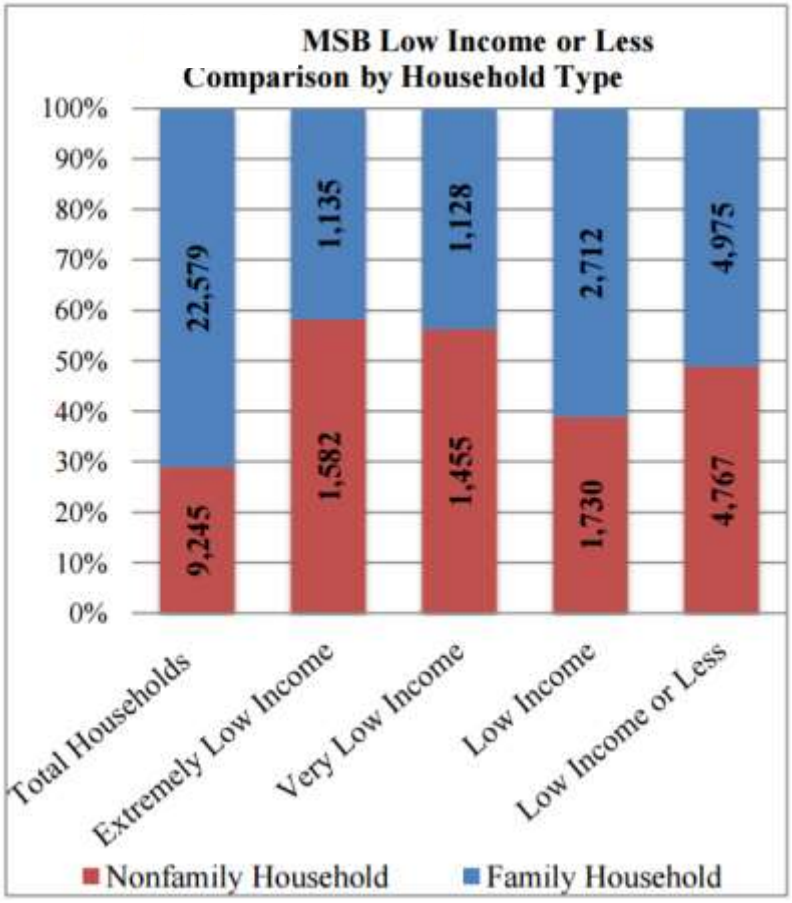
**Please note that the demographic information on this page was taken from the U.S. Census Bureau and therefore does not reflect the State of Alaska Department of Labor and Workforce Development's Mat-Su population number of 100,178.*

As published in the Mat-Su Borough Housing Needs Assessment, Figure 80 illustrates the number of households with low income based on a five-year estimate for Mat-Su. The US Department of Housing and Urban Development (HUD) considers any income below 80% of the median as "low income," with the following distinctions for housing assistance programs:

- Median Income
- Low Income (80% of Median)
- Very Low Income (50% of Median)
- Extremely Low Income (30% of Median)

The highest number of households falls within the low income or less category. There are more family households in the low income category when compared to nonfamily households. There are more nonfamily households in the extremely low or very low income categories than family households.

Figure 80 - Mat-Su Household by Income Type



Source: Mat-Su Borough Housing Needs Assessment, 2014

The Mat-Su Borough Housing Needs Assessment also illustrated housing compared to income. Table 107 shows the average housing cost and rental cost compared to median income in years 2009, 2010, 2011, 2012, 2013, and 2014. The cost of housing has been increasing over the past few years, while median income has decreased in recent years.

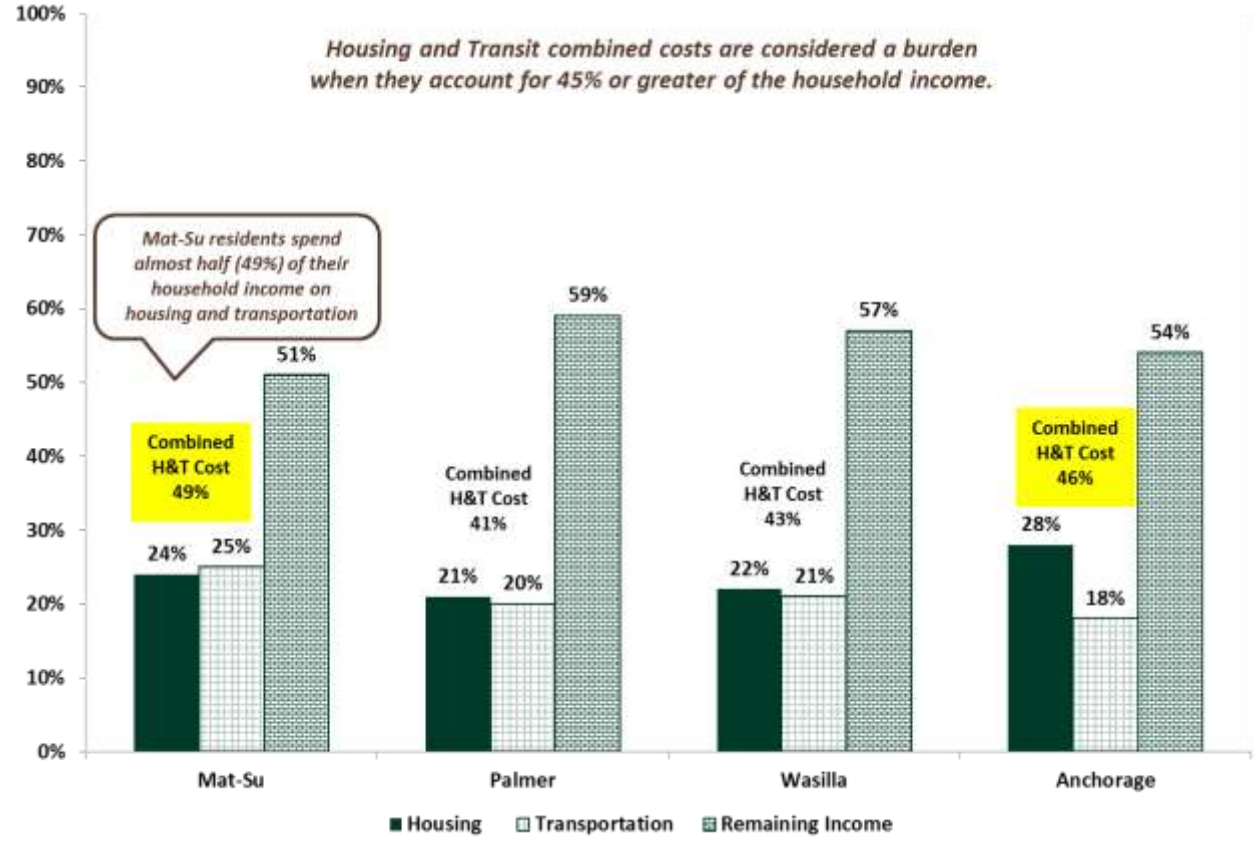
Table 107 - Mat-Su Housing Cost Compared to Income

	AK MLS Average Home Price	AHFC Median Gross Rent	Nonfamily Household HUD Median Income (1 Person)	Family Household HUD Median Income (3 Persons)	All Households HUD Median Income (4 Persons)
2009	$212,594	$806	$51,000	$65,600	$72,900
2010	$216,880	$865	$52,900	$68,000	$75,600
% Change	2.02%	7.32%	3.73%	3.66%	3.70%
2011	$213,569	$898	$62,600	$80,500	$89,400
% Change	-1.53%	3.82%	18.34%	18.38%	18.25%
2012	$221,607	$1,004	$63,400	$81,500	$90,600
% Change	3.76%	11.80%	1.28%	1.24%	1.34%
2013	$227,990	$940	$57,800	$74,300	$82,500
% Change	2.88%	-6.37%	-8.83%	-8.83%	-8.94%
2014	$234,437	$1,017	$55,000	$70,700	$78,500
% Change	2.83%	8.19%	-4.84%	-4.85%	-4.85%

Source: Mat-Su Borough Housing Needs Assessment, 2014

Housing and transportation tend to be the largest household expenditures. According to the Center for Neighborhood Technology Housing and Transportation Index, the combined cost of housing and transportation are considered a burden for a family when they account for 45% or greater of the household expenditures. Figure 81 shows the combined housing and transit cost burden for Mat-Su, Palmer, Wasilla and Anchorage. Based on this index, Mat-Su (49%) and Anchorage (46%) residents experience a sizable combined housing and transit cost burden.

Figure 81 - Housing and Transit Cost Burden



Source: The Center for Neighborhood Technology, Housing and Transportation (H+T®) Affordability Index

Statistically significant differences were observed in how income impacts health for the indicators in Table 108. Residents with household incomes of less than $15,000 are less likely to receive medical care when needed or have a personal care provider. They are also less likely to be healthy and active. These residents are also more likely to smoke and to have ever been told they have depressive disorder, asthma, COPD, or arthritis.

Table 108 - How Income Impacts Health, 2010-2014, 2011 & 2013, and 2011-2014

How Income Impacts Health					
Where We Live	**<$15,000**	**$15,000 - $24,999**	**$25,000 - $49,999**	**$50,000 - $74,999**	**$75,000 +**
Residents have health insurance (2010-2014)	70.0%	69.9%	70.2%	87.7%	91.9%
Access to medical care not limited due to cost (2010-2014)	75.7%	73.0%	74.4%	86.4%	94.1%
Residents received medical care when needed (2013-2014)	63.3%	79.0%	77.1%	80.3%	84.1%
Residents have a personal care provider (2010-2014)	56.4%	64.9%	62.0%	71.1%	73.4%
Where We Play	**<$15,000**	**$15,000 - $24,999**	**$25,000 - $49,999**	**$50,000 - $74,999**	**$75,000 +**
Residents are a healthy weight (2010-2014)	30.2%	34.7%	29.5%	26.3%	27.5%
Health Status Impact	**<$15,000**	**$15,000 - $24,999**	**$25,000 - $49,999**	**$50,000 - $74,999**	**$75,000 +**
Residents who report they are healthy (2010-2014)	60.3%	72.2%	82.1%	92.1%	93.1%
Residents report no physical, mental, or emotional limitations (2010-2014)	42.3%	65.0%	74.7%	82.7%	84.3%
Residents are physically healthy (2010-2014)	37.0%	51.4%	51.5%	67.8%	73.2%
Reports no poor mental health days in last month (2010-2014)	56.0%	61.4%	54.9%	70.7%	72.1%
Thoughts of suicide or harming self (2011 & 2013)	2.8%	6.3%	3.6%	0.0%	3.5%
Ever told had depressive disorder (2010-2014)	34.8%	27.3%	23.4%	12.1%	12.7%
Ever told have asthma (2010-2014)	20.4%	9.3%	12.5%	5.8%	9.0%
Residents ever told had COPD (2011-2014)	18.0%	8.9%	7.5%	3.8%	4.6%
Non-Smoking residents (2010-2014)	64.3%	67.8%	69.0%	79.2%	84.7%
Ever told had diabetes (2010-2014)	11.8%	12.1%	9.3%	5.6%	5.3%
Ever told had arthritis (2011-2014)	49.3%	31.2%	33.4%	21.0%	21.0%

Source: Alaska Behavioral Risk Factor Surveillance System Data

How Employment Impacts Health: Veterans

According to the U.S. Census Bureau data for the year 2016, the majority of active military personnel live in Wasilla, and there are no active military in Upper Susitna as outlined in Table 109 below.

Table 109 - 2016 Armed Forced Employment by Region

2016 ARMED FORCES EMPLOYMENT BY REGION	
2016 Demographics by Region	% in Armed Forces
Mat-Su	*0.5%*
Glenn Highway	*0.2%*
Knik Goosebay Road	*0.6%*
Palmer Area	*0.6%*
South Park Highway	*0.1%*
Upper Susitna Valley	*0.0%*
Wasilla Area	*0.8%*
Anchorage	*1.2%*
Alaska	*2.9%*

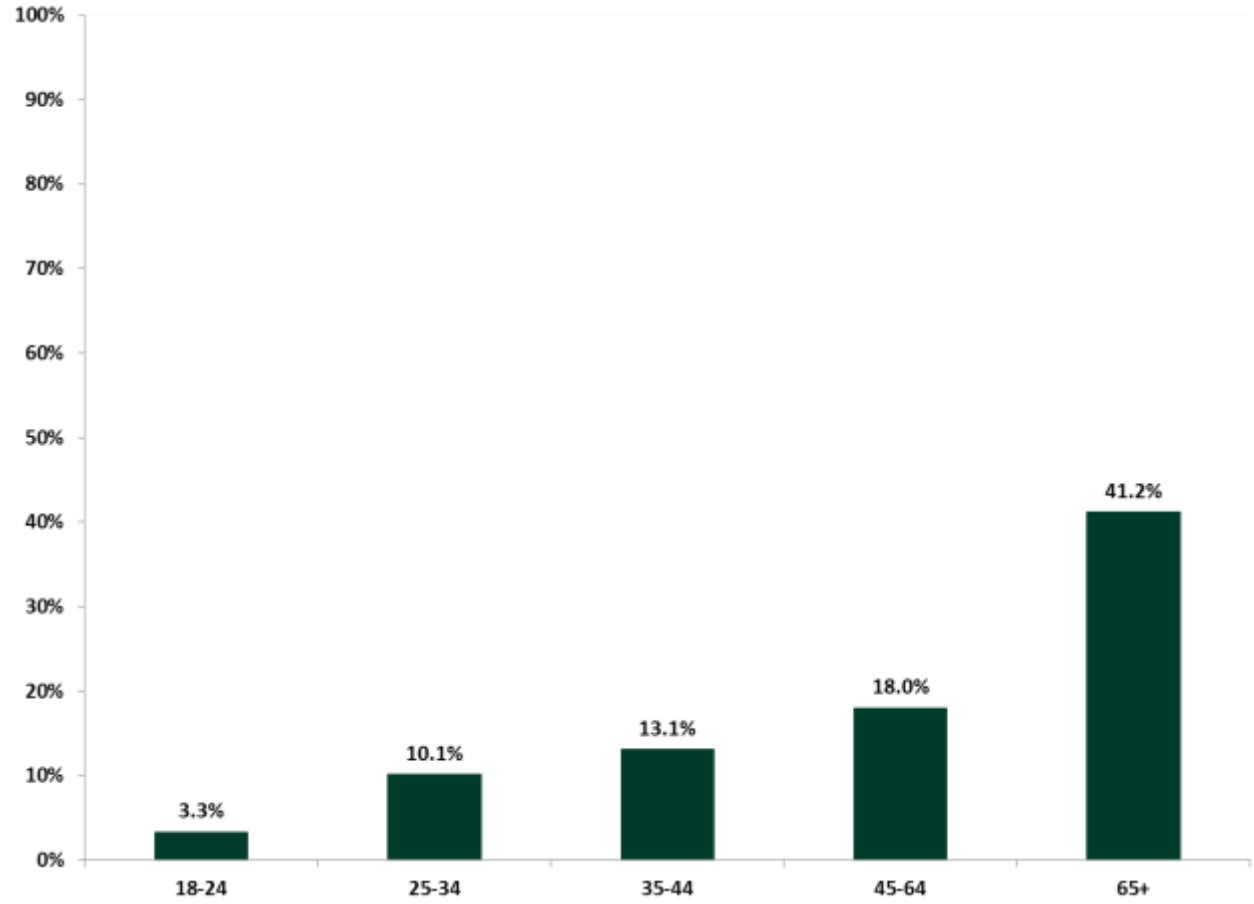
Source: U.S. Census Bureau, 2016

Mat-Su Residents Who Have Ever Served in the Armed Services

According to the State of Alaska Behavioral Risk Factor Surveillance System for the years 2010-2014, the percentage of Mat-Su respondents who reported they have ever served in the United States Armed Forces was 16.9%.

The percentage of Mat-Su respondents who report they have ever served in the military by age is illustrated below in Figure 82. Respondents over the age of 65 years (41.2%) are more likely to have served in the military when compared to younger residents.

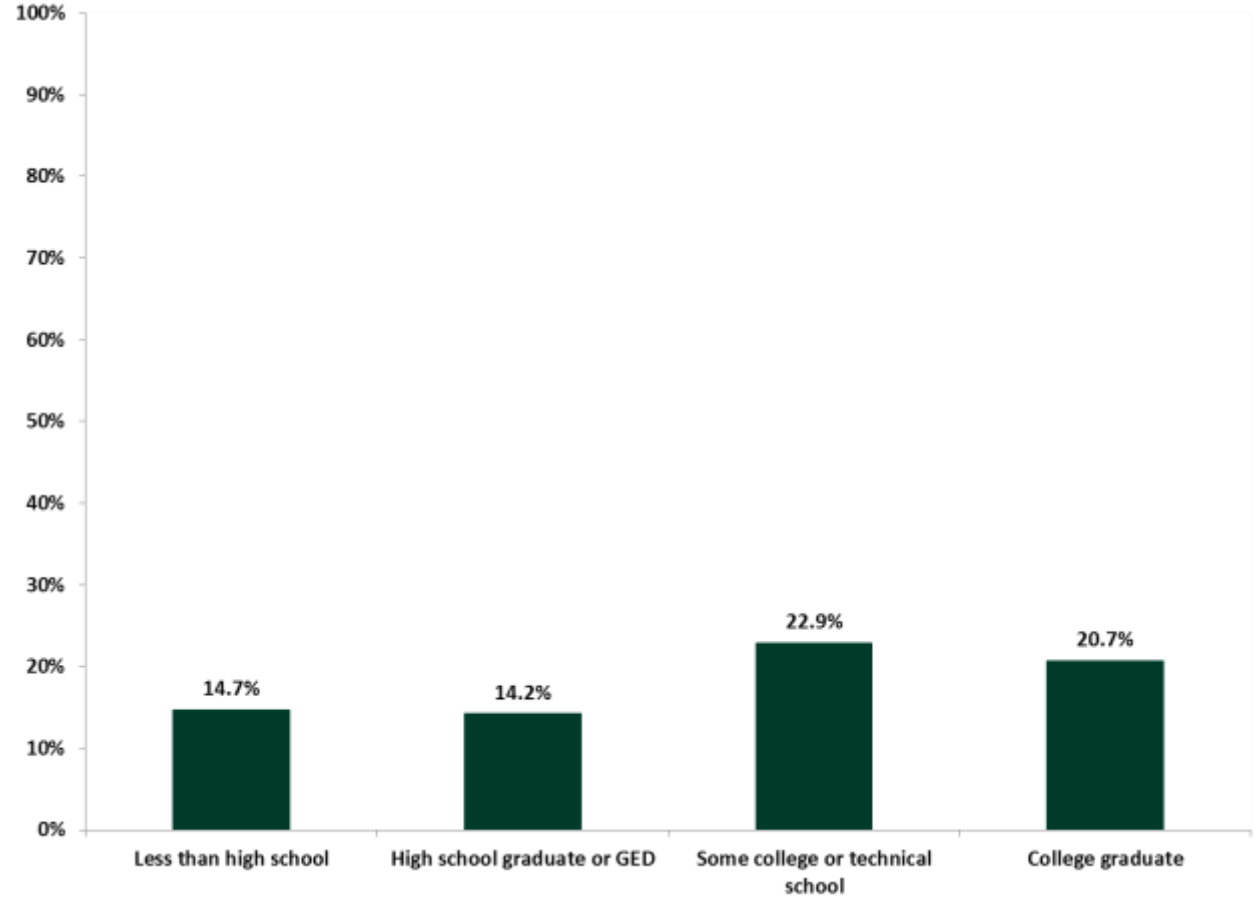
Figure 82 - Percent of Mat-Su Residents Who Have Ever Served in the Military, by Age, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

The percentage of Mat-Su respondents who reported having ever served in the military in the Behavioral Risk Factor Surveillance System during 2010-2014 by the highest level of education received is illustrated in Figure 83 below. According to the Alaska Behavioral Risk Factor Surveillance System, respondents who have served in the military are more likely to have completed some college or technical school.

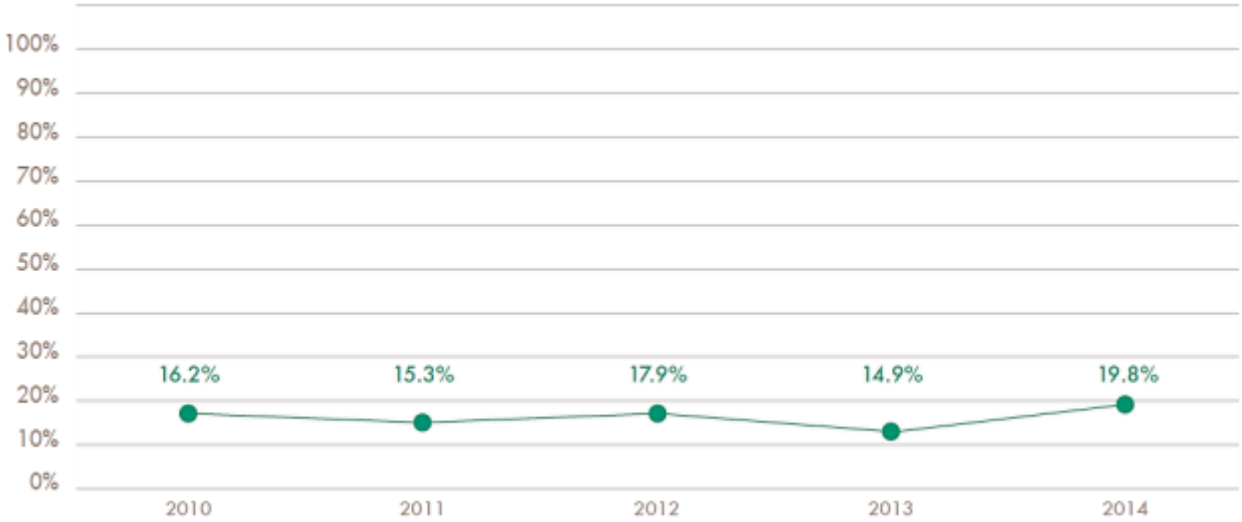
Figure 83 - Percent of Mat-Su Residents Who Have Ever Served in the Military, by Education Level, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

The percentage of Mat-Su respondents who report having ever served in the military in survey years 2010 through 2014 is illustrated below in **Figure 84**. According to the Alaska Behavioral Risk Factor Surveillance System, the percentage of Mat-Su respondents who report having served in the military has fluctuated, with the highest percentage seen in the most recent year with almost one in five (19.8%) respondents having served in the Armed Forces.

Figure 84 - Percent of Mat-Su resident Who Have Ever Served in the Armed Forces, 2010-2014



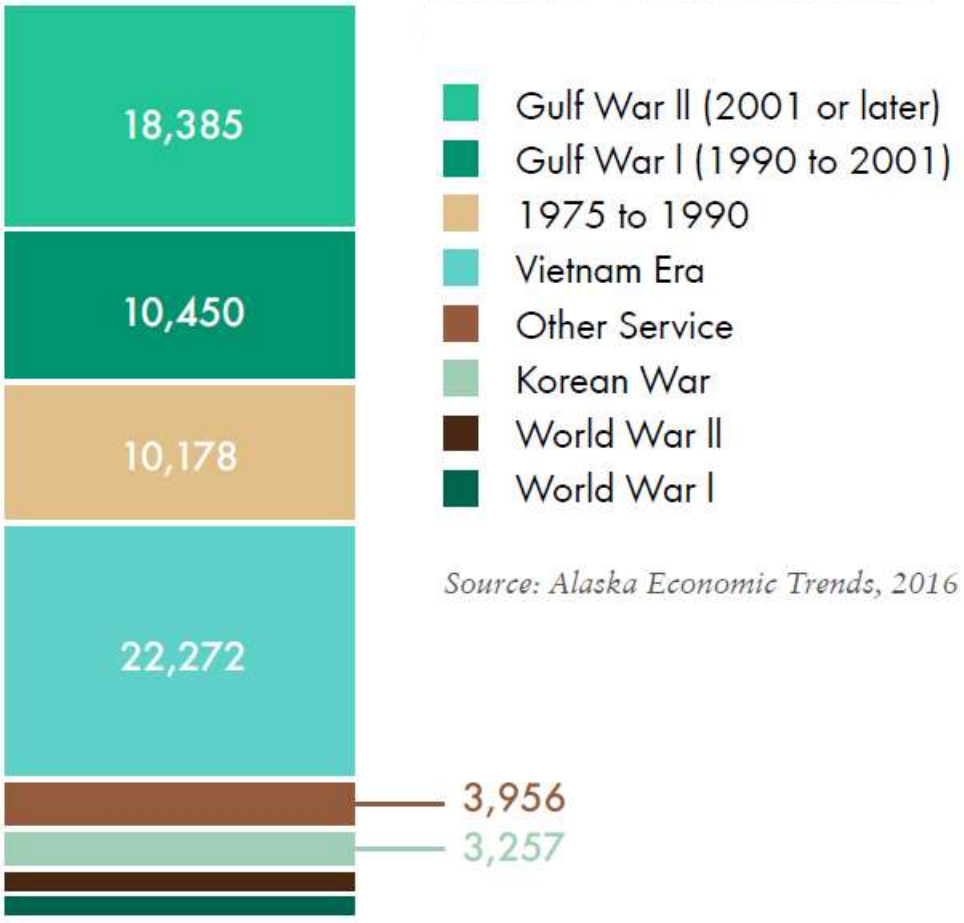
Source: Alaska Behavioral Risk Factor Surveillance System Data

According to the Joint Economic Committee, Alaska Economic Snapshot:

- In 2014, all Veterans in Alaska had an unemployment rate of 5.9%.
- In 2014, post 9/11 Veterans had an unemployment rate of 7.5%.
- Alaskan Veterans without health Insurance in 2013 was 18.5% and in 2014 was 17.2%.

The Alaskan Veterans by Era are illustrated in **Figure 85** below.

Figure 85 - Alaska Vets by Era



According to Alaska Economic Trends, from 2010-2014 in the Mat-Su Borough, there were 9,775 Veterans, suggesting that 10% of the borough population are veterans.

As seen in Table 110 below, according to Alaska Economic Trends, from 2010-2014 in Alaska, Veterans are less likely to be below the poverty level than nonveterans.

Table 110 - Poverty Status of Veterans

POVERTY STATUS OF VETERANS		
	Veterans	Nonveterans
Poverty Status Determined	69,529	445,417
Below Poverty, Past 12 Months	5%	10%

Source: Alaska Economic Trends, 2010-2014

Source: Alaska Economic Trends, 2010-2014

How Housing and Income Impact Health: Community Input

There was much discussion in the focus groups and interviews regarding how housing and income impact both access to healthcare and health overall in the Mat-Su region. Income levels affect the ability to access adequate housing, often resulting in homelessness. Many households in the area do not have electricity or running water, making activities of daily living challenging, including proper hygiene and oral care, especially in remote areas.

> *"Health is everyone's issue. Housing is everyone's issue. Housing is a big issue in the valley. If you talk to seniors, it is all about senior housing. Talk to those in nonprofits, it is homelessness. For others, it is prisoner re-entry, veterans or addiction and abuse. We need to retain the 18 to 34 year olds. If not, you are left with those that are retiring, and the borough has a different tax bracket, and we can't offer services. It is a domino effect. Diversified housing stock is the secret."*
>
> – Mat-Su Planner

Affordable and stable housing, access to education, job skills training and jobs, and zoning so that appropriate infrastructure could be developed in communities were identified as needs.

> *"Affordability of health care is a big issue. I work at a shelter and our residents can't afford it, but then when I think about it, the same discussions are actually happening with my staff. It sounds different, but really what we're all saying is we can't afford it. So it's not just our residents, it's the people working there that are struggling just as much."*
>
> – Wasilla Rotary Member

The region would also benefit from additional resources to support the working poor. When struggling financially, people will delay or avoid seeking medical care because they cannot pay high, out-of-pocket expenses, resulting in more serious diagnoses down the road. A significant medical condition can result in homelessness due to lack of insurance and inability to pay medical expenses.

Factors that Impact Health Where We Play

Exercising activities can help curb obesity. Obesity and diabetes can be greatly reduced through regular aerobic exercise and physical activity. Recreation activities, such as running, brisk walking, swimming and bicycling are excellent for elevating the heart rate and lowering the incidence of heart disease, obesity and diabetes, if done regularly. Active living has been shown to help prevent site-specific cancers, particularly in the colon, breast and lungs.[116]

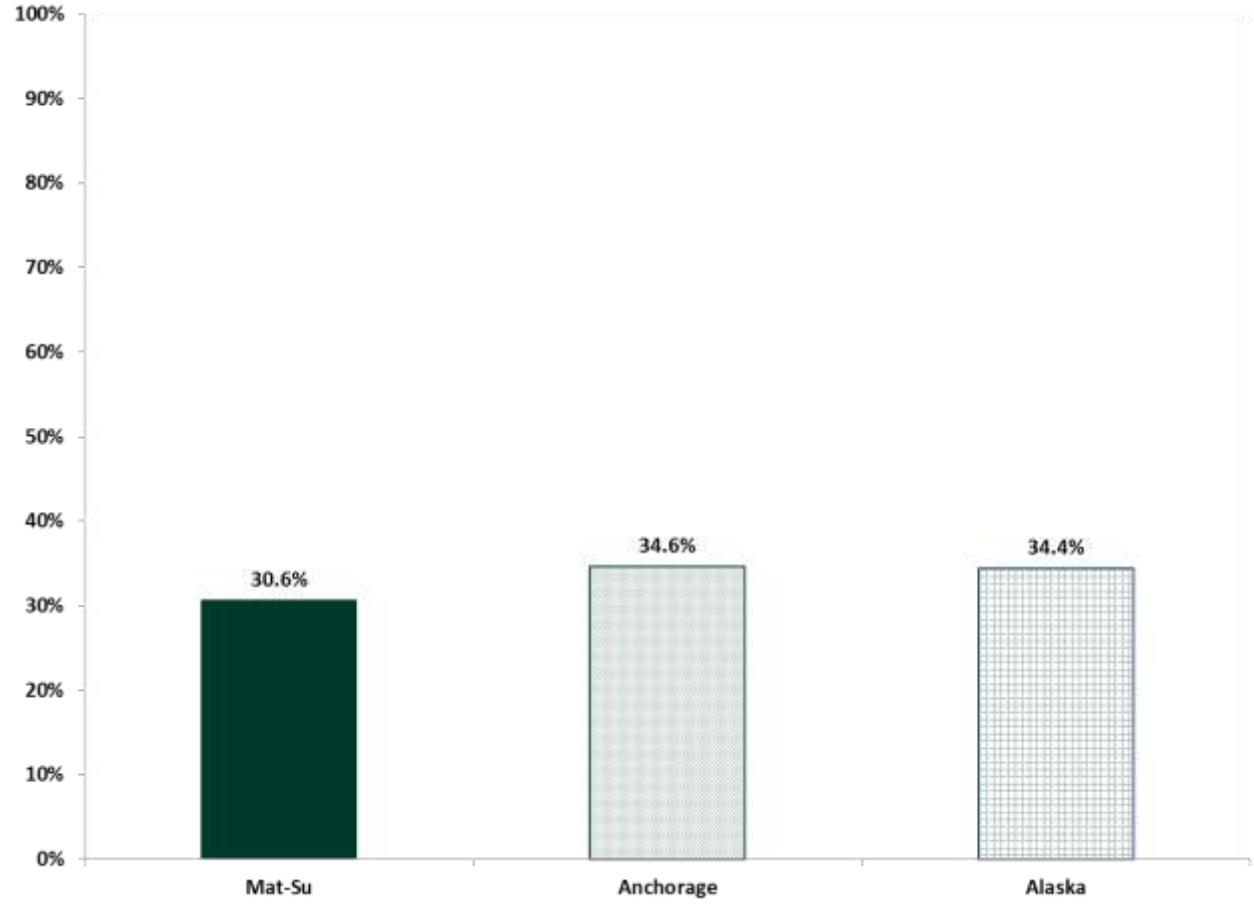
The prevalence of obesity is more strongly related to a lack of physical activity than to increases in caloric intake (Welk & Blair, 2000).

[116] "The Health and Social Benefits of Recreation," Sacramento, CA., 2005. California State Parks, p.11.

Healthy Weight

Based on the Alaska Behavioral Risk Factor Surveillance System data, **Figure 86** illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who were considered to be at a healthy weight during the combined years 2010-2014. Statistically significant differences were observed for respondents who report being at a healthy weight. Mat-Su residents (30.6%) were less likely to be at a healthy weight compared to residents in Anchorage (34.6%) and Alaska (34.4%).

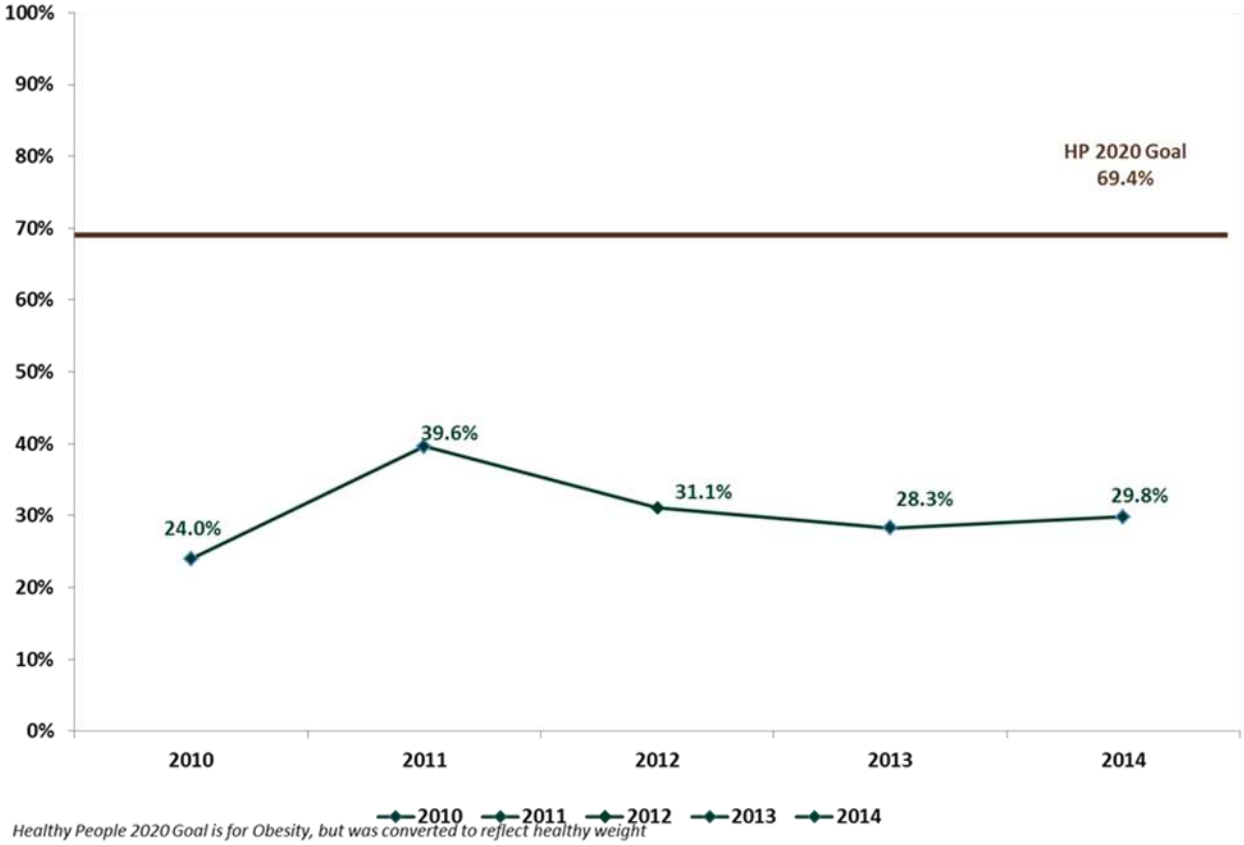
Figure 86 - Healthy Weight



Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System data, Figure 87 illustrates the percentage of respondents in Mat-Su who reported being at a healthy weight in years 2010 through 2014. The percentage of respondents who reported being at a healthy weight has fluctuated, but for most years, less than one third of the respondents were at a healthy weight. Mat-Su falls well below the Healthy People 2020 Goal to have 69.4% of residents at a healthy weight.

Figure 87 - Healthy Weight, Trend, 2010-2014

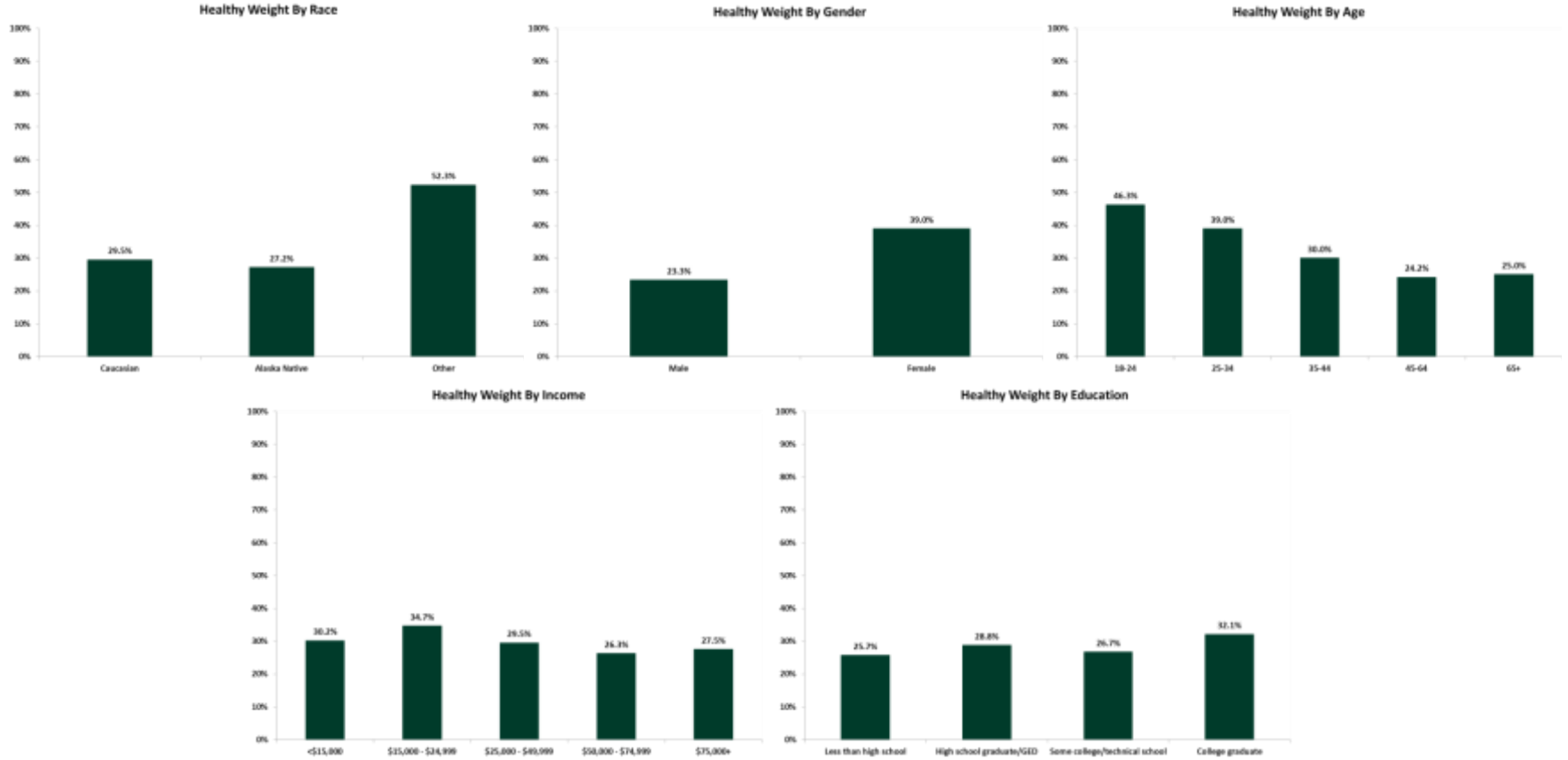


Healthy People 2020 Goal is for Obesity, but was converted to reflect healthy weight

Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System, **Figure 88** illustrates the demographic factors where a statistically significant difference was observed for residents who self-reported being at a healthy weight for 2010-2014. Respondents who did not consider themselves (52.3%) to be Caucasian or an Alaska Native were more likely to self-report being at a healthy weight. Female respondents (39.0%) were more likely to be at healthy weight than males (23.3%). Younger respondents (46.3%) were more likely to be at a healthy weight than older respondents. Respondents with household incomes of $15,000 to $24,999 (34.7%) were more likely to be at a healthy weight compared to other income levels. College graduates (32.1%) were more likely to be at a healthy weight when compared to other respondents.

Figure 88 - Healthy Weight, Significant Differences, 2010-2014

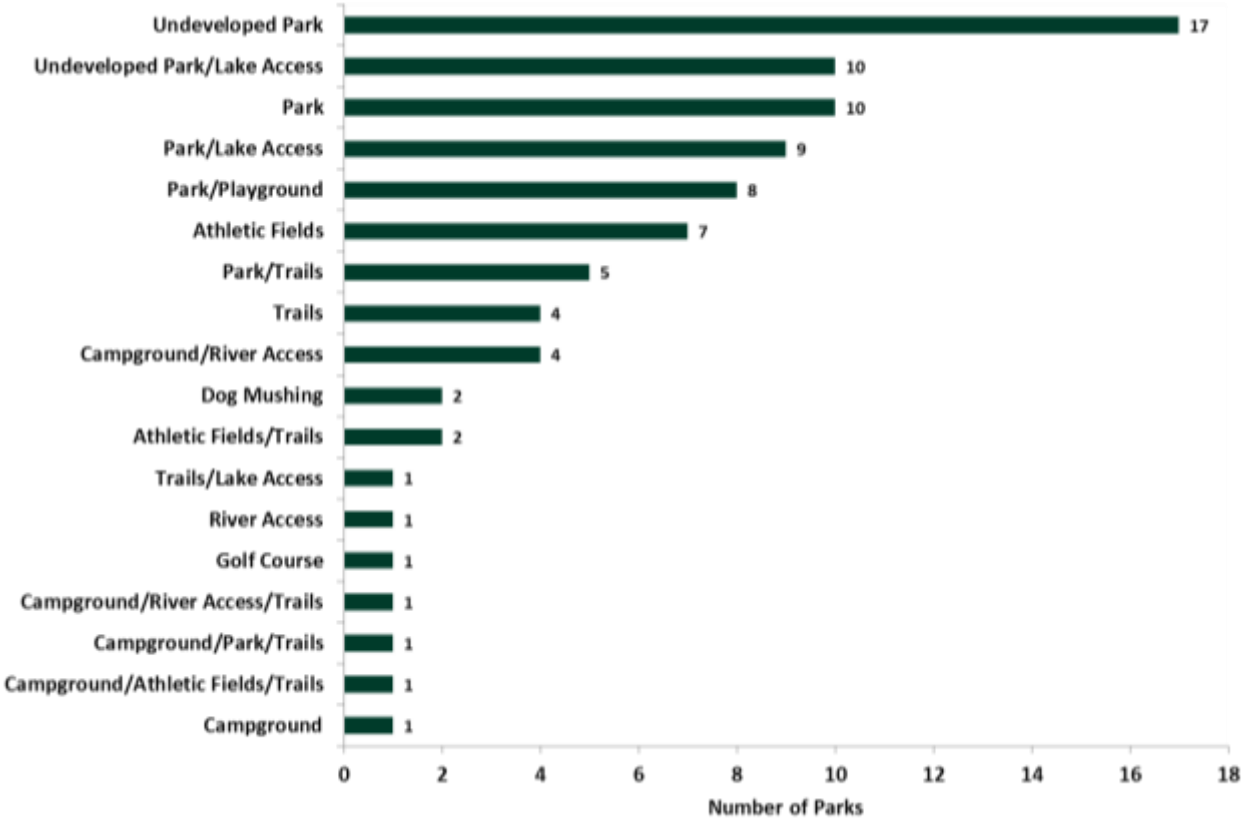


Source: Alaska Behavioral Risk Factor Surveillance System Data

Recreation

According to data available from Mat-Su Borough, **Figure 89** illustrates the current number of parks in the Mat-Su Borough. The borough has more undeveloped parks (17) than other types of recreational spaces. There are also ten undeveloped parks with lake access and ten parks. There are very few campgrounds offering amenities such as trails and athletic fields.

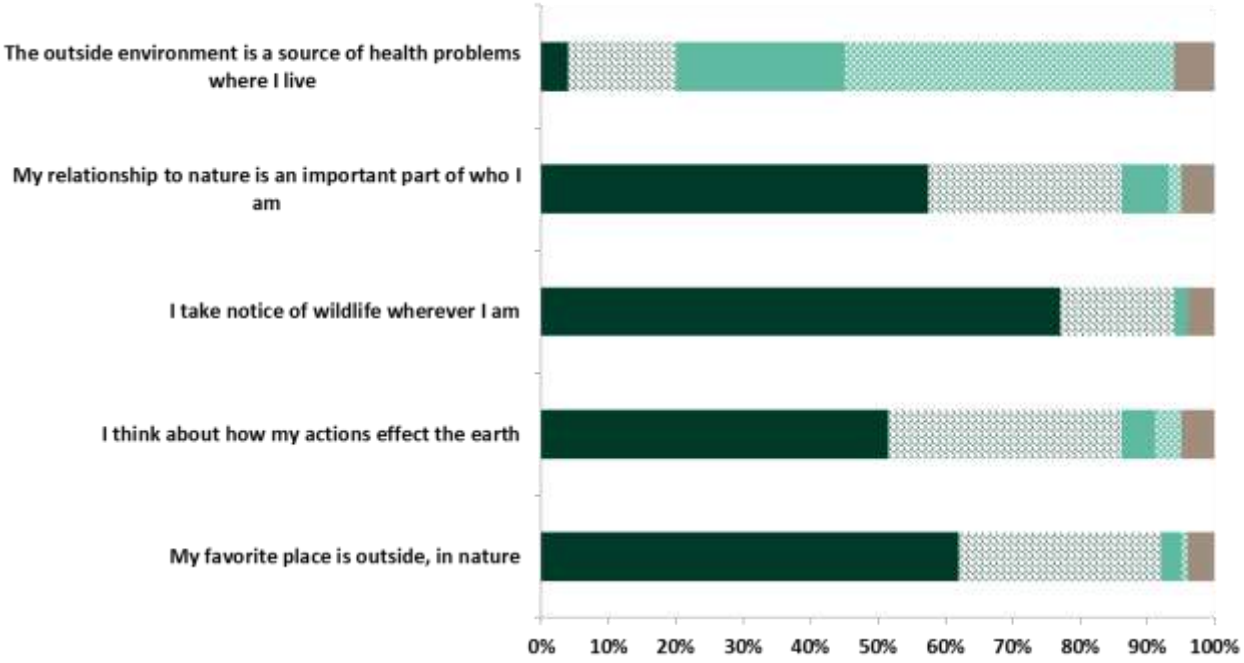
Figure 89 - Mat-Su Parks, by Type



Source: http://www.matsugov.us/shapefiles

The 2016 Mat-Su Household survey asked a number of questions to determine the respondent's relationship with nature. Figure 90 illustrates the responses from the 2016 household survey (N=700) for how the respondents reported that they view their relationship with nature. The highest percentage of respondents agreed that they notice wildlife wherever they go (94%) and that their favorite place is outside in nature (92%).

Figure 90 - Mat-Su Residents Relationship with Nature



	My favorite place is outside, in nature	I think about how my actions effect the earth	I take notice of wildlife wherever I am	My relationship to nature is an important part of who I am	The outside environment is a source of health problems where I live
Strongly Agree	62.0%	52.0%	77.0%	58.0%	4.0%
Agree	30.0%	35.0%	17.0%	29.0%	16.0%
Disagree	3.0%	5.0%	2.0%	7.0%	25.0%
Strongly Disagree	1.0%	4.0%	0.0%	2.0%	49.0%
Don't Know	4.0%	5.0%	4.0%	5.0%	6.0%

Source: Mat-Su Household Survey, McDowell Group, 2016

Civic Involvement

According to the Division of Elections, **Table 111** shows civic involvement in Mat-Su, Alaska and the United States for the 2012 election. Mat-Su (62.0%) had the highest percentage of registered voters turn out to vote compared to Alaska (59.0%) and the United States (55.0%).

Table 111 - Civic Involvement, 2012

	Mat-Su	Alaska	United States
Voter Registration	74,662	505,953	235,248,000
Voter Turnout	62.0%	59.0%	55.0%

Source: Division of Elections

Social Cohesion

The 2016 Mat-Su Household Survey also asked a number of questions regarding social cohesion and social capital. **Table 112** shows results from the Mat-Su Household Survey (n=700) related to these variables. Comparative data between the 2012 and 2016 survey are provided where available. Slightly fewer respondents report being very comfortable asking neighbors for help in 2016 (45.0%) compared to 2012 (49.0%), although for both years fewer than half of the respondents indicated that they would be comfortable asking neighbors for help.

The majority (93.0%) of respondents in 2016 indicated that they have access to a computer to get needed information. Over two thirds (70.0%) have attended a local community event in the past six months. Over half (64.0%) of the respondents would intervene if children skipped school or spray painted graffiti. Fewer than half (44.0%) of the respondents have volunteered in the past 12 months.

Table 112 - Mat-Su Residents Social Cohesion/Social Capital

Social Cohesion/Social Capital		
	2012	2016
Very comfortable asking neighbors for help	49.0%	45.0%
Access to a computer to get needed information	N/A	93.0%
Attended local community event, past 6 months	N/A	70.0%
Likelihood neighbors would intervene if children skipped school or spray painted graffiti	N/A	64.0%
Involved in volunteering activity, past 12 months	N/A	44.0%

Source: Mat-Su Household Survey - McDowell Group, 2016

The results from the Youth Risk Behavior Survey for Mat-Su and Alaska for 2015 are outlined in Table 113. Students who responded in Mat-Su (42.3%) were more likely to have a parent talk to them about their day when compared to Alaska overall (39.6%). Fewer students in Mat-Su responded feeling comfortable seeking help from other adults, volunteering, participating in community events, or feeling like they matter when compared to students across the state.

Table 113 - Youth Social Cohesion/Social Capital, 2015

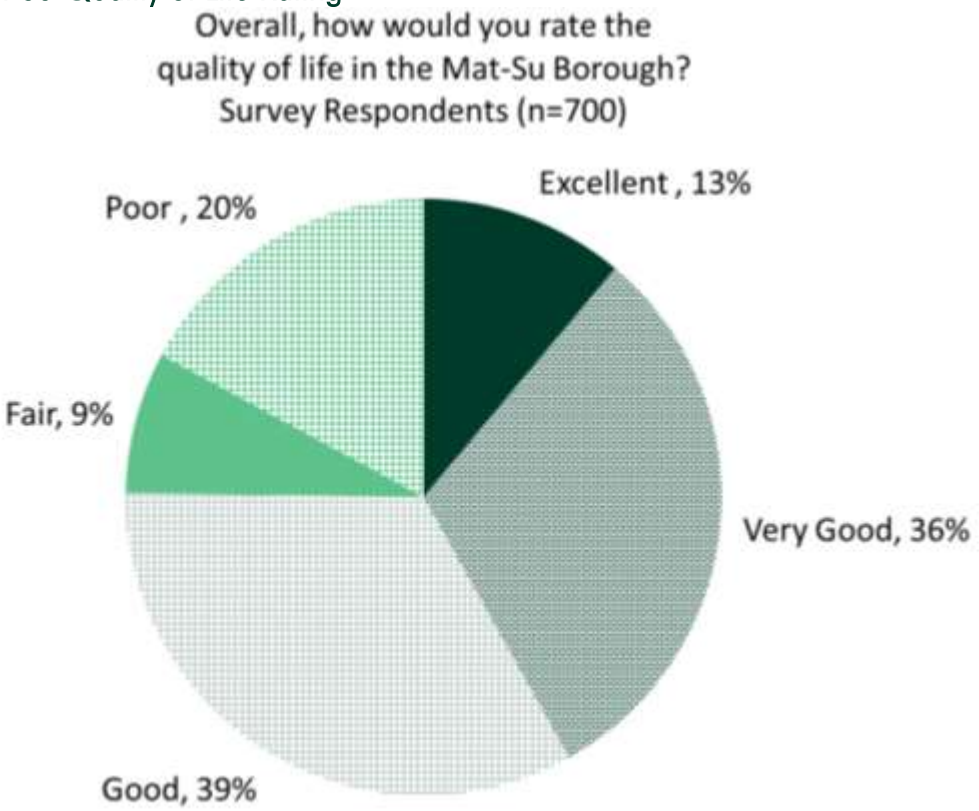
Social Cohesion/Social Capital		
	Mat-Su	Alaska
Students feel comfortable seeking help from at least one adult besides their parents if they had an important question affecting their life	84.8%	85.7%
Students who spend one or more hours helping people without getting paid, or volunteering at school or in the community during an average week	50.1%	56.6%
Students who take part in organized after school, evening, or weekend activities on one or more days during an average week	50.0%	54.9%
Students who agree or strongly agree that in their community they feel like they matter to people	48.5%	52.7%
Students who had a least one parent who talked with them about what they were doing in school every day	42.3%	39.6%

Source: Youth Risk Behavior Survey, 2015

Quality of Life

As illustrated in **Figure 91**, almost half (49%) of the 2016 Household Survey respondents rated the quality of life of the Mat-Su Borough as Excellent (13%) or Very Good (36%).

Figure 91 - Mat-Su Quality of Life Rating



Source: Mat-Su Household Survey - McDowell Group, 2016

Ratings of quality of life by age group from the 2016 Household Survey are outlined in **Table 114** as statistically significant differences were observed by age. Respondents under age 35 were more likely not to rate the quality of life of the Mat-Su Borough as excellent (8% vs. 13%) while those age 35-49 were more likely to rate the quality of life as fair (12% vs. 9%). Those age 50-64 were more likely to rate the quality of life as good (43% vs. 39% overall) and those age 65+ were more likely to rate the quality of life in the Mat-Su Borough as excellent (20% vs. 13%).

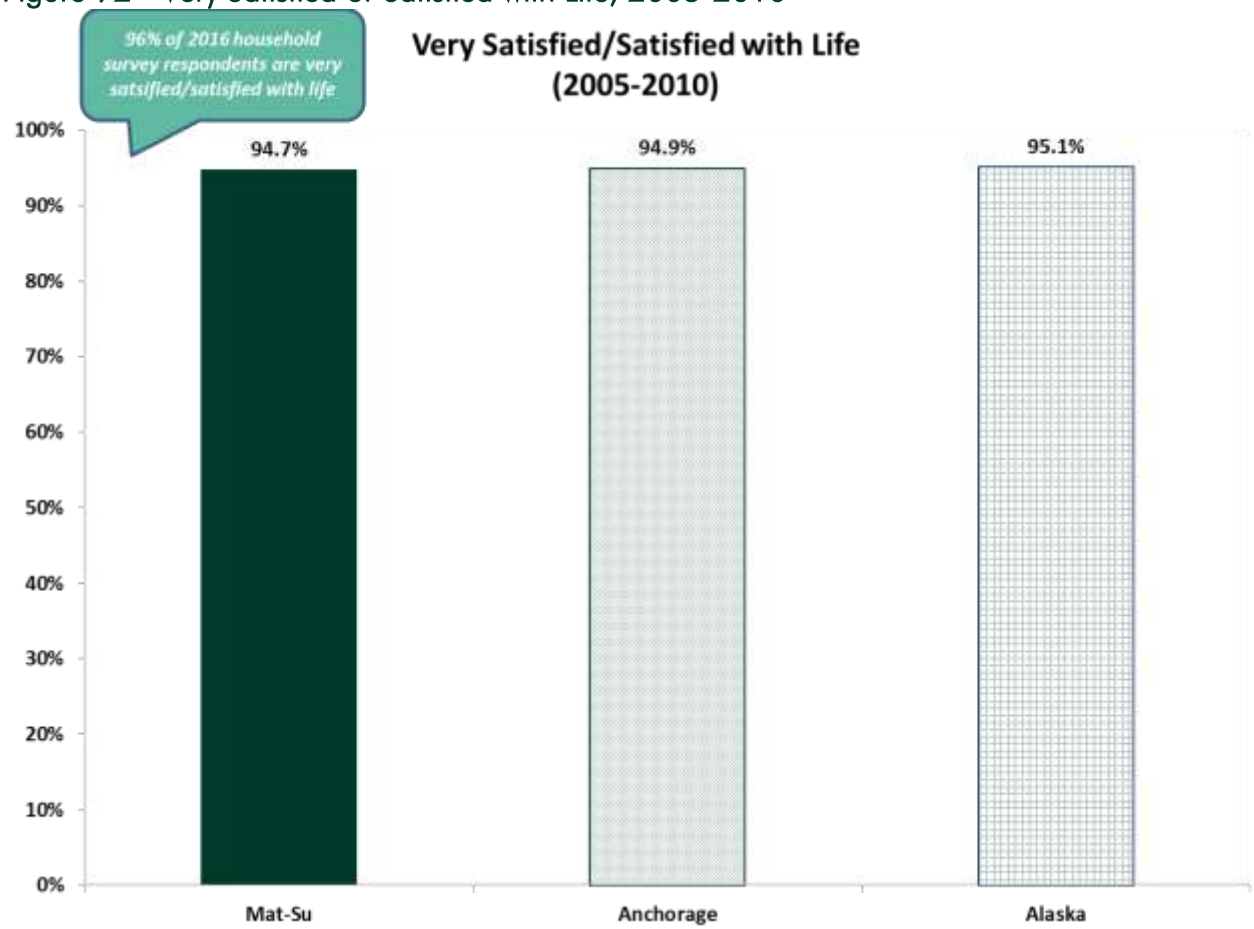
Table 114- Quality of Life Rating by Age Group Table

	Total	<35	35-49	50-64	65+
Excellent	13%	8%	14%	15%	20%
Very Good	36%	38%	34%	34%	39%
Good	39%	40%	38%	43%	32%
Fair	9%	11%	12%	5%	4%
Poor	2%	2%	1%	1%	1%
Don't Know	1%	1%	1%	2%	4%

Source: Mat-Su Household Survey - McDowell Group, 2016

According to the Alaska Behavioral Risk Factor Surveillance System data, Figure 92 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who self-reported being very satisfied or satisfied with their life. The majority of respondents in Mat-Su (94.7%), Anchorage (94.9%) and Alaksa (95.1%) reported that they are satisifed with their life. A similiar percentage of household survey respondents (96.0%) reported they were very satisfied/satisfied with their life.

Figure 92 - Very Satisfied or Satisfied with Life, 2005-2010



Source: Alaska Behavioral Risk Factor Surveillance System Data

Also from the Alaska Behavioral Risk Factor Surveillance System data, **Table 115** shows the comparison for the combined years of 2010-2014 for Mat-Su compared to Anchorage, Alaska, the United States and Healthy People 2020, where data is available. The table indicates where indicators are at least 1.0 higher (🡅), 1.0 lower (🡇) or about the same (🡄🡆).

Over the past four years, the percentage of Mat-Su respondents who self-reported being at a healthy weight has decreased, as has the percentage of respondents who reported that they are very comfortable asking neighbors for help.

Table 115 - Factors That Impact Health Where We Play, Mat-Su Trends, 2010-2014

FACTORS THAT IMPACT HEALTH WHERE WE PLAY	
Indicator	Mat-Su
Healthy Weight	
Residents at a healthy weight (2010-2014)	🡇
Social Cohesion/Social Capital	
Very comfortable asking neighbors for help (2010-2014)	🡇

Source: Alaska Behavioral Risk Factor Surveillance System Data

The comparison for the combined years of 2010-2014 for Mat-Su compared to Anchorage, Alaska, the United States and Healthy People 2020, where data is available is outlined in Table 116. The data is marked where indicators are at least 1.0 higher (↑), 1.0 lower (↓) or about the same (↔).

Mat-Su has higher voter turnout compared to Alaska and the United States. Mat-Su respondents reported they are less likely to be at a healthy weight when compared to Anchorage, Alaska and the Healthy People 2020 Goal.

Table 116 - Factors That Impact Health Where We Play, Comparison 2010-2014

FACTORS THAT IMPACT HEALTH WHERE WE PLAY				
Indicator	Mat-Su compared to Anchorage	Mat-Su compared to Alaska	Mat-Su compared to U.S.	Mat-Su compared to HP 2020
Healthy Weight				
Residents at a healthy weight (2010-2014)	↓	↓		↓
Civic Involvement				
Voter turnout (2012)		↑	↑	
Social Cohesion/Social Capital				
Students feel comfortable seeking help from at least one adult besides their parents if they had an important question affecting their life (2015)		↔		
Students who spend one or more hours helping people without getting paid, or volunteering at school or in the community during an average week (2015)		↓		
Students who take part in organized after school, evening, or weekend activities on one or more days during an average week (2015)		↓		
Students who agree or strongly agree that in their community they feel like they matter to people (2015)		↓		
Students who had at least one parent who talked with them about what they were doing in school every day (2015)		↑		

Source: Alaska Behavioral Risk Factor Surveillance System Data, Healthy People 2020

According to data from the Alaska Behavioral Risk Factor Surveillance System, Table 117 shows the comparison for the combined years of 2010-2014 for Mat-Su compared to Anchorage, Alaska, the United States and Healthy People 2020, where data is available. The table denotes where indicators are at least 1.0 higher (↑), 1.0 lower (↓) or about the same (↔).

Mat-Su self-reported that they have a higher voter turnout compared to Alaska and the United States. Mat-Su respondents are less likely to be at a healthy weight when compared to Anchorage, Alaska and the Healthy People 2020 Goal.

Table 117 - Factors That Impact Health Where We Play, Comparison 2010-2014

FACTORS THAT IMPACT HEALTH WHERE WE PLAY	
Indicator	Mat-Su compared to Alaska
Healthy Weight	
Residents at a healthy weight (2010-2014)	↓
Civic Involvement	
Voter turnout (2012)	↑
Social Cohesion/Social Capital	
Students feel comfortable seeking help from at least one adult besides their parents if they had an important question affecting their life (2015)	↔
Students who spend one or more hours helping people without getting paid, or volunteering at school or in the community during an average week (2015)	↓
Students who take part in organized after school, evening, or weekend activities on one or more days during an average week (2015)	↓
Students who agree or strongly agree that in their community they feel like they matter to people (2015)	↓
Students who had at least one parent who talked with them about what they were doing in school every day (2015)	↑

Source: Alaska Behavioral Risk Factor Surveillance System Data, 2010-2014

How Where We Play Impacts Health: Community Input

Many focus group and interview participants identified access to nature as a factor that impacts health. While the Mat-Su region has much natural beauty and opportunities for outdoor recreation and access to nature, participants indicated that transportation is often required to take advantage of trails and other natural resources in the area. Additionally, financial resources are sometimes required to take advantage of the recreational opportunities. Participants noted, however, that individuals who are able to enjoy those resources have healthier lives.

> *"Peer to peer support (is needed). There is nothing more valuable than the therapeutic value of someone being able to relate – someone that has been through it and can share their experience is very important. We are one of only a few states that doesn't recognize peer to peer support."*
>
> – My House Teen

Almost every focus group and stakeholder interview discussed the need for social capital or a feeling of "connectedness" in the community. Community connectedness was identified as both a factor that impacts health, as well as an element of the vision of a healthy community. Many people commented about the isolation that exists in the community. There is a yearning for an increased sense of community in the region so that people would be better supported and be better equipped to address their needs. There is also a need to implement peer support programs in the community.

> *"The way behavioral health engages in the community needs to change. Not completely away from a traditional model, but in some ways, away from it. We are trying to think creatively about that; partnering with the schools to see how we can do that; how can we connect seniors and*

Another aspect of connectedness that is needed in the community is to create inter-generational support networks.

Community engagement and creating a sense of community was suggested by many of the focus group and interview participants as a key goal for the future and an integral part of the vision of the ideal healthy community.

Safe routes to school and safe playgrounds for kids were identified as needs in the region. Many schools are not in locations that are "walkable" even from nearby homes. There is also a perception that many of the community parks are not safe today, because of the needles and other debris that is littered there. Children who do not have access to adequate physical activity tend to be overweight, and this leads to increased health problems later in life.

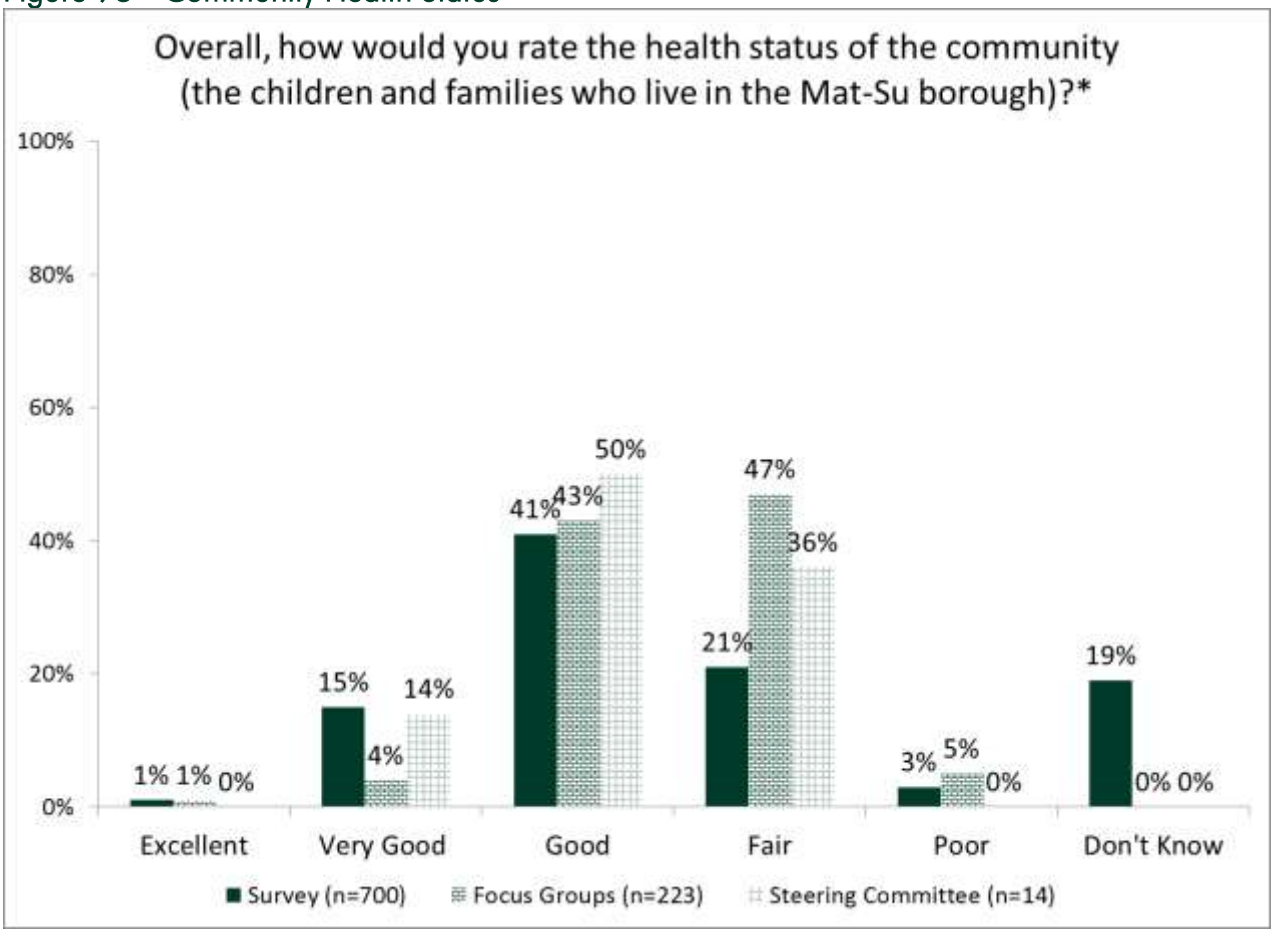
"A healthy community is where any person can look around them and see a face of support and not feel that there is a stigma associated with needing a helping hand. And giving a helping hand is part of what you do all the time."

-Talkeetna Resident

Community Health Status

Participants of the Household Survey, Focus Groups and Steering Committee were asked to rate the health status of the Mat-Su Borough. As illustrated in **Figure 93**, when asked to rate the health status of the community, the majority of focus group participant survey respondents (54%) and Steering Committee members (64%) indicated Very Good or Good. Household Survey respondents were slightly more likely to rate their personal health as Very Good or Good (66%) than they are the health of the community overall. One in five survey respondents indicated that they "don't know" enough to rate. Focus group survey participants were more likely to rate the health status of the community as Fair (47%).

Figure 93 - Community Health Status



Source: Mat-Su Focus Groups, Strategy Solutions, Inc. 2016; Mat-Su CHNA Steering Committee, 2016; Mat-Su Household Survey, McDowell Group, 2016

*Household Survey respondents were given a "don't know" response option.

Respondents under age 35 were more likely than average to rate the health status of the community as Fair (26% vs. 21%), while those age 35-49 were more likely than average to rate the health status as Good (46% vs. 41%). Older persons (over age 65) were more likely than average to rate the health status of the community Very Good (18% vs. 15%) or Excellent (3% vs. 1%).

During the discussion, focus group participants had the opportunity to rate the health status of children and families in Mat-Su. Table 118 shows the results from focus group participants by subgroup. Just under half (49%) of the focus group participants rated the health of children and families in Mat-Su as Fair or Poor. Child providers and youth rated the health status worse than other subgroups with 61% providing a Fair or Poor rating. Tribal focus group participants provided the most positive rating of the health status of children and families in Mat-Su with 37% offering an Excellent or Very Good rating.

Table 118 - Health Status of Children and Families in Mat-Su By Focus Group Type

Overall, how would you rate the health status of children and families in Mat-Su?					
	Excellent	Very Good	Good	Fair	Poor
Overall (N=249)	1%	6%	43%	43%	6%
Child Providers/Youth (N=68)	0%	3%	36%	51%	10%
Providers (N=37)	0%	3%	49%	46%	3%
Tribal (N=19)	5%	32%	53%	5%	5%
Community Residents (N=133)	3%	9%	49%	36%	4%
Seniors (N=65)	6%	17%	50%	21%	6%
Rural (N=51)	2%	17%	46%	30%	4%
Sunshine CHNA (N=17)	0%	6%	35%	59%	0%

Source: Mat-Su Focus Groups, Strategy Solutions, Inc., 2016

Community Health Status: Community Input

Due to time constraints and logistics, only about half of the focus group participants and stakeholder interview participants were asked to rate the health status of the community. About half of the participants rated the health status of the community as Good, Very Good or Excellent. When asked why they gave the rating they did, participants cited that there are many people in the community who are healthy, active and involved and can afford to get what they need. The community is perceived as fairly wealthy, with good hiking and walking trails available and healthy food that people can access (when they can afford it). There are good schools in the region and the government entities work hard to ensure that the community has the services it needs. Health care services are available and there is a strong sense of community here in the region.

On the other hand, a little over half of the voting participants rated the health status of the community as Fair or Poor. Reasons for the lower ratings most often included broken families, unhealthy family life and trauma, drugs and substance abuse, homelessness, mental health/ depression, and domestic violence. Also mentioned were food access and/or quality is not good, there is not enough physical activity, poor sexual habits, there are sick kids in the region, immunization rates are low and sexually transmitted diseases are high. Some also noted that the region is large and diverse and that the region suffers from intergenerational incarceration and crime rates.

Focus group participants were asked to rate the percentage of residents with the minimum baseline of factors to make healthy decisions **Table 119** shows the results from focus group participants by subgroup. Half (51%) of the overall participants indicated that 26%-50% of residents have the minimum baseline factors to make healthy decisions. Tribal participants tended to think that residents had 51% or more (62%) of the baseline factors, while providers thought residents had 50% or less (83%).

Table 119 - Mat-Su Residents Have Minimum Factors to Make Healthy Decisions, By Focus Group Type

What percentage of residents of Mat-Su have a minimum baseline of all factors we mentioned that allow them to make healthy decisions?				
	Less than 25%	26-50%	51-75%	More than 75%
Overall (N=249)	12%	51%	32%	5%
Child Providers/Youth (N=68)	14%	50%	30%	6%
Providers (N=37)	14%	69%	17%	0%
Tribal (N=19)	14%	24%	57%	5%
Community Residents (N=133)	8%	48%	38%	6%
Seniors (N=65)	11%	43%	45%	2%
Rural (N=51)	8%	41%	45%	6%
Sunshine CHNA (N=17)	0%	65%	29%	6%
Government (N=0)	N/A	N/A	N/A	N/A

Source: Mat-Su Focus Groups, Strategy Solutions, Inc., 2016

Population with Minimum Factors to Make Healthy Decisions: Community Input

When asked to identify the percentage of the population of the region that has the minimum factors to make healthy decisions, a variety of answers were given that differed by group. Participants struggled with answering this question, and many people commented out loud that they were trying to figure out/remember the percentage of people who lived in poverty or had some barrier to accessing care. Participants most often explained their answers by stating that they estimated the percentage of people in the region that was disadvantaged or experienced some type of barrier to making heathy decisions. Specific answers that were offered included the factors that impact health and the barriers to access that had already been discussed.

Mat-Su is Currently a Healthy Community

Focus group participants were asked to agree with the statement, "Mat-Su is currently a healthy community." Table 120 shows the results from focus group participants by subgroup. Slightly less than half (43%) of the participants who answered this question disagree that Mat-Su is a healthy community. Tribal participants (57%) were more likely to agree that Mat-Su is a healthy community, while child providers and youth (62%) tended to disagree.

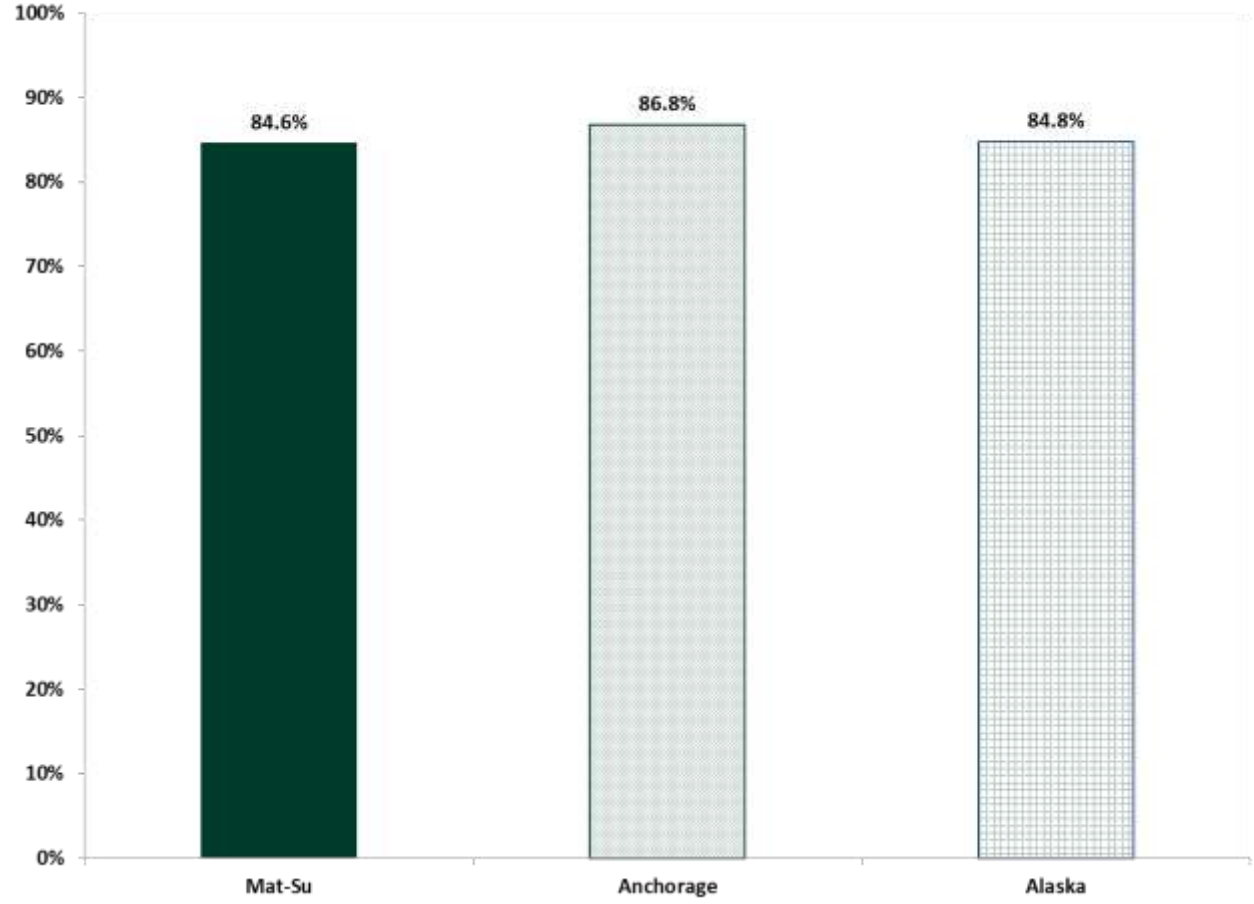
Table 120 - Mat-Su Is a Healthy Community, By Focus Group Type

Mat-Su is currently a "healthy community"					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Overall (N=249)	2%	20%	34%	36%	7%
Child Providers/Youth (N=68)	0%	11%	27%	45%	17%
Providers (N=37)	0%	14%	36%	44%	6%
Tribal (N=19)	5%	52%	24%	19%	0%
Community Residents (N=133)	4%	28%	38%	27%	3%
Seniors (N=65)	7%	35%	41%	17%	0%
Rural (N=51)	0%	31%	39%	29%	0%
Sunshine CHNA (N=17)	0%	6%	41%	53%	0%
Government (N=0)	N/A	N/A	N/A	N/A	N/A

Source: Mat-Su Focus Groups, Strategy Solutions, Inc., 2016

Based on the data from the Alaska Behavioral Risk Factor Surveillance Survey, **Figure 94** illustrates the percentage of residents who self-reported their health as Excellent, Very Good or Good in Mat-Su, Anchorage and Alaska during the combined years 2010-2014. A statistically significant difference was observed for residents who self-report they are healthy. Mat-Su respondents (84.6%) were slightly less likely to report their health as Excellent, Very Good or Good, when compared to Anchorage (86.8%). The percentage of respondents in Mat-Su who report they are healthy is comparable to the state (84.8%).

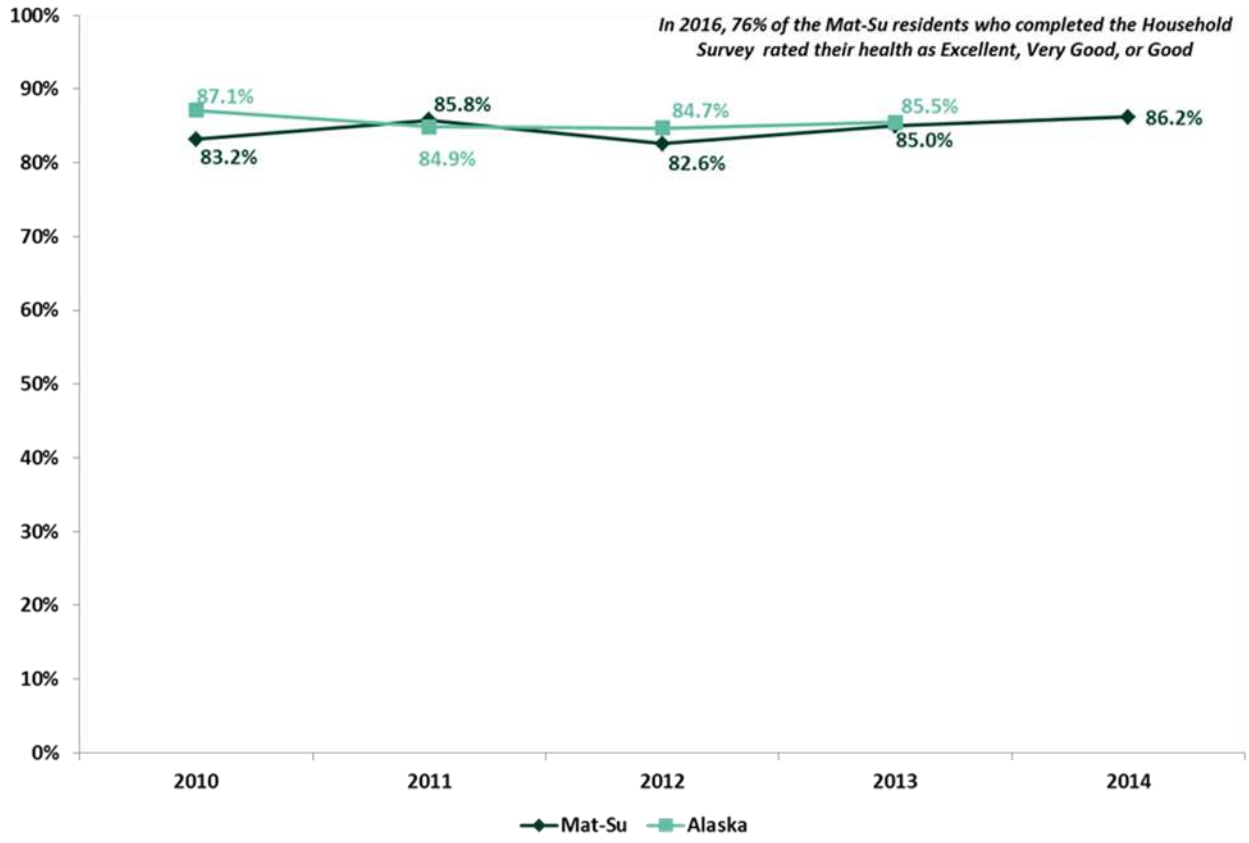
Figure 94 - Residents Who Report They are Healthy, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

Also found in the Alaska Behavioral Risk Factor Surveillance data, **Figure 95** illustrates the percentage of respondents in Mat-Su and Alaska who self-reported that they consider themselves healthy during 2010 through 2014. The percentage of respondents in Mat-Su who report their health as Excellent, Very Good or Good increased from 82.6% in 2012 to 86.2% in 2014. When compared to Alaska in 2013 (85.5%), Mat-Su had a comparable percentage of respondents who reported their health as Excellent, Very Good or Good (85.0%). In 2016, 76.0% of the respondents who completed the household survey rated their health as Excellent, Very Good or Good.

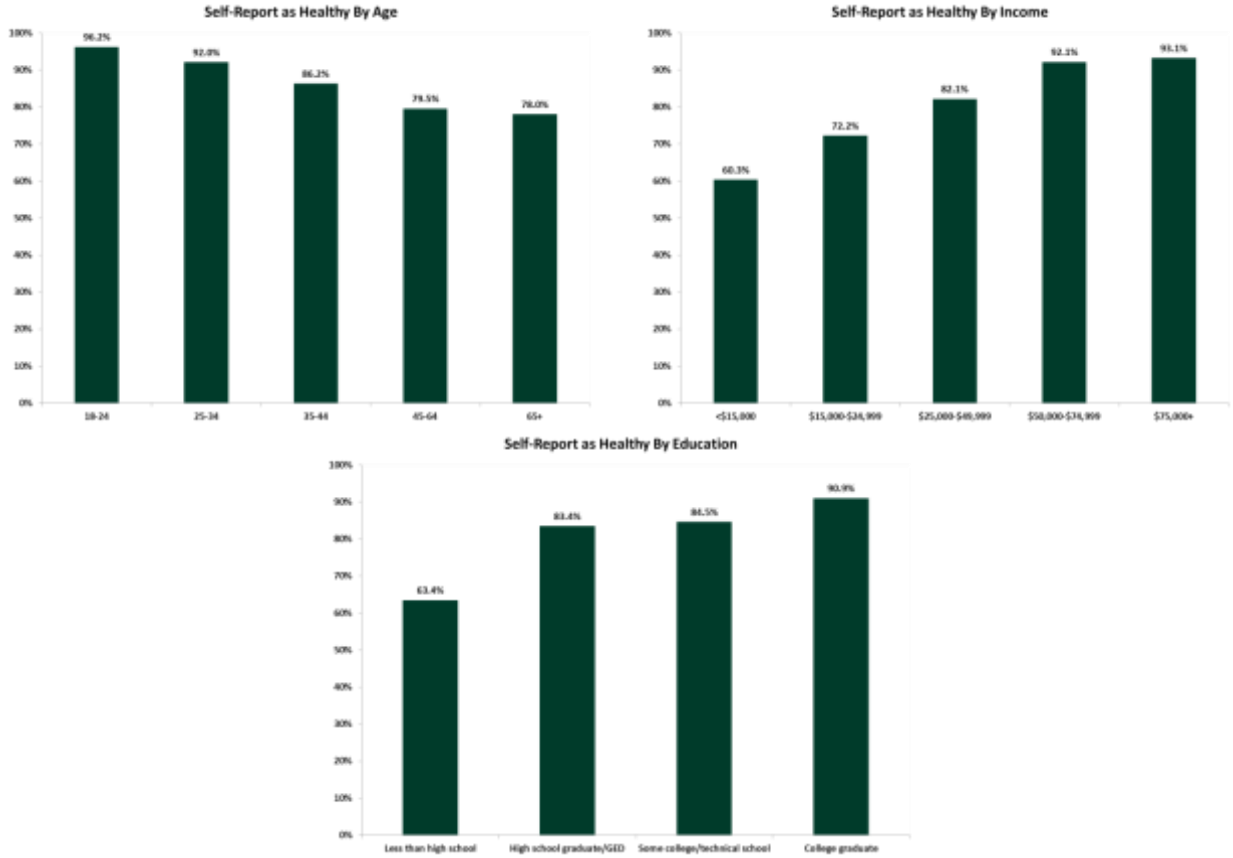
Figure 95 - Residents Who Report They are Healthy, Trend 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System data, **Figure 96** illustrates the demographic variables where a statistically significant difference was observed for respondents who self-report they are healthy. The data shown is for the combined years of 2010-2014. Mat-Su respondents are less healthy as they age, with younger residents having a higher percentage reporting their health as Excellent, Very Good or Good than the older residents. As residents' income level and education increase so does their health; residents whose income is $75,000 a year or college graduates are more likely to report their health as Excellent, Very Good or Good.

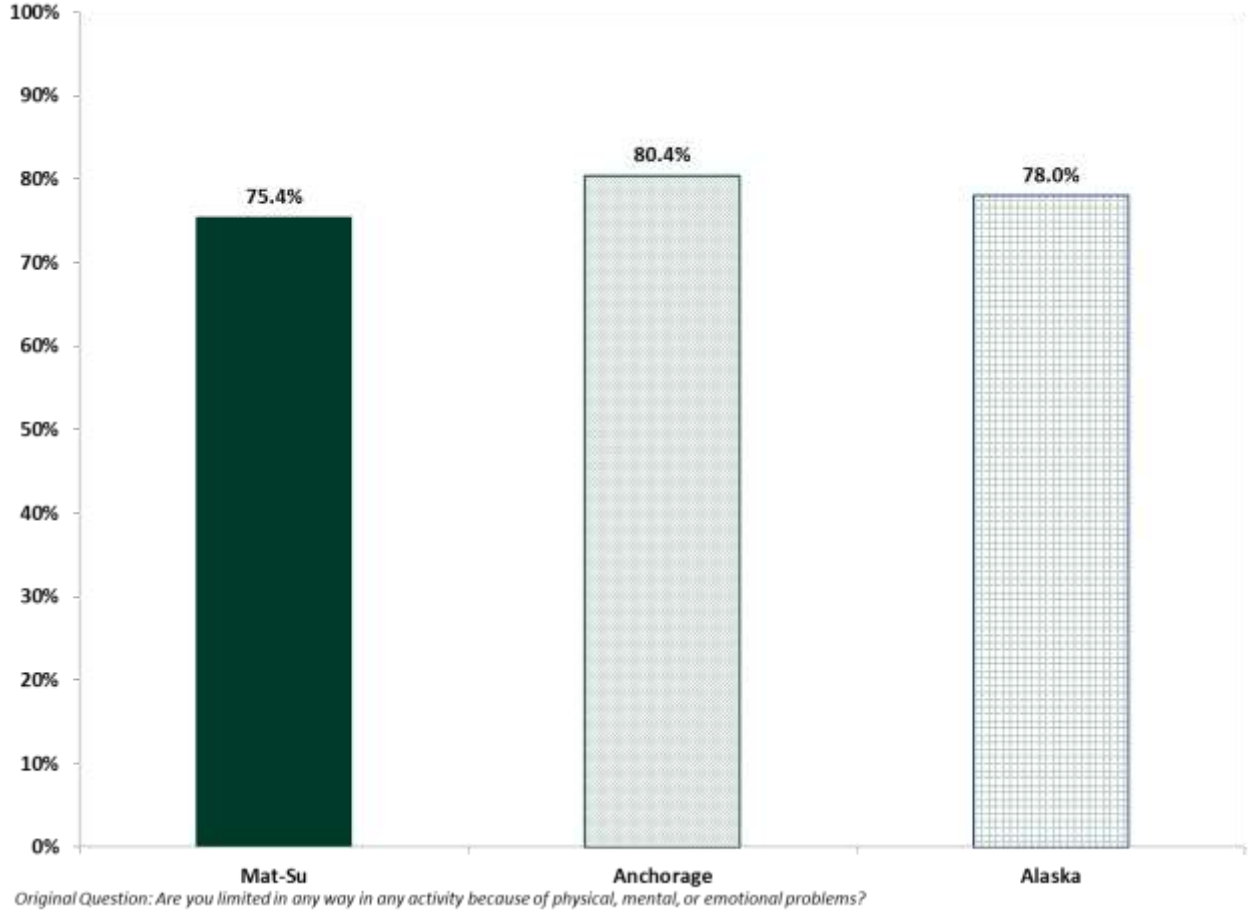
Figure 96 - Residents Who Report They are Healthy, Significant Differences, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

The percentage of respondents in Mat-Su, Anchorage and Alaska who reported no physical, mental, or emotional limitations in the combined years of 2010-2014 from the Alaska Behavioral Risk Factor Surveillance System is outlined in Figure 97. Statistically significant differences were observed for respondents who self-report no physical, mental, or emotional limitations. Anchorage (80.4%) respondents were more likely to report no physical, mental, or emotional limitations compared to respondents in Alaska (78.0%) and Mat-Su (75.4%).

Figure 97 – Report no Physical, Mental, or Emotional Limitations, 2010-2014, Combined

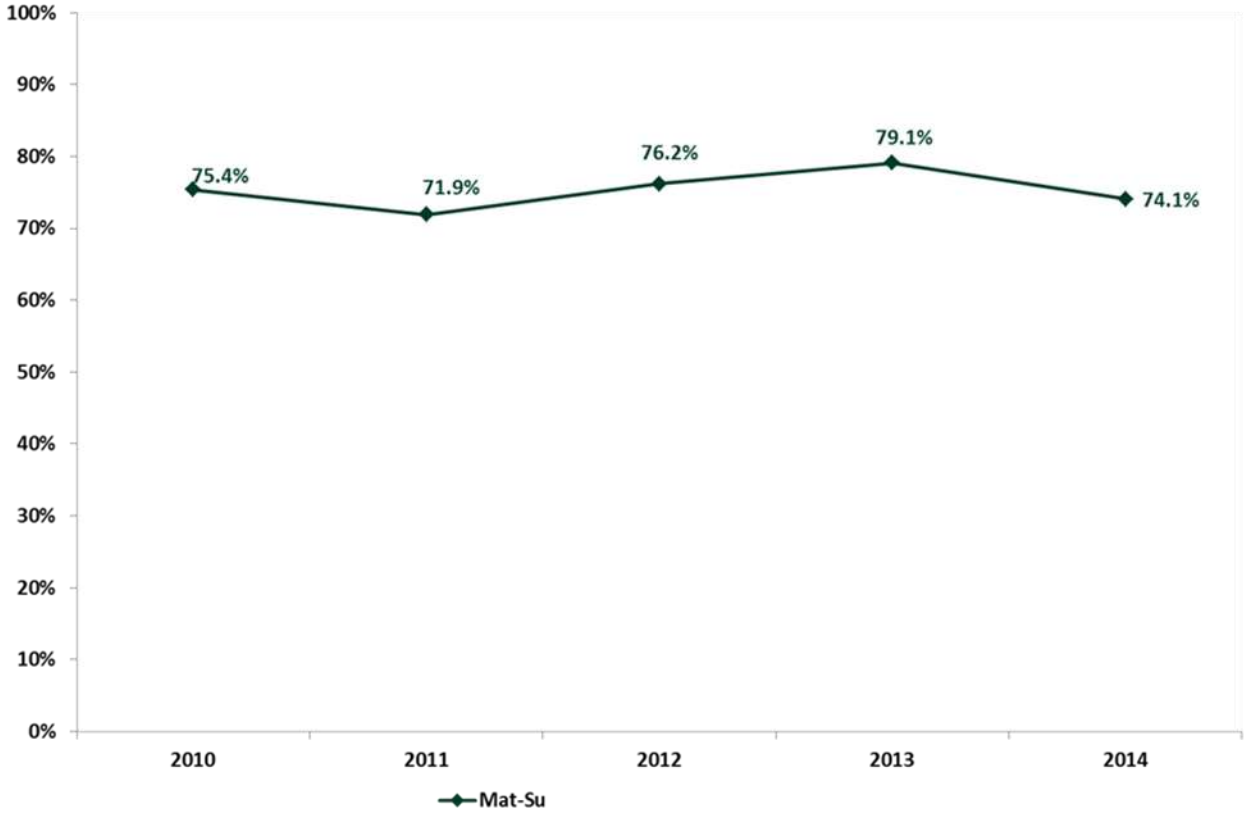


Original Question: Are you limited in any way in any activity because of physical, mental, or emotional problems?

Source: Alaska Behavioral Risk Factor Surveillance System Data

From the Alaska Behavioral Risk Factor Surveillance System data, Figure 98 illustrates the five-year trend (2010-2014) for the percentage of respondents in Mat-Su who reported no physical, mental, or emotional limitations. The percentage of respondents limited in some way has fluctuated over the past five years but in most recent years is decreasing.

Figure 98 - Residents Report no Physical, Mental, or Emotional Limitations, Trend 2010-2014

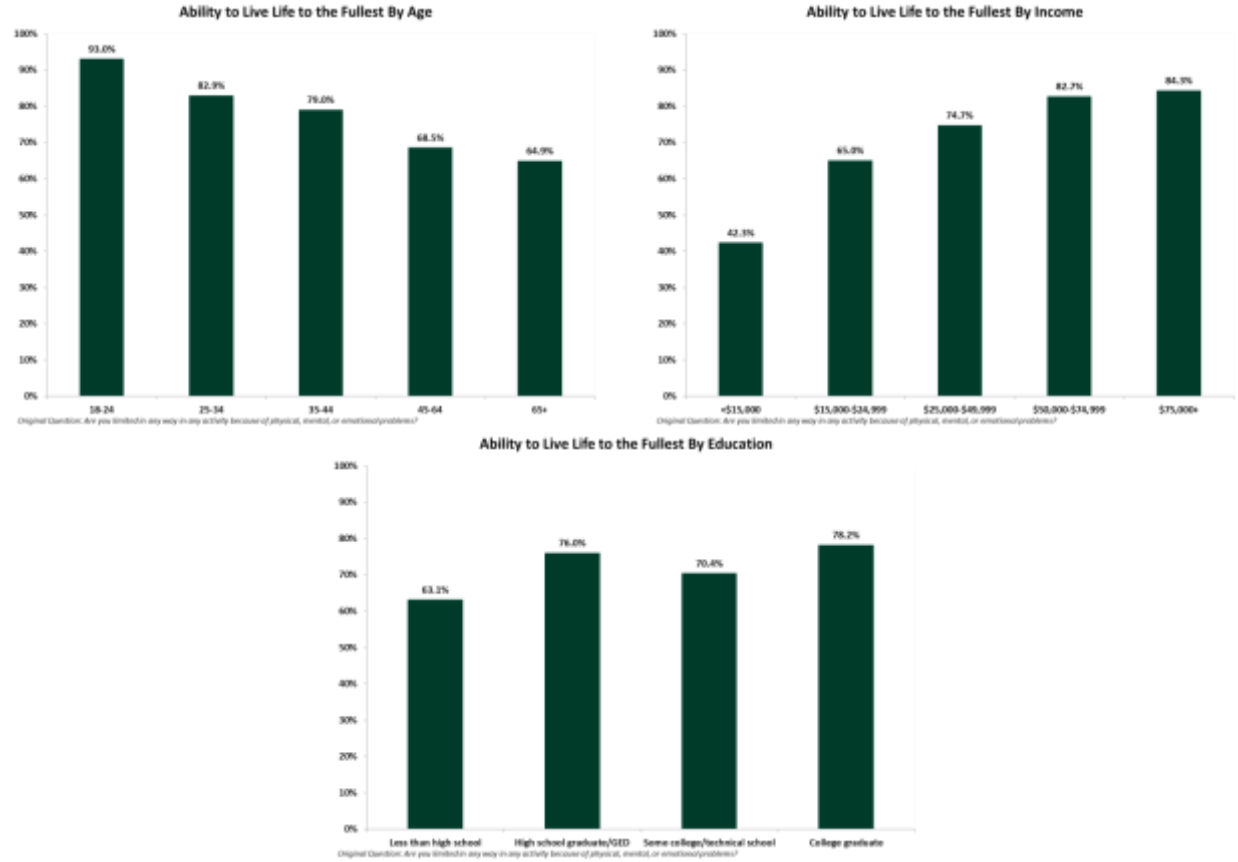


Original Question: Are you limited in any way in any activity because of physical, mental, or emotional problems?

Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System, **Figure 99** illustrates the demographic factors where a statistically significant difference was observed for respondents who reported no physical, mental, or emotional limitations for 2010-2014. Respondents who are older, live below the poverty level or did not graduate high school are more likely to be limited due to physical, mental or emotional problems when compared to others.

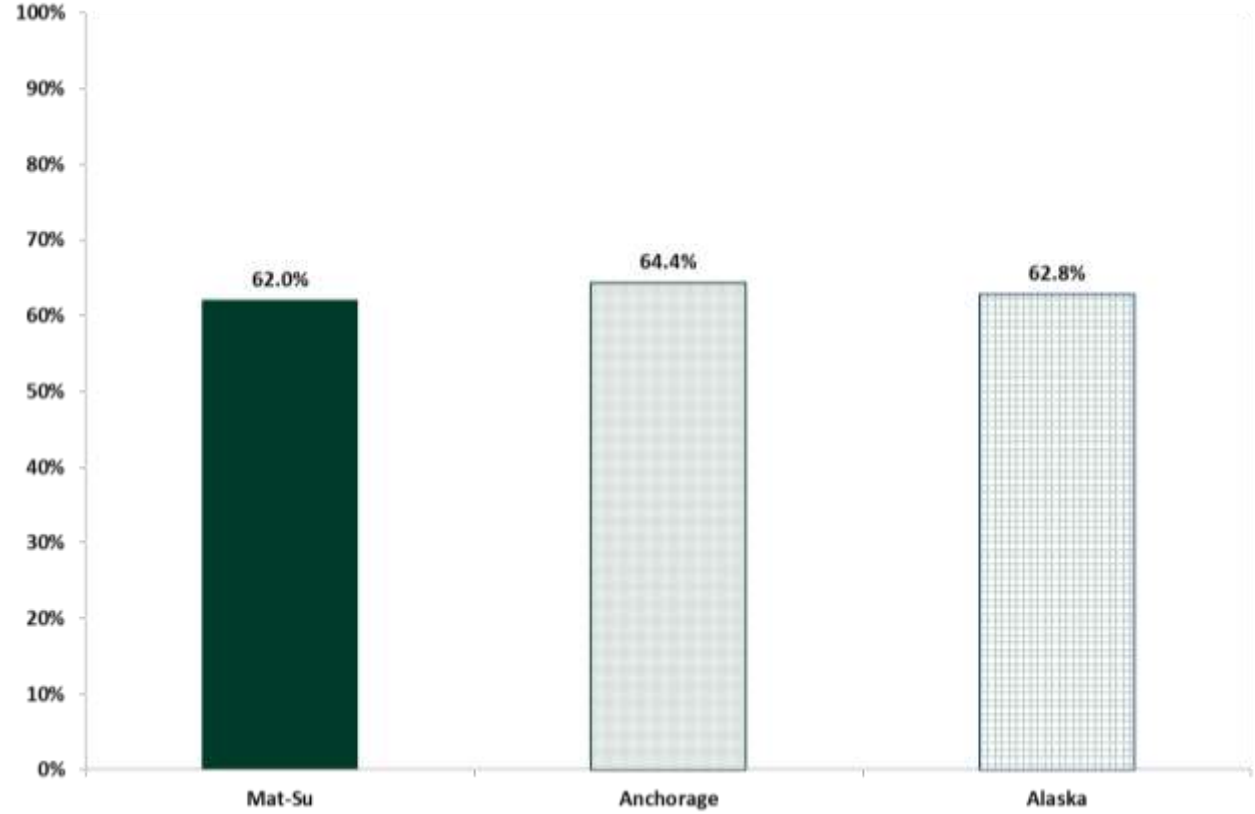
Figure 99 - Residents Reported no Physical, Mental, or Emotional Limitations, 2010-2014, Significant Differences



Source: Alaska Behavioral Risk Factor Surveillance System Data

From the Alaska Behavioral Risk Factor Surveillance System data, Figure 100 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who reported in the Behavioral Risk Factor Surveillance System being in good physical health in the combined years of 2010-2014. Mat-Su respondents (62.0%) were slightly less physically healthy when compared to residents in Anchorage (64.4%), but are comparable to the state (62.8%).

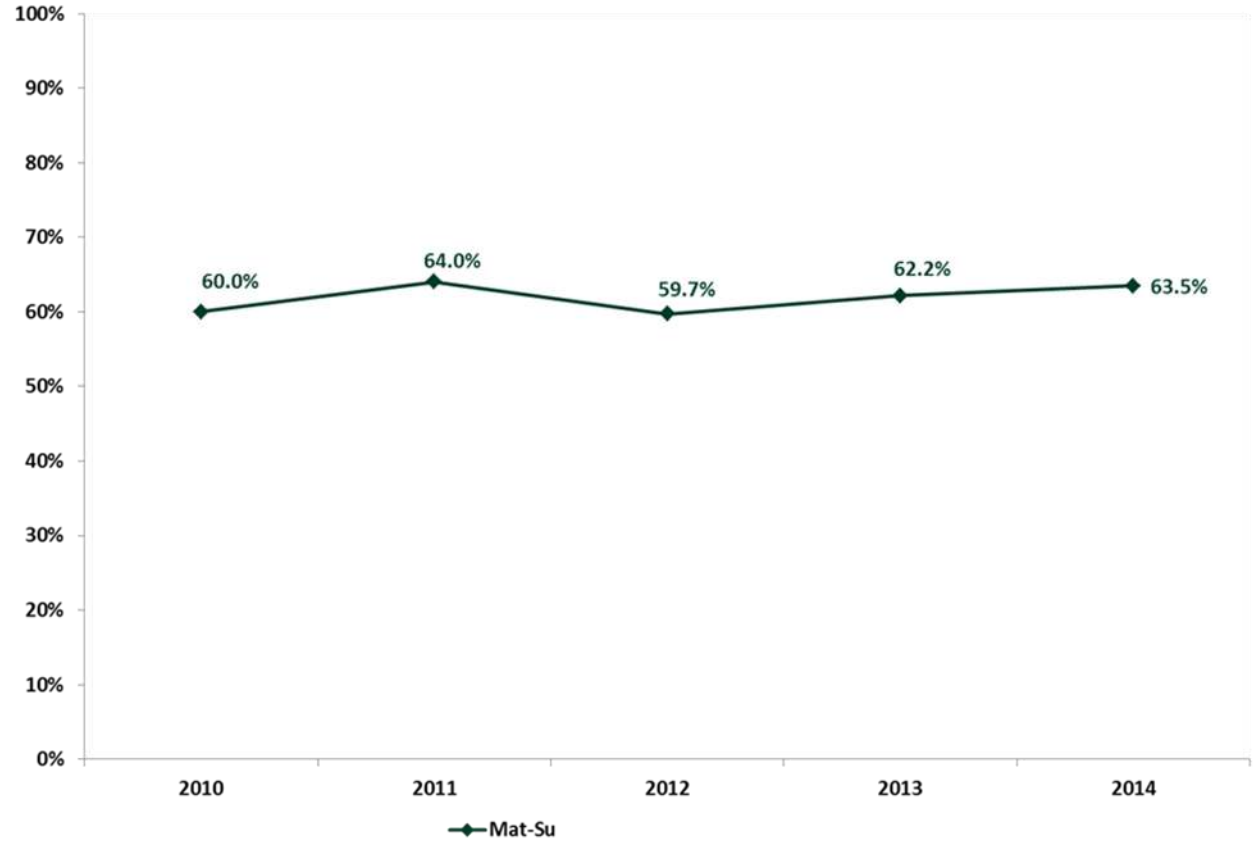
Figure 100 - Residents Are Physically Healthy



Source: Alaska Behavioral Risk Factor Surveillance System Data

From the Alaska Behavioral Risk Factor Surveillance System data, Figure 101 illustrates the five-year trend (2010-2014) for the percentage of respondents in Mat-Su who reported being physically healthy. The percentage of respondents who are physically healthy has been increasing in recent years.

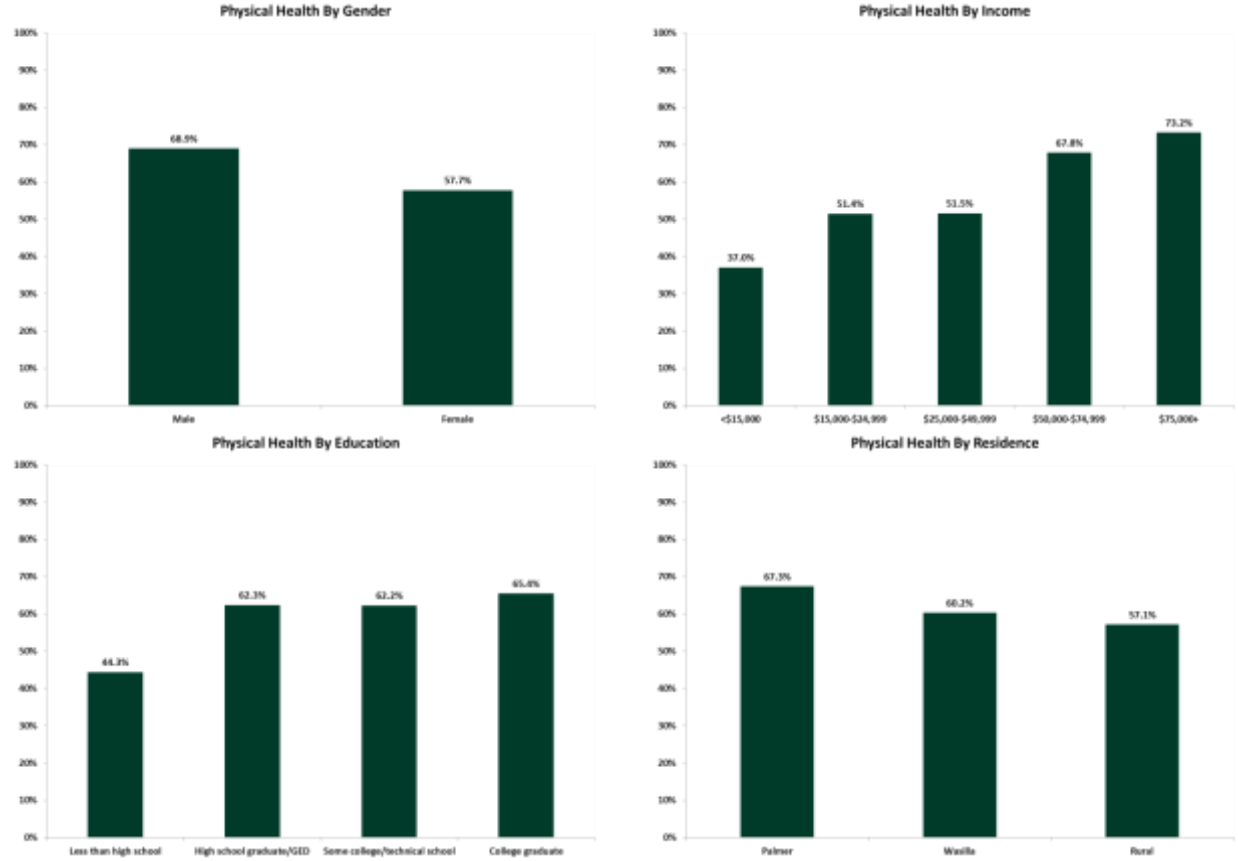
Figure 101 - Residents Are Physically Healthy, Trend 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

From the Alaska Behavioral Risk Factor Surveillance System data, Figure 102 illustrates the demographic variables where a statistically significant difference was observed for residents who self-report to be physically healthy. Females, those with incomes less than $15,000, those who did not graduate high school and those who live in a rural community are less likely to be physically healthy compared to other respondents.

Figure 102 - Residents Are Physically Healthy, Significant Differences



Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System data, **Table 121** shows the comparison for the combined years of 2010-2014 for Mat-Su compared to Anchorage, Alaska, and Healthy People 2020, where data is available. The table indicates where indicators are at least 1.0 higher (↑), 1.0 lower (↓) or about the same (↔).

For several of the indicators, the Mat-Su region does not compare favorably to either Anchorage or the state overall, including reporting no physical, mental, or emotional limitations and ever having been told they have a depressive disorder. For other indicators, such as making a suicide plan, suicide attempts, and suicidal thoughts in the past 30 days, Mat-Su fares better when compared to Anchorage or Alaska overall.

Table 121 - Health Status Impacts of Various Conditions, Comparison 2010-2014

HEALTH STATUS IMPACT			
Indicator	Mat-Su compared to Anchorage	Mat-Su compared to Alaska	Mat-Su compared to HP 2020
Personal Health Status			
Reporting no physical, mental, or emotional limitations (2010-2014)	↓	↓	
Physically healthy (2010-2014)	↓	↔	
Childhood Illness			
Children get vaccine shots or immunizations (mother of 3-year olds) (2012-2014)		↓	
Mental Health			
Make suicide plan, past 12 months (2010 & 2013)	↓	↓	
Suicide attempts, past 12 months (2010, 2011, 2013)	↓	↓	
Suicidal thoughts, at least 1 day in past 30 days (2010 & 2013)	↓	↓	
Suicidal thoughts, past 12 months (2010, 2011, 2013)	↓	↔	
Ever told have depressive disorder (2010-2014)	↑	↑	
Suicide mortality, rate per 100,000 (2010-2014)		↓	↑
Reports no poor mental health days in last month (2010-2014)	↑	↓	
Life Expectancy			
Life expectancy (years) (2011-2015)	↔	↔	
Perinatal Care			
Infant mortality (Rate per 1,000) (2011-2015)	↓	↓	↓
Babies born full gestation (2011-2015)		↔	
Healthy birthweight babies (2011-2015)		↔	↓

Table 121 - Health Status Impacts of Various Conditions, Comparison 2010-2014 - Continued

HEALTH STATUS IMPACT			
Indicator	Mat-Su compared to Anchorage	Mat-Su compared to Alaska	Mat-Su compared to HP 2020
Diabetes			
Ever told by doctor/health provider have diabetes (2010-2014)	↔	↑	
Diabetes mortality, rate per 100,000 (2011-2015)		↑	↓
Cardiovascular			
High blood pressure (2009, 2011, 2013, 2014)	↔	↔	↑
Cerebrovascular mortality, rate per 100,000 (2011-2015)		↓	↑
Heart disease mortality, rate per 100,000 (2011-2015)		↓	↑
Respiratory Illness			
Asthma (2011-2014)	↔	↑	
Childhood Asthma (2015)		↑	
COPD (2011-2014)	↑	↑	
COPD mortality, rate per 100,000 (2011-2015)		↑	
Non-smoking residents (2010-2014)	↓	↔	
Cancer			
Cancer mortality (all causes), rate per 100,000 (2011-2015)		↔	↑
Residents currently receiving cancer treatment (2010, 2012, 2014)	↑	↓	
Cancer patients that are not experiencing pain due to cancer or cancer treatment (2010, 2012, 2014)	↓	↓	
Other Conditions			
Arthritis (2010-2014)	↑	↑	
Alzheimer's mortality, rate per 100,00 (2011-2015)		↑	
Liver disease mortality, rate per 100,000 (2011-2015)		↔	↑
Influenza and pneumonia mortality, rate per 100,000 (2011-2015)		↔	

Source: Alaska Behavioral Risk Factor Surveillance System Data, Healthy People 2020

Table 122 shows the comparison for the combined years of 2010-2014 for Mat-Su/ Anchorage Region compared to Alaska and the United States, where data is available. The table indicates where indicators are at least 1.0 higher (🡅), 1.0 lower (🡇) or about the same (🡄🡆).

The Mat-Su/Anchorage region has a lower chlamydia rate compared to the state, but higher when compared to the nation.

Table 122 - Chlamydia Rate, Comparison 2010-2014

HEALTH STATUS IMPACT		
Indicator	Mat-Su/Anchorage Region compared to Alaska	Mat-Su/Anchorage Region compared to the U.S.
Infectious Disease		
Chlamydia Rate, per 100,000 (2013-2014)	🡇	🡅

Source: DHSS-Alaska Center for Health Data and Statistics

Health status indicators from the Alaska Behavioral Risk Factor Surveillance System data are outlined in **Table 123** and show the trend for the years of 2010-2014 for Mat-Su and Alaska. The table indicates where the trend for the indicators are at least 1.0 higher (↑), 1.0 lower (↓) or about the same (←→).

Mat-Su has a positive increasing trend for respondents who are physically healthy, have no poor mental health days in last month and do not smoke. Conversely, there is a negative increasing trend for respondents who have ever been told that they have diabetes, high blood pressure, and asthma.

Table 123 - Health Status Indicators, Trend 2010-2014

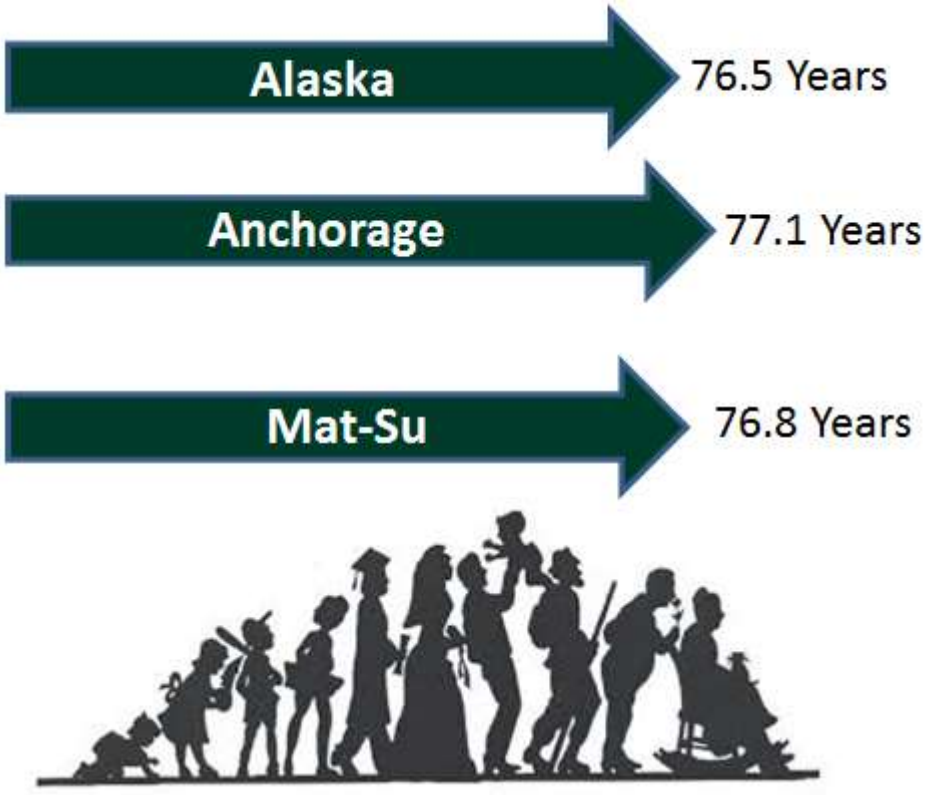
HEALTH STATUS IMPACT		
Indicator	Mat-Su	Alaska
Personal Health Status		
Reporting no physical, mental, or emotional limitations (2010-2014)	↓	
Physically healthy (2010-2014)	↑	
Mental Health		
Reports no poor mental health days in last month (2010-2014)	↑	
Diabetes (ever been told)		
Diabetes (2010-2014)	↑	↑
Cardiovascular (ever been told)		
High blood pressure (2009, 2011, 2013, 2014)	↑	↑
Respiratory Illness (ever been told)		
Asthma (2010-2014)	↑	
Non-smoking residents (2010-2014)	↑	↑
Other Conditions		
Arthritis (2011-2014) **(ever been told)**	↓	

Source: Alaska Behavioral Risk Factor Surveillance System Data

Health Status Impact: Life Expectancy

The Alaska Department of Labor and Workforce Development, Research and Analysis Section reports life expectancy data based on death certificate data. Figure 103 illustrates the life expectancy of residents in Mat-Su, Anchorage and Alaska based on population and mortality statistics for years 2011-2015. Mat-Su residents are expected to live until the age of 76.8, which is comparable to Anchorage (77.1) and the state (76.5).

Figure 103 - Life Expectancy (2011-2015)



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section. Vintage 2015, Alaska Department of Vital Statistics death certificate data

As cited in the 2015 Mat-Su Senior Services Environmental Scan, **Table 124** shows the average life expectancy for males and females in Alaska and the United States from 1970 and projected through 2040. The life expectancy for both males and females is expected to increase over the next several decades, with females expected to live longer when compared to males. Residents in Alaska are projected to live slightly longer when compared to the nation.

Table 124 - Average Life Expectancy

	Alaska		United States	
Years	Male	Female	Male	Female
1970	66.1	74.0	67.2	74.9
1980	68.8	76.5	69.9	77.5
1990	71.6	78.7	71.8	78.9
2000	74.9	79.7	74.0	79.4
2010	76.1	80.5	75.4	80.0
2020	77.3	81.7	76.5	80.8
2030	78.3	82.4	77.5	81.7
2040	79.3	83.0	78.5	82.5

Source: Mat-Su Senior Services Environmental Scan, McDowell Group, 2015

Health Status Impact: Years of Productive Life Lost

Years of Productive Life Lost (YPLL) attempts to quantify types of death which harm a population the most, in that they reduce productive years of a population (those years prior to age 65 or 75, arbitrarily defined). For example, an infant who dies results in a large contribution of productive years lost (his or her whole life), while an elderly person who dies already has his/her "productive" years behind them. Thus, YPLL is one method of quantifying which types of death are most harmful to society. If types or classes of death that result in a large YPLL can be identified, then interventions that try to reduce those types of death could, by at least this measure, be more beneficial to society than interventions aimed at mortality causes with low YPLL.

Premature death results in the potential of years of life lost that could be spent enjoying time with family and friends in recreational and social activities. In total for Mat-Su, as outlined in Table 125, there are 33,569 YPLL for those under age 75 based on the current death rates. Specifically, the following preventable causes of death accounted for significant years of lost life in Mat-Su from 2011 - 2015: intentional self-harm- suicide (2,986 years); unintentional injuries (7,076 years), cancer (malignant neoplasms, 6,967 years) and alcohol abuse (248 years).

For those with premature deaths under age 65, the highest priority areas based on overall potential years of lost life would include unintentional injuries, cancer (malignant neoplasms), suicide (intentional self-harm) and diseases of the heart. Those conditions that have the highest average years of lost life per death include perinatal and congenital conditions, suicide (intentional self-harm), hernia, cancer, and homicide. The following preventable causes of death accounted for significant years of lost life prior to age 65 years in Mat-Su from 2011 - 2015: intentional self-harm-suicide (2,152 years), unintentional injuries (4,982 years), and alcohol abuse (128 years).

Years of lost life under age 65 have an economic impact as well as a social impact. The total potential years of lost life for those under age 65 in Mat-Su is 19,058. Based on the average median income of the Borough, $30,013 equates to potential lost wages of $572,750,074.

Table 125 - Years of Productive Life Lost by Cause of Death, 2010-2015

NCHS50 Definition	YPLL per Death	YPLL <75	YPLL per death <75	YPLL <65	YPLL per Death < 65
Unintentional injuries	27.3	7076	32.6	4982	24.9
Malignant neoplasms	10.3	6967	14.3	2990	10.3
non-top 50 NCHS cause of death	10.8	5146	21.7	3123	19.9
Diseases of heart	9.2	4050	15.2	1807	10.8
Intentional self-harm (suicide)	33.9	2986	35.1	2152	26.6
Cerebrovascular diseases	8.1	902	18.8	511	18.3
Assault (homicide)	29.3	850	31.5	582	23.3
Chronic liver disease and cirrhosis	15.6	812	17.3	396	11.6
Diabetes mellitus	9.5	810	13.7	302	7.9
Certain conditions originating in the perinatal period	75.0	675	75.0	585	65.0
Chronic lower respiratory diseases (CLRD)	4.5	662	9.2	169	7.0
Viral hepatitis	18.6	372	19.6	185	10.3
Influenza and pneumonia	9.4	338	22.5	201	16.8
Congenital malformations, deformations and chromosomal abnormalities	37.5	300	42.9	233	38.8
Alcohol Abuse	19.1	248	20.7	128	10.7
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	15.3	229	32.7	161	26.8
Septicemia	14.1	225	22.5	135	16.9
Nephritis, nephrotic syndrome and nephrosis	5.8	184	15.3	70	7.8
Essential hypertension and hypertensive renal disease	9.4	151	13.7	66	13.2
Pneumonitis due to solids and liquids	8.8	140	17.5	69	13.8
Aortic aneurysm and dissection	6.7	87	14.5	36	7.2
Complications of medical and surgical care	12.8	64	16.0	36	18.0
Peptic ulcer	12.6	63	21.0	33	11.0
Hernia	16.7	50	25.0	39	39.0
Nutritional deficiencies	8.4	42	21.0	22	22.0
Cholelithiasis and other disorders of gallbladder	4.3	34	11.3	14	14.0
Infections of kidney	25.0	25	25.0	15	15.0
Parkinson's disease	1.4	22	3.7	NA	NA
Human immunodeficiency virus (HIV) disease	20.0	20	20.0	NA	NA
Atherosclerosis	5.3	16	16.0	NA	NA
Alzheimer's disease	0.2	15	3.0	NA	NA
	12.54	33,569	19.86	19,058	16.56

Source: Alaska Department of Health and Social Services, Division of Public Health

Top Factors Affecting Health

The focus group and stakeholder interview participants were asked to identify the top factors affecting health. Due to the variation in the way the groups and interviews were structured, as well as the fact that not everyone had the opportunity to speak on every topic, it is impossible to calculate the number of people who mentioned a particular topic. Table 126 outlines the top 15 topics that were discussed in the greatest number of focus groups and interviews. Transportation was the topic discussed by the highest number of focus groups participants and stakeholders.

Table 126 - Top Factors that Impact Health by Focus Group/Interview Clusters

Mat-Su 2016 Focus Group and Stakeholder Interview Clusters						
Factors That Impact Health	Children/ Youth	Community/ Residents	Providers	Hospital Staff	Govt.	Total
Transportation; lack of public transportation	5	6	5	1	3	20
Access to mental health and substance abuse services; there are long waiting lists for detox centers, substance abuse/rehab, mental health services	6	2	5	2	2	17
Poverty/Income	3	6	3	1	3	16
Availability of information and support to live a healthy lifestyle	2	5	5	1	2	15
Parental/family involvement and support for families; grandparents raising children	3	4	5	1	1	14
Access to health care, dental and vision care	3	6	2	0	2	13
Food quality and insecurity; lack of fresh fruits and vegetables	4	3	4	0	2	13
Culture of Health expectation	3	4	4	1	0	12
Drugs/Substance abuse/family or child	3	2	3	2	2	12
Adverse childhood experiences (ACEs)	4	1	4	0	2	11
Affordable/stable Housing	4	3	4	0	0	11
Weather	1	4	5	0	1	11
Affordability of health care insurance	2	2	4	2	0	10
Isolation	1	4	3	0	2	10
Attitude/ Sense of community/ connection/ self esteem	-	5	4	0	1	10

Source: Mat-Su 2016 CHNA Focus Groups and Interviews

The focus group and stakeholder interview participants were also asked to indicate what they perceive as the top community needs and issues. Table 127 outlines the top 15 topics that were discussed in the greatest number of focus groups and interviews. Transportation was discussed in the highest number of focus group and interviews.

Table 127 - Top 15 Community Needs and Issues, by Focus Group/Interview Clusters

Mat-Su 2016 Focus Group and Stakeholder Interview Clusters						
Community Needs	Children/ Youth	Community Groups	Providers	Hospital Staff	Govt	Total
Transportation	6	5	3	0	2	16
Support services	2	4	4	2	1	13
Preventative services	5	4	1	1	1	12
Recreational activities/pool	4	3	3	2	0	12
Substance abuse treatment	4	3	2	1	1	11
Sense of community/ connectedness	2	5	1	1	1	10
Parent education	3	1	3	2	0	9
Hotline/communication	1	2	2	1	1	7
Long term family housing	1	1	3	0	2	7
Detox	3	0	2	0	1	6
Early education/ Headstart/ childcare	2	2	2	0	0	6
Employment/jobs/income	1	2	2	0	1	6
Elementary school counselors/services	2	3	0	0	0	5
Foodbanks/affordable food	1	3	1	0	0	5
Resource directory	1	2	0	0	1	4
Specialists	1	1	2	0	0	4
Safe places for kids	-	2	1	1	0	4
Housing	-	-	3	-	1	4

Source: Mat-Su 2016 CHNA Focus Groups and Interviews

Focus Group and Stakeholder "Notable Comments" regarding Top Factors and Needs

In order to appropriately summarize the data, the summary data from the list of Factors that Affect Health and Needs and Issues were combined to separate those topics that were truly "social determinants" (factors that impact health) from those topics that were inidicative of community needs. During the focus groups and interviews, participants often told stories to illustrate the topics that they were discussing. Table 128 below identifies representative comments that illustrate the top factors that impact health.

Table 128 - Comments Related to Top Factors Affecting Health

Top Factors Affecting Health	Representative Comments
Transportation	*"People are a ways off the route. If you are not able to go two miles to the Mascot bus stop, you are isolated." – Alaska Family Services Case Manager* *"Infrastructure has a lot to do with land use: where to put roads and where to put houses. We don't know where to put a road if we don't know the housing that is planned. Subdivisions come in and they don't need to tell us what they are doing as long as they pass quality for water and sewer. Turn onto Bogart Road and it is heavy traffic. That road was not meant to have that type of capacity. There is no zoning to control (the volume growth) so we are always fixing. We can't charge a tax for road improvements. There is no revenue stream for transportation funding. This is a problem for the whole state." – Mat-Su Professional* *"Some of the individuals we see are because of lack of transportation and access to healthcare. We end up seeing them because of lack of intervention earlier. We get the history of where they have been. It is not easy to get health care; people that won't take Medicaid. There is a waiting list to access care: mental health, drug addiction services, (and the) dentist; and then they don't have transportation to get there." – Mat-Su Judge*

Family and Social Connection and Support	*"We need to get back to a sense of community where strangers talk to each other and you're not so isolated that you cannot socialize."* - Chickaloon Elder *"We have many people in our community that are in the 'sandwich generation:' caring for elderly parents and caring for young children. We have many people who moved here for work and then moved their parents here. But then they don't have resources or social supports when their daughter is working all day in Anchorage."* - Hospital Social Worker *"I think isolation is the root of so many things. If they don't have support from their family and they're afraid to reach out and they don't have neighbors and they're afraid to reach out even to their teachers because they're isolated. It leads to depression or overeating or an unhealthy style of life. That might be the foundation; you know, the catalyst to all these other (things like) abuse, because they don't know how to cope with it."* - Wasilla Rotary Member *"We need to get back to a sense of community where strangers talk to each other and you're not so isolated that you cannot socialize." - Chickaloon Elder* *"We are fixing problems that are already dire. We rehabilitate; we agree we would see less if we could intervene earlier. Juvenile justice does a great job on restorative justice to help kids in crisis. OCS is so overwhelmed they are not doing as good of a job (as they could.) They are reacting. There is no significant focus on fixing underlying problems in the family. It is a reactive system and we are reacting as judges. We can't just think about fixing people in crisis." – Mat-Su Judge*
Education and Information	*"In trying to solve problem (of the justice system) long term, primary care and education are most important. But we are not going to solve the problem until deal with (the lack of) heroin and mental health services."* – Mat-Su Judge *"There are lots of deaths. Expand on education and health classes in schools. I take an on-line health class. It could be expanded to teach about other things, especially the new drugs and their short and long term effects. People don't know about spice and other new drugs. There are new drugs*

	out there that are laced with gasoline (and people still take them. It would be a good goal to educate teens about this." – Willow Teen *"Fear of the unknown (impacts health). Some people won't seek medical attention because if they don't hear it, it is not happening to me. Some people wait until the last minute and if they had gone earlier, something could have been done about it." - Talkeetna Resident* *"Fear is a big part of motivation (to seek help). There is a fear of opening up and fear of what family stuff is going to come out. Once you start peeling back the layers, it can be really scary. A lot of families are afraid that if open up that their children will get taken away." - School Counselor* *"A healthy lifestyle doesn't start with pills and covering up misery. It starts with eating healthy and being around healthy people." - Mat-Su Youth* *"Education to reduce stigma is important, especially in a small community where everybody knows everyone. If you're reaching out for certain services, everyone's going to know and they're going to automatically assume that you're the crazy one and you're afraid of losing the support you do have." – Wasilla Rotary Member*
Income	*"Sometimes you have to make a choice whether you are going to pay the medical bill or buy food."* – Mat-Su Public Health Nurse *"Affordability of health care is a big issue. I work at a shelter and our residents can't afford it, but then when I think about it, the same discussions are actually happening with my staff. It sounds different, but really what we're all saying is we can't afford it. So it's not just our residents, it's the people working there that are struggling just as much." – Wasilla Rotary Member* *"There are people who come here that ran away from domestic violence in another state. They're afraid to plug into those agencies where somebody in another state will find them; or their kids are going to get taken away from them, (because they are living in a shack without running water).*

	Poverty is a disease. So they do without. They live off whatever they can grow in this little section of property that they have." – Mat-Su Public Health Nurse *"We have a lot of the working poor and I've met a lot of people who said when you ask them about their eating situation, they are like, 'Are you going to buy my vegetables and my fruit that I can't afford to buy?' I've had grown men crying because they hadn't eaten in a few days. So food is definitely an issue." – Mat-Su Public Health Nurse*
Housing	*"Housing is everyone's issue. Housing is a big issue in the valley. If you talk to seniors, it is all about senior housing. Talk to those in nonprofits, it is homelessness. For others, it is prisoner re-entry, veterans or addiction and abuse. We need to retain the 18 to 34 year olds. If not, you are left with those that are retiring, and the borough has a different tax bracket, and we can't offer services. It is a domino effect. Diversified housing stock is the secret." –* Mat-Su Planner *"It's very subjective when you talk to our clients about what home is. It is not what you think it is. A client with five kids will tell me they live in a camper, and it is not a mobile home. It is literally the back of a truck." – Mat-Su Public Health Nurse* *"We have a lot of people dealing with a lot of home health and hospice issues; we have a veteran that is living out of his van." – Sunshine Clinic Staff Member* *"I rated (the health of the community fair) because I know there are a lot of children who need homes. It is terrible that these kids are so young and have lived through so many things already." – Sunshine Clinic Staff Member*
Discrimination	*"Discrimination affects people's health. It affects your ability to do things, get school work done, and just operate. It also affects eating habits and your entire life without noticing it." - LGBTQ teen*
Incarceration	*"In the criminal world, people are cycling in and out and say 'I didn't want you to see me like this. I was doing good'… and then there is the shame of relapse. They give up on themselves; they feel so defeated. We see people blame themselves. They bear responsibility. They have this fatalism*

	that nothing is going to work and then we lose them to suicide, overdose, or off the grid." – Mat-Su Judge
Employment	*"The department of vocational rehabilitation has assisted job development but has never been successful. They have done a great job with people with developmental disabilities but for individuals with mental illness that needs support and assistance, it is not there." – Mat-Su Judge*
Environment	*"There is a lot of glacial silt in Palmer. It is a problem when the wind blows and it gets in people's houses." - Wasilla Resident*

Source: Mat-Su 2016 CHNA Focus Groups and Interviews

Participants also discussed the top issues and needs facing residents of Mat-Su. **Table 129** lists representative comments related to the top needs and issues discussed in the largest number of focus groups and interviews.

Table 129 - Comments Related to Top Issues and Services Needed

Top Issues and Services Needed	Representative Comments
Substance abuse	*"Access to treatment needs to be immediate. The thing is we're paying now or paying later. We need to just accept the fact that addiction treatment's expensive, but doing nothing is infinitely more expensive. They can't do it by themselves while they wait. We are incarcerating people for drug addiction; really, for drug possession. Essentially, we can get a lot of treatment for that. So we're paying either way. –* Hospital Social Worker *"Some people maybe feel better if they're paying through the corrections system, but that isn't actually the appropriate way to deal with an addiction. Or even the hospital, I mean, there are people who sit here for six weeks getting IV antibiotics because they're on drugs, I mean, those people don't need that. They could be in six weeks of treatment and getting their IV antibiotics the same exact time. They would be much better off. – Hospital Social Worker* *"In trying to solve problem (of the justice system) long term, primary care and education are most important. But we are not going to solve the problem until deal with (the lack of) heroin and mental health services." – Mat-Su Judge*

Top Issues and Services Needed	Representative Comments
Access to behavioral health services	*"We need the ability to do home visits and get medical and behavioral health staff into the home." – Sunshine Clinic Staff Member* *"The way behavioral health engages in the community needs to change. Not completely away from a traditional model, but in some ways away from it. We are trying to think creatively about that; partnering with the schools to see how we can do that; how can we connect seniors and youth together because there is much value." - Talkeetna Resident* *"We see people at their worst, in the context of divorce where the government hasn't intervened and where there is no primary care physician. They are not going to school, septic is an old buried truck. Parents are so angry and all the kids know is yelling; mental health is terrible. Domestic violence is the result when the frustration and stress levels are high from lack of resources. They haven't sought them out or they don't exist at that income point. The kid's primary response is to wish they would stop fighting." – Mat-Su Judge* *"Peer to peer support (is needed). There is nothing more valuable than the therapeutic value of someone being able to relate – someone that has been through it and can share their experience is very important. We are one of only a few states that don't recognize peer to peer support." – My House Teen*
Access to health care	*"Here, there are great services, music, cool tricks and all that. But after three or four hours when they find a problem, nothing gets fixed and you to go see another specialist. By the time you see the doctors, you could go to Mexico cheaper. One doctor gets it done in one visit." – Hispanic resident*
Preventative services	*"There is no gap program (for women who are trying to better their lives.) If the kids are removed, they won't qualify for assistance and they will get evicted then they can't follow their care plan. It is a vicious cycle." – Alaska Family Services Case Manager*

Top Issues and Services Needed	Representative Comments
	"We don't have as many resources in this community as we had 20 years ago. We're certainly spending more money on healthcare, but there are some things that I think were preventative in nature; (we had) healthy families and those kind of immediate services in other situations that we don't have available anymore." – Hospital Social Worker *"I like the idea of community hubs; a one stop shop where everything is right there. A person and people to talk to get where you need to go. A place that is welcoming where you know you will get your needs met. I think people feel alone and when they try to find help, it is not easy to access. They will only move in a moment when there is crisis." – Mat-Su Judge* *"I would say more than half of this community has multiple things on their plate that they need to fix all at once if they're going to be healthy. The housing…they have drug addiction. They don't qualify because of prior situations for the federal housing assistance. They are all different. Some have OCS involvement. It's really complex and they have a really fragmented support system." – Hospital Social Worker* *"A healthy community is where any person can look around them and see a face of support and not feel that there is a stigma associated with needing a helping hand. And giving a helping hand is part of what you do all the time." - Talkeetna Resident*
Senior services and supports	*"We have many people in our community that are in the 'sandwich generation:' caring for elderly parents and caring for young children. We have many people who moved here for work and then moved their parents here. But then they don't have resources or social supports when their daughter is working all day in Anchorage." - Hospital Social Worker*
Community planning	*"We are a second class borough. There are certain things we have to do and certain powers we don't have. We don't have road, health or police powers. When we talk about health, it is sewer and water policy. We don't have any of those. We have seven state troopers for an area the size of West Virginia. There are a ton of recreation areas and our*

Top Issues and Services Needed	Representative Comments
	own population as well as others who come and enjoy the area. Our tax policy is meant to run and maintain what we already have, not build. We have had 4% growth the past 10 years, where 1% is normal. We should be in catch up mode but we are still growing. We need a revenue structure that makes sense." – Mat-Su Professional *"We have no emergency planning for an area the size of a small state. With volcano, earthquake, flood, wildfire and a river that moves, we have a natural disaster every year: windstorm, fire or flood. In the last ten years, we have had two '100 year' floods. In the Soki fire, the dog mushers had a plan in place and got all the dogs out. We need that kind of plan for people." – Mat-Su Planner* *"We need a mechanism to make planning work. It would be feasible (to invest in the infrastructure we need), if we had this mechanism in place. We have to figure out what works at each community level and help achieve those goals. We need the community to participate and buy in. We need to say what is the base where we all have the same set of rules, but if your community needs additional layers, let's talk about it. We need a standard set of tools that fit for the entire borough and then each community could pick the ones that they want. We could define levels for various types of things and decide where to put them; like a quilt with all the same fabrics…something to create unity but allow individual identity." - Mat-Su Professional* *"Health is a non-combative way to approach things. We could create a team that can really help further that message (for community planning) and have a bigger discussion. It could come from ROCK Mat-Su; we need community capacity to come together and help families. Addressing healthy relationships feeds into it; that impacts everything. Most comprehensive plans include good schools, safe communities, clean air, clean water and safe roads." – Mat-Su Professional*

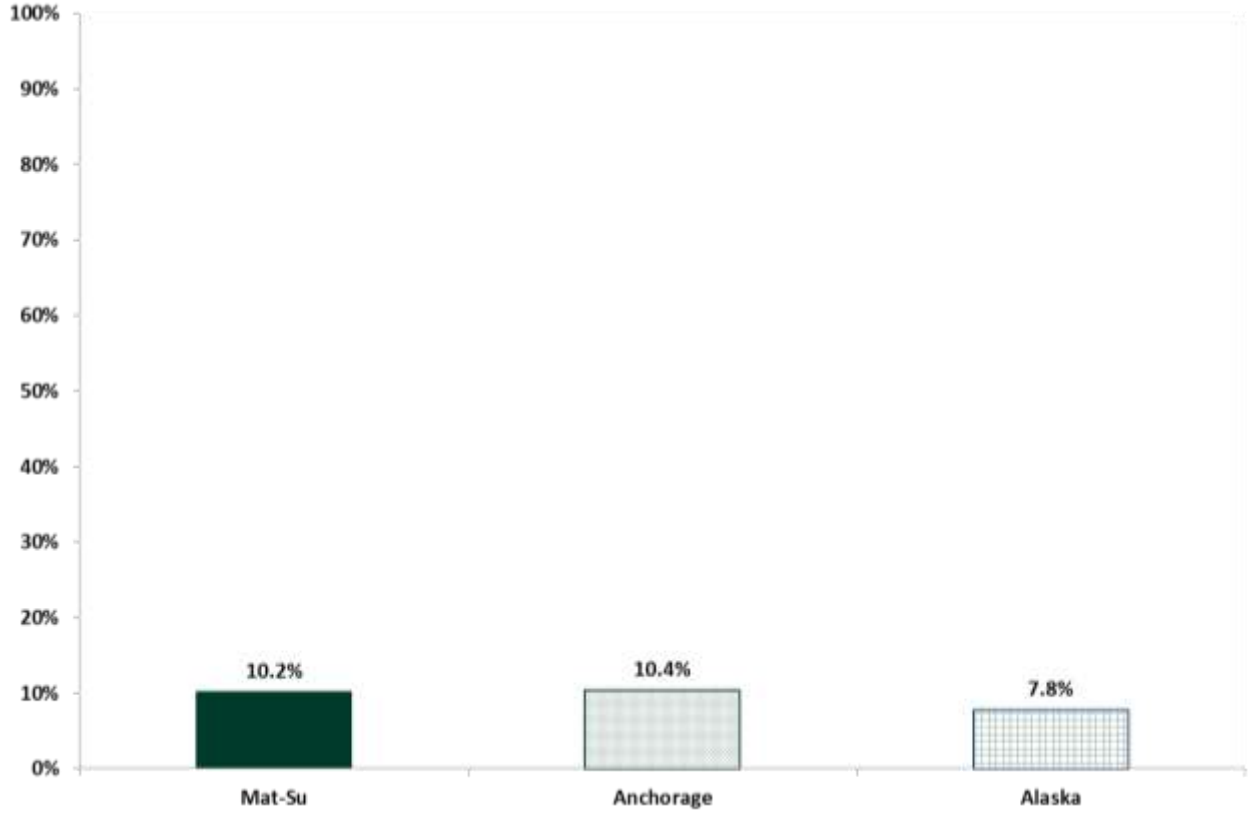
Source: Mat-Su 2016 CHNA Focus Groups and Interviews

Health Status Impact: Chronic Disease

Respiratory Illness

As reported by the Alaska Behavioral Risk Factor Surveillance System, Figure 104 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who self-reported they have ever been told they have asthma during the combined years of 2010-2014. A comparable percentage of Mat-Su respondents (10.2%) reported they have ever been told they have asthma when compared to respondents in Anchorage (10.4%). Mat-Su and Anchorage have a higher percentage of respondents who reported they have ever been told they have asthma when compared to the state (7.8%).

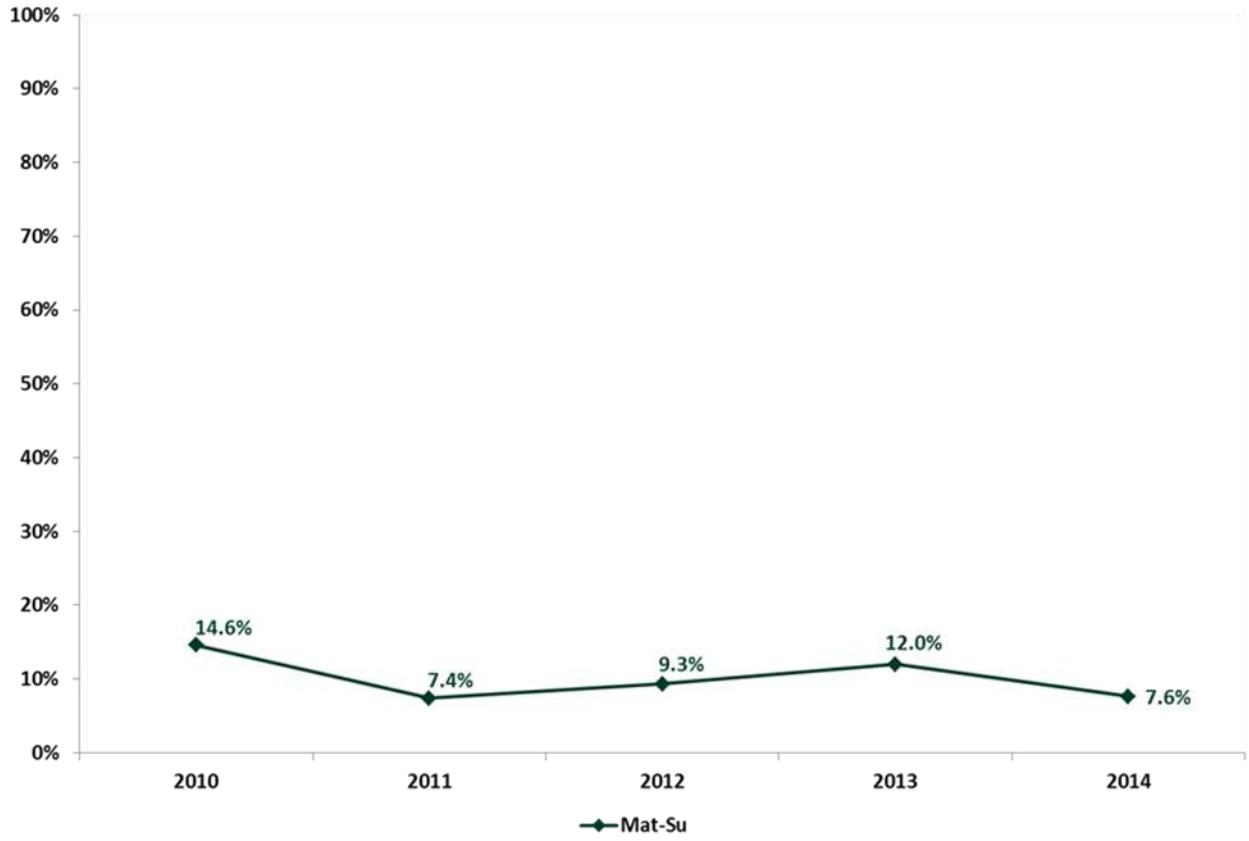
Figure 104 - Ever Told Had Asthma, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

Also reported in the Alaska Behavioral Risk Factor Surveillance System, Figure 105 illustrates the five-year trend for the percentage of respondents in Mat-Su who indicated that they have ever been told they have asthma. The percentage of respondents who reported they have ever been told they had asthma has fluctuated over the five years and, in recent years, there was a decrease (12.0% to 7.6%).

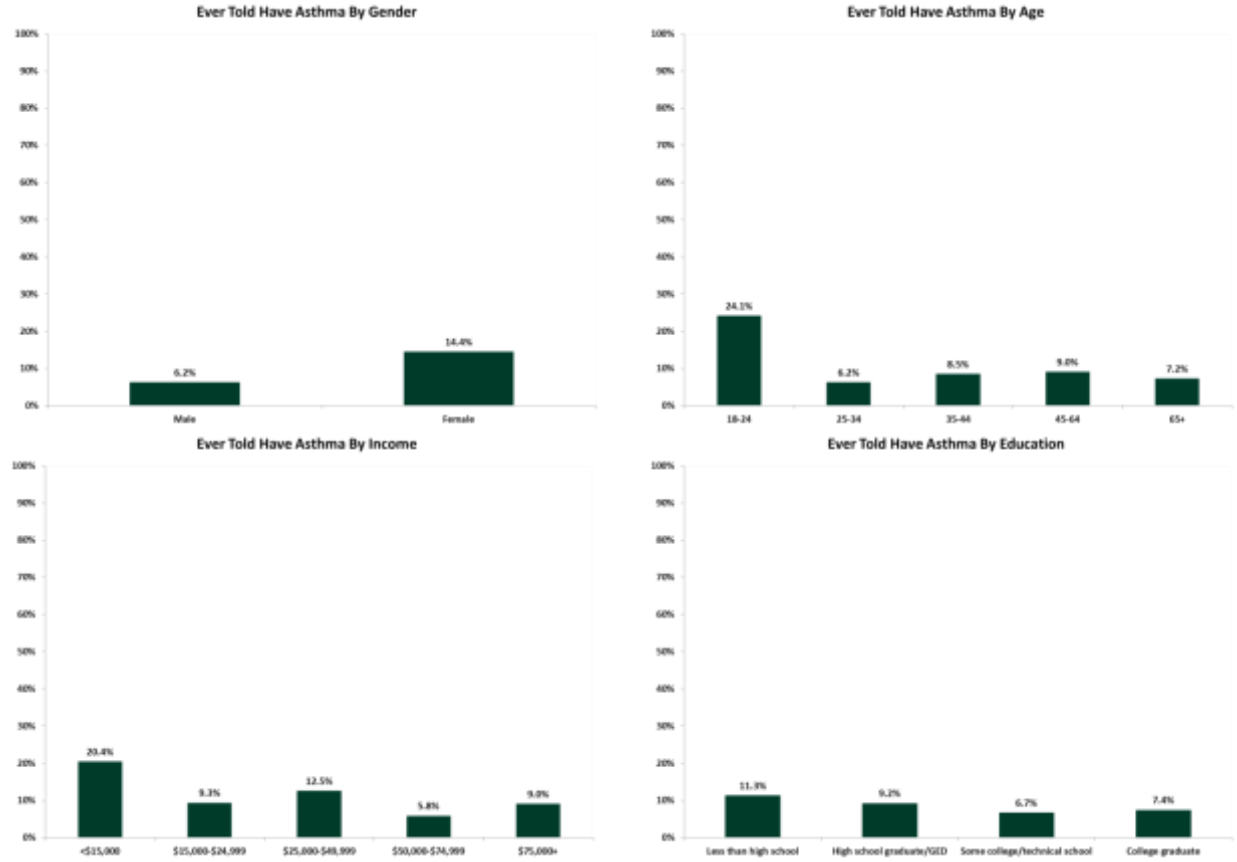
Figure 105 - Ever Told Had Asthma, Five Year Trend, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

From the Alaska Behavioral Risk Factor Surveillance System, Figure 106 illustrates the demographic variables where a statistically significant difference was observed for respondents who self-reported they have been told they have asthma for the combined years 2010-2014. Females, residents age 18-24, residents with incomes less than $15,000 and those who did not graduate high school are more likely to report they have ever been told they have asthma when compared to their counterparts.

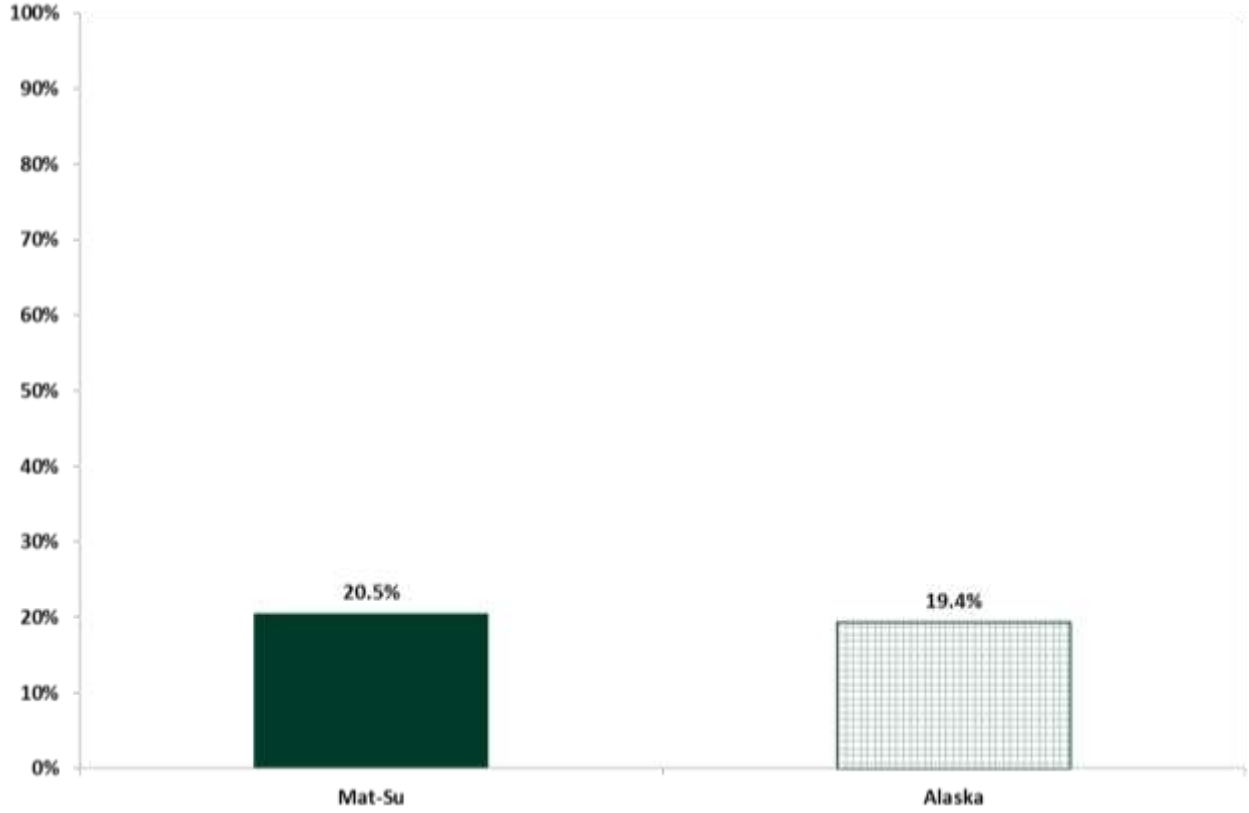
Figure 106 - Ever Told Had Asthma, 5 Year Trend, 2010-2014 Significant Differences



Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Youth Risk Behavior Survey, **Figure 107** illustrates the percentage of students in Mat-Su and Alaska who indicated that they have ever been told they have asthma. A comparable percentage of Mat-Su students who responded (20.5%) reported they have ever been told they asthma when compared to students in Alaska overall (19.4%).

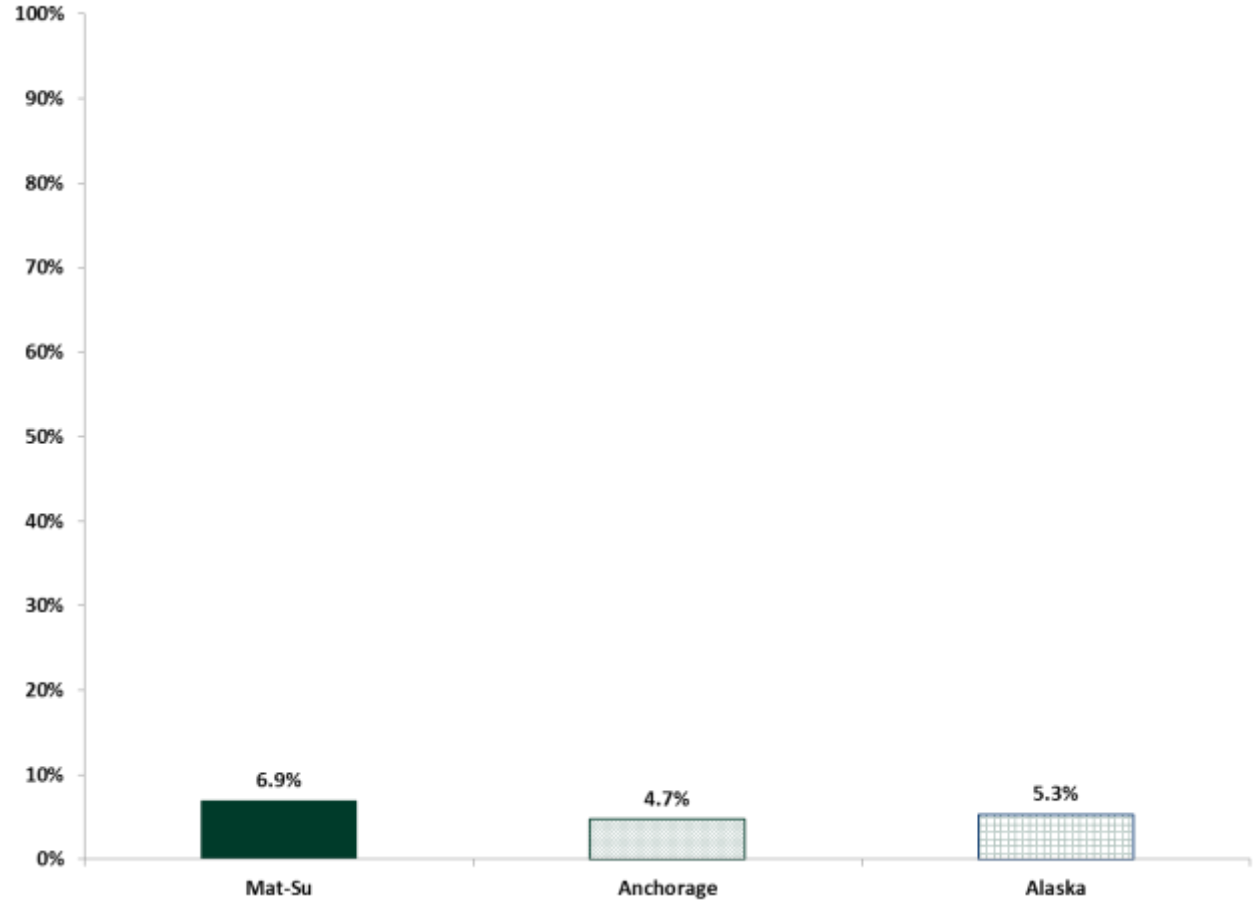
Figure 107 - Childhood Asthma, 2015



Source: Youth Risk Behavior Survey, 2015

From the Alaska Behavioral Risk Factor Surveillance System, Figure 108 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who self-reported they were ever told they had COPD during the combined years of 2011-2014. A statistically significant difference was observed for respondents who reported having ever been told they have COPD. During this time, respondents in Mat-Su (6.9%) were more likely to indicate they have ever been told they have COPD when compared to the state (5.3%). Mat-Su also had a higher percentage of respondents who indicated they have been told they have COPD compared to Anchorage (4.7%).

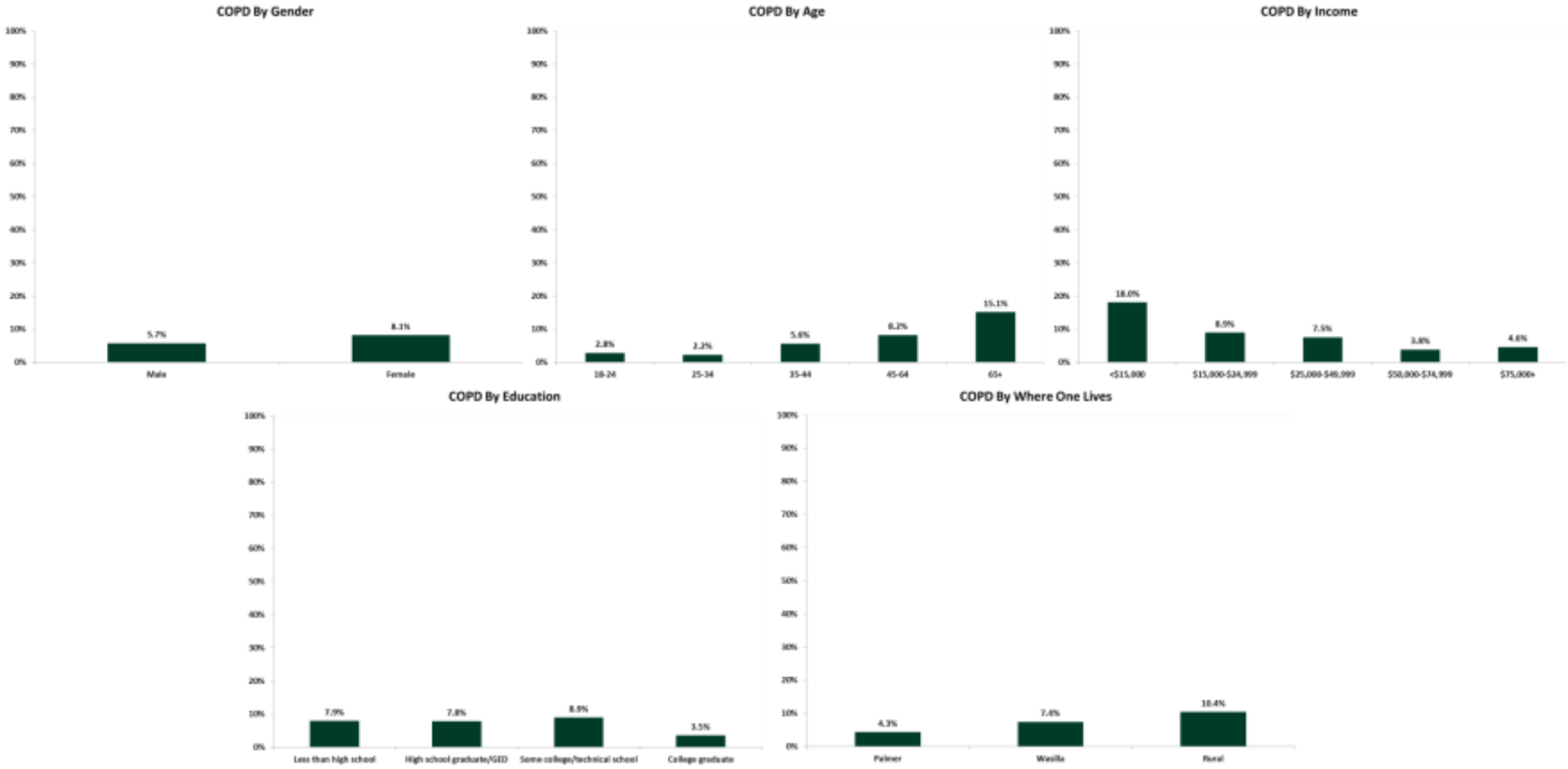
Figure 108 - Ever Told Have COPD, 2011-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

Statistically significant differences were observed for the several demographic variables from the Alaska Behavioral Risk Factor Surveillance System respondents who reported they have ever been told they had COPD during combined years 2011-2014. This is illustrated in **Figure 109**. Females, those over the age of 65, respondents with incomes less than $15,000 and those who live in a rural environment are more likely to report they have ever been told they have COPD. Respondents who graduate college are less likely to report they have ever been told they have COPD compared to all other levels of education.

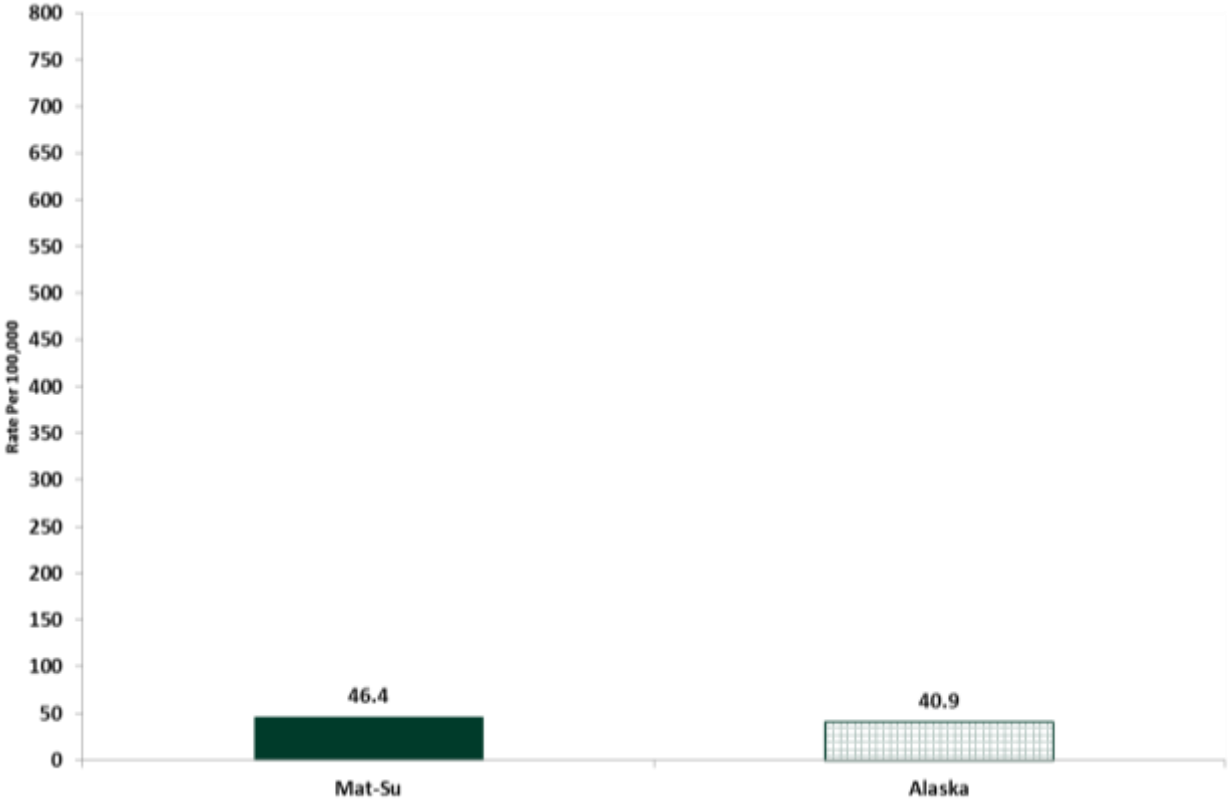
Figure 109 - Ever Told Had COPD, 2011-2014, Significant Differences



Source: Alaska Behavioral Risk Factor Surveillance System Data

The COPD mortality rate for Mat-Su and Alaska during the combined years of 2011-2015 from the Alaska Department of Vital Statistics is illustrated in **Figure 110**. Mat-Su (46.4) had a slightly higher COPD mortality rate when compared to the state (40.9).

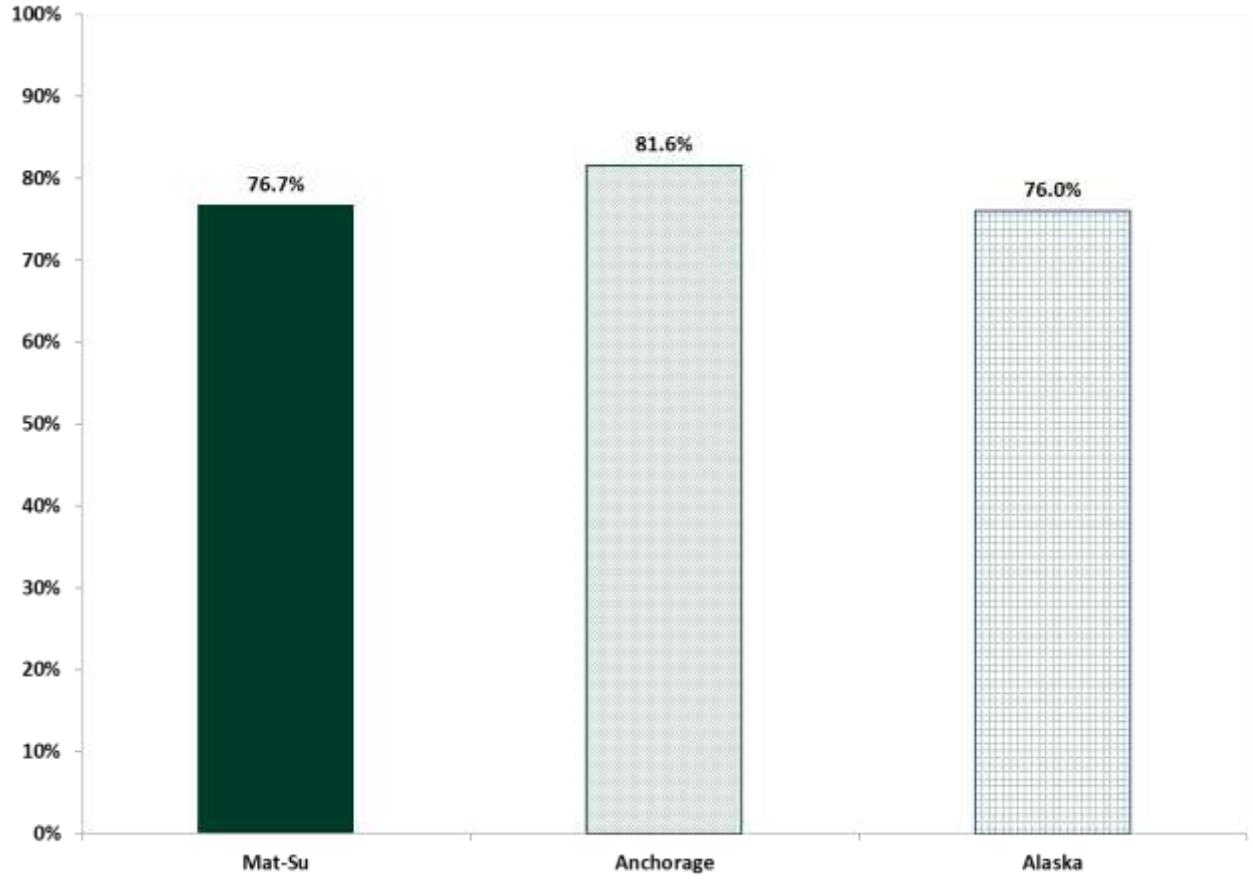
Figure 110 - COPD Mortality Rate, 2011-2015



Source: Alaska Department of Vital Statistics Death Certificate Data

The percentage of respondents in Mat-Su, Anchorage and Alaska who reported they did not smoke during the combined years of 2010-2014 from the Alaska Behavioral Risk Factor Surveillance System is outlined in Figure 111. During this time, respondents in Mat-Su (76.7%) were more likely to report they smoke when compared to respondents in Anchorage (81.6%). Mat-Su has a comparable amount of non-smokers as the state (76.0%). A statistically significant difference was observed for respondents who reported they do not smoke.

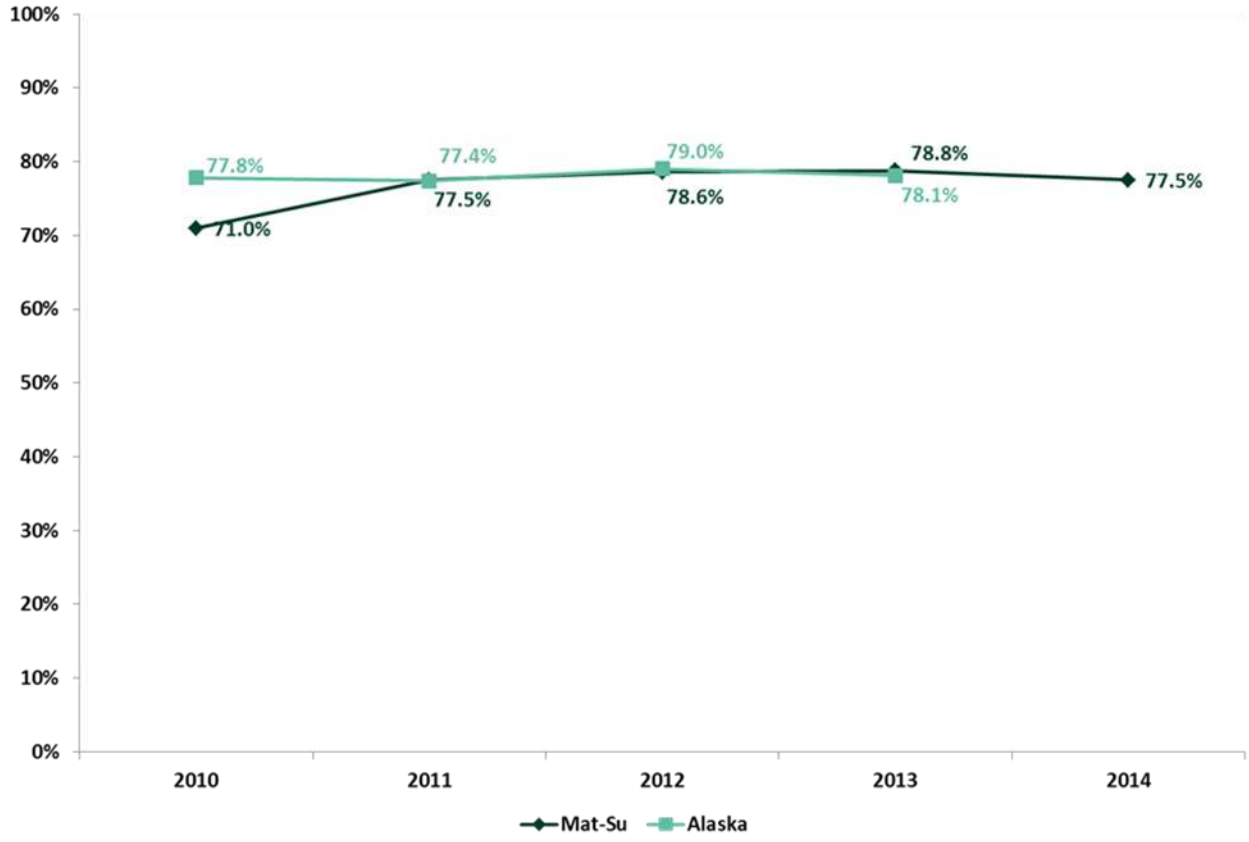
Figure 111 - Non-Smoking Residents, 2011-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

From the Alaska Behavioral Risk Factor Surveillance System, Figure 112 illustrates the five-year trend for non-smoking respondents in Mat-Su and Alaska. There was an increase in non-smoking respondents in Mat-Su for the first four years; however, in 2014, the percentage decreased slightly (78.8% to 77.5%). In 2013, Mat-Su (78.8%) and Alaska (78.1%) respondents had comparable non-smoking percentages.

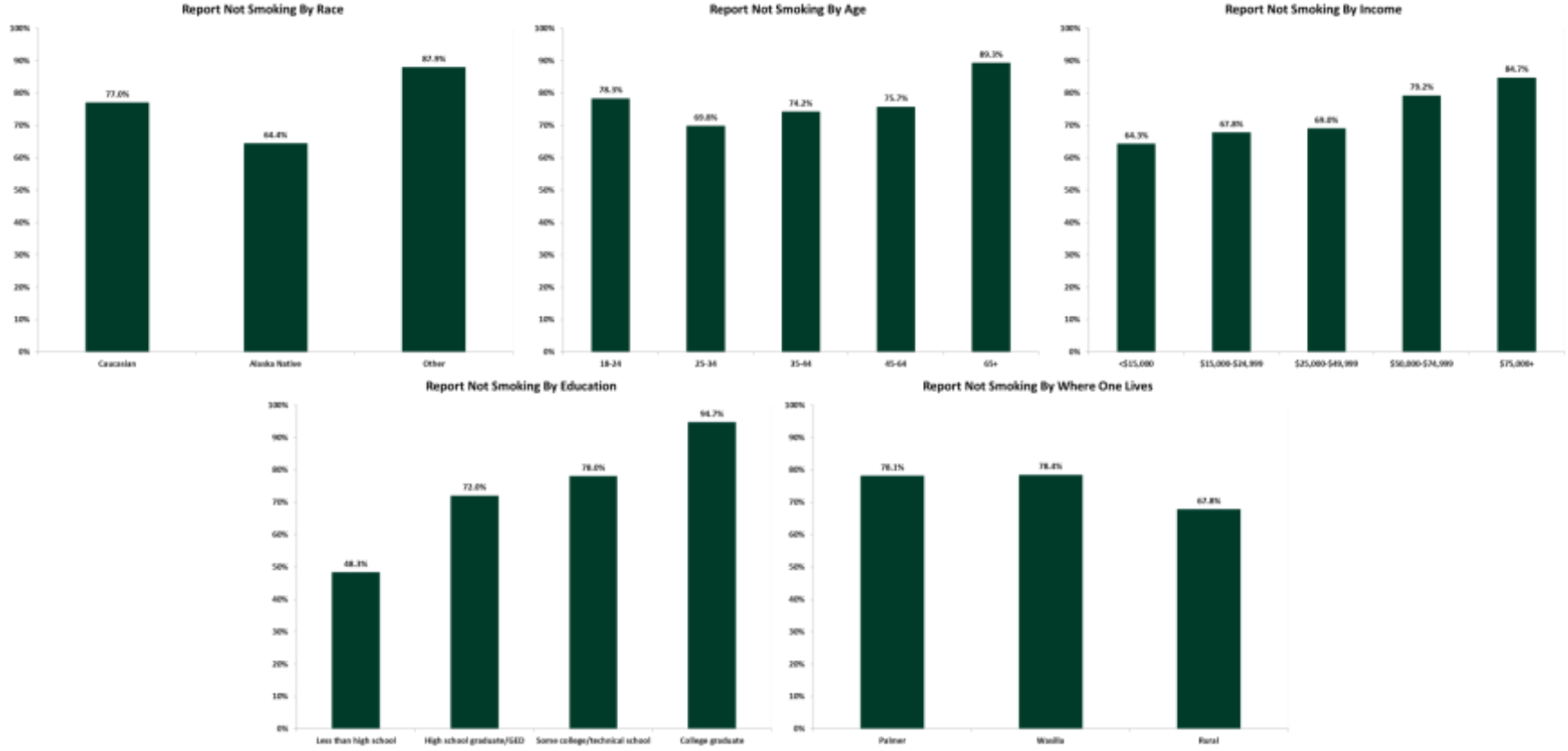
Figure 112 - Non-Smoking Residents, 2010-2014, 5-Year Trend



Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System, **Figure 113** illustrates the demographic variables where a statistically significant difference was observed for respondents who self-reported not smoking for 2010-2014. Respondents who are an Alaska Native, between the ages of 25-34, have incomes of less than $15,000, did not graduate high school or live in a rural environment are less likely to be a non-smoker (i.e. they smoke) compared to other respondents.

Figure 113 - Non-Smoking Residents, 2010-2014, Significant Differences

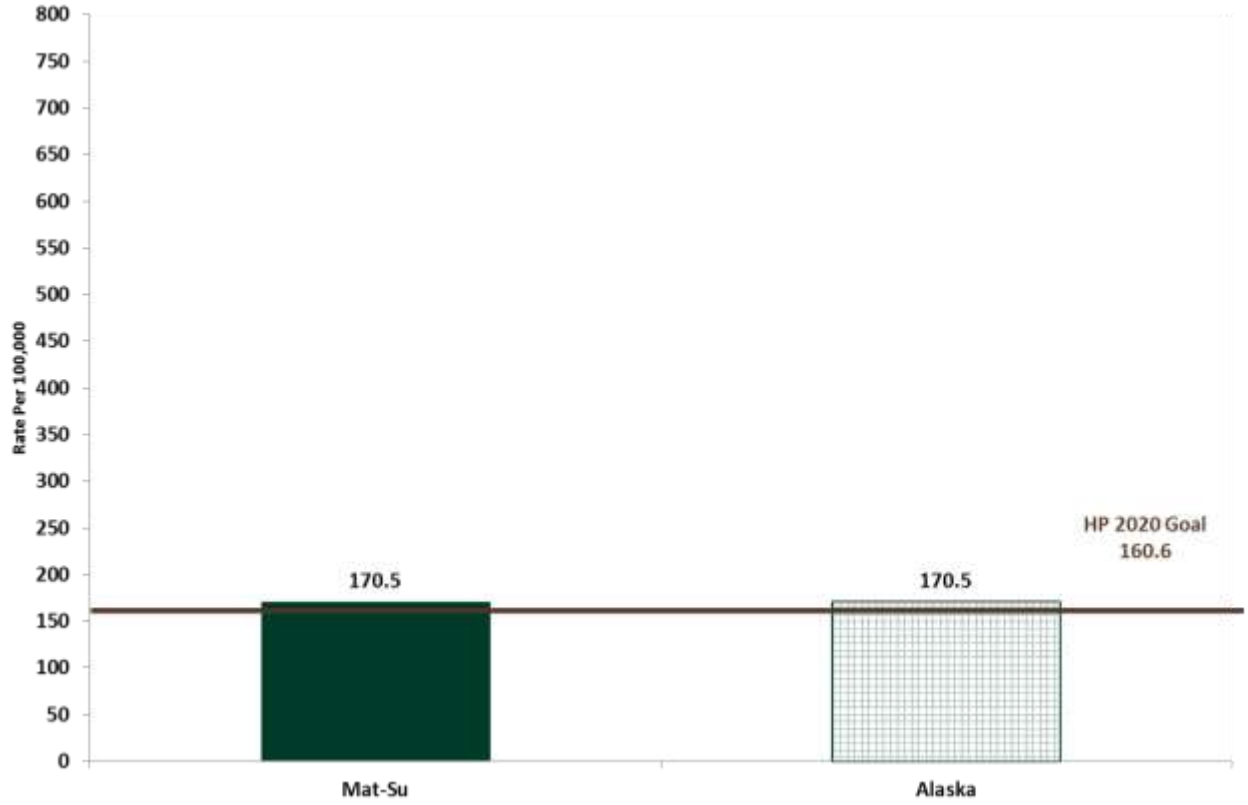


Source: Alaska Behavioral Risk Factor Surveillance System Data

Cancer

According to the Alaska Department of Vital Statistics Death Certificate Data, **Figure 114** shows the cancer (all causes) mortality rate for Mat-Su and Alaska during the combined years of 2011-2015. Mat-Su (170.5) had the same cancer (all causes) mortality rate as the state (170.5). Both Mat-Su and the state cancer mortality rates are slightly higher than the Healthy People 2020 Goal (160.6).

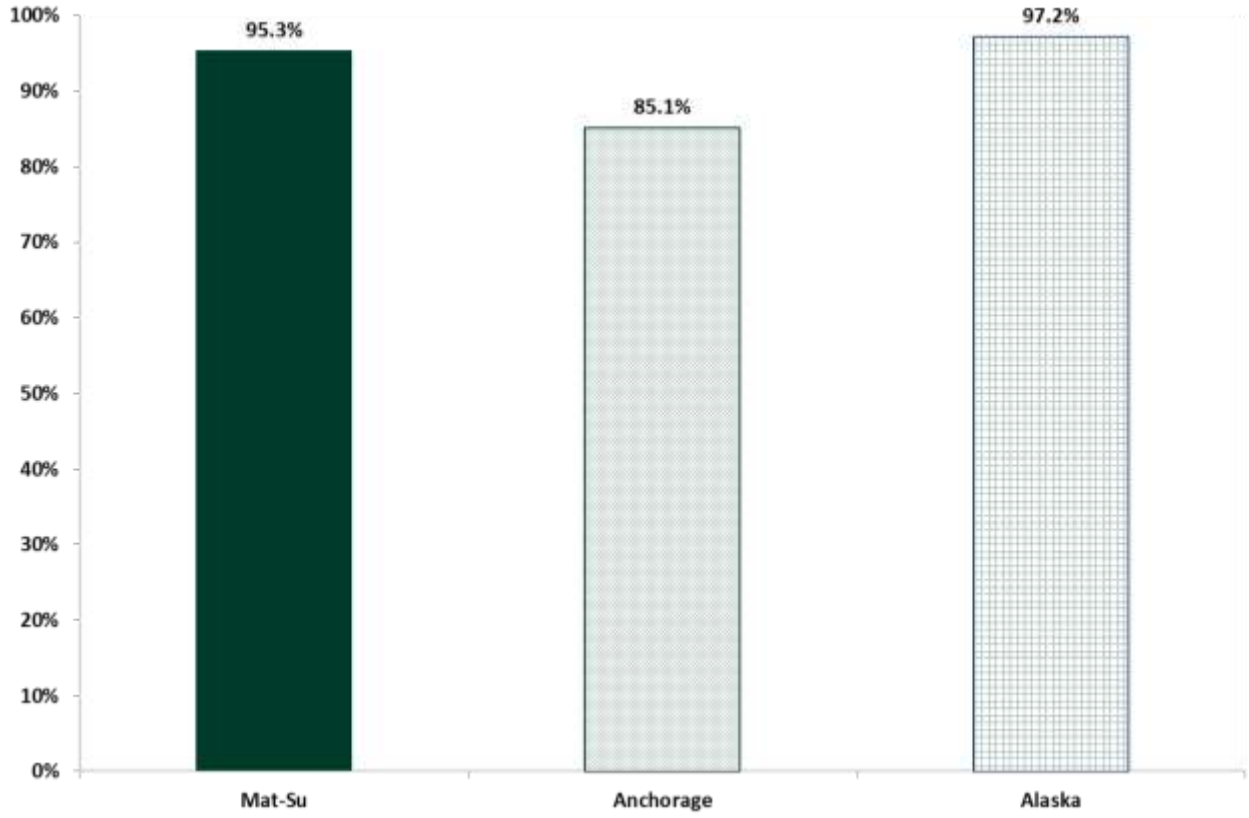
Figure 114 - Cancer (All Causes) Mortality Rate



Source: Alaska Department of Vital Statistics Death Certificate Data, Healthy People 2020

As reported in the Alaska Behavioral Risk Factor Surveillance System data, **Figure 115** illustrates the percentage of respondents with cancer that self-reported they are currently receiving cancer treatment in Mat-Su (N=162), Anchorage (N=199) and Alaska (N=675) during the combined years of 2010, 2012, and 2014. During this time, Mat-Su (95.3%) had a higher percentage of respondents with cancer reporting they are receiving cancer treatment when compared to Anchorage (85.1%), and a slightly lower percentage than the state (97.2%).

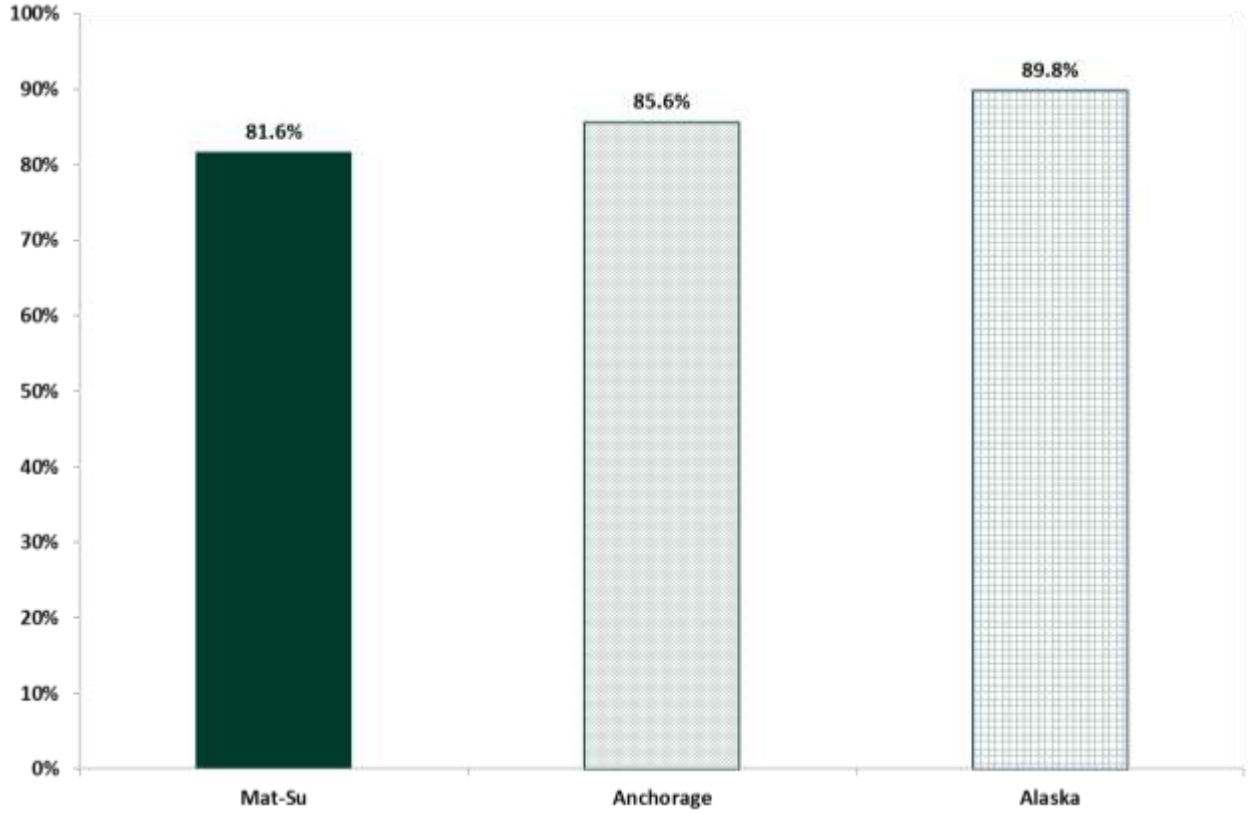
Figure 115 – Cancer Patients Currently Receiving Cancer Treatment, N=1,036



Source: Alaska Behavioral Risk Factor Surveillance System Data

According to the Alaska Behavioral Risk Factor Surveillance System data, **Figure 116** illustrates the percentage of cancer patients who reported they are currently not experiencing any pain as a result of their cancer treatment in Mat-Su (N=77), Anchorage (N=110) and Alaska (N=364) during the combined years of 2010, 2012, and 2014. During this time, Mat-Su (81.6%) had a lower percentage of respondents who are cancer patients experiencing pain due to cancer treatment when compared to Anchorage (85.6%) and the state (89.8%).

Figure 116 - Cancer Patients Not Experiencing Pain Due to Cancer Treatment

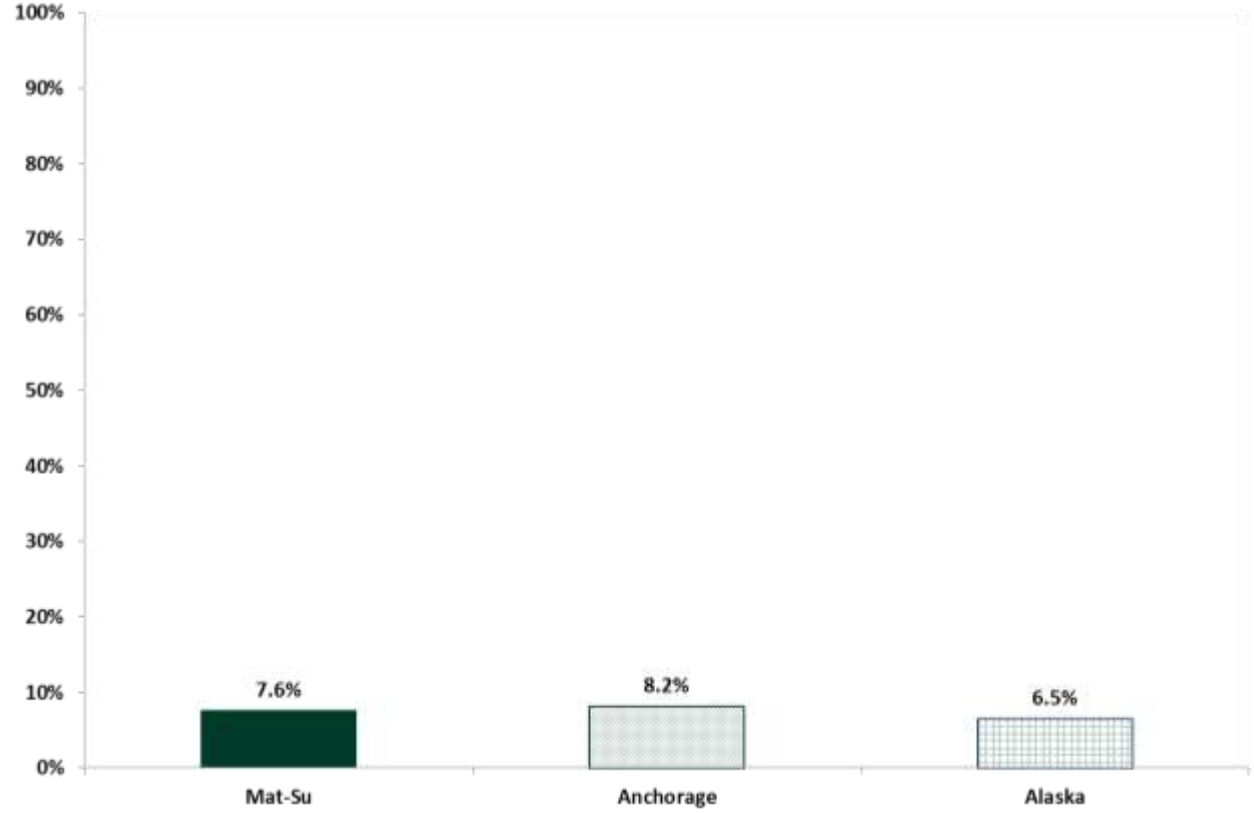


Source: Alaska Behavioral Risk Factor Surveillance System Data

Diabetes

As reported in the Alaska Behavioral Risk Factor Surveillance System, Figure 117 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who self-reported they have ever been told they have diabetes during the combined years of 2010-2014. A slightly smaller percentage of respondents in Mat-Su (7.6%) reported they have been told they have diabetes when compared to respondents in Anchorage (8.2%). Both Mat-Su and Alaska had a higher percentage of respondents reporting they have ever been told they have diabetes when compared to the state (6.5%).

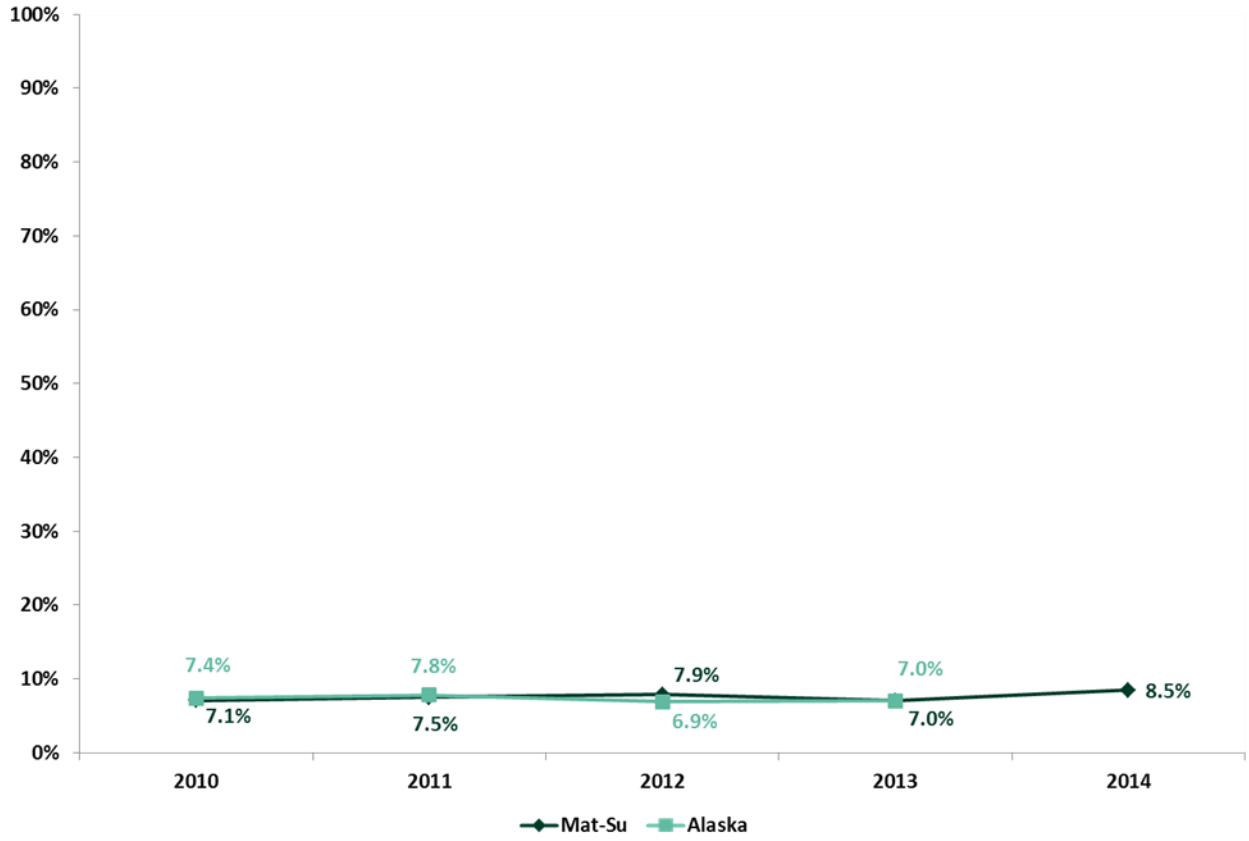
Figure 117 - Ever Told Had Diabetes, 2010-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

The five-year trend for the percentage of respondents in Mat-Su and Alaska who reported they have ever been told they have diabetes from the Alaska Behavioral Risk Factor Surveillance System is outlined in Figure 118. The percentage of respondents in Mat-Su who reported they have been told they have diabetes has fluctuated over the five years, although between 2013 (7.0%) and 2014 (8.5%), the percentage has increased. In 2013, Mat-Su (8.5%) had a higher percentage of adults who reported they have ever been told they had diabetes when compared to the state (7.0%).

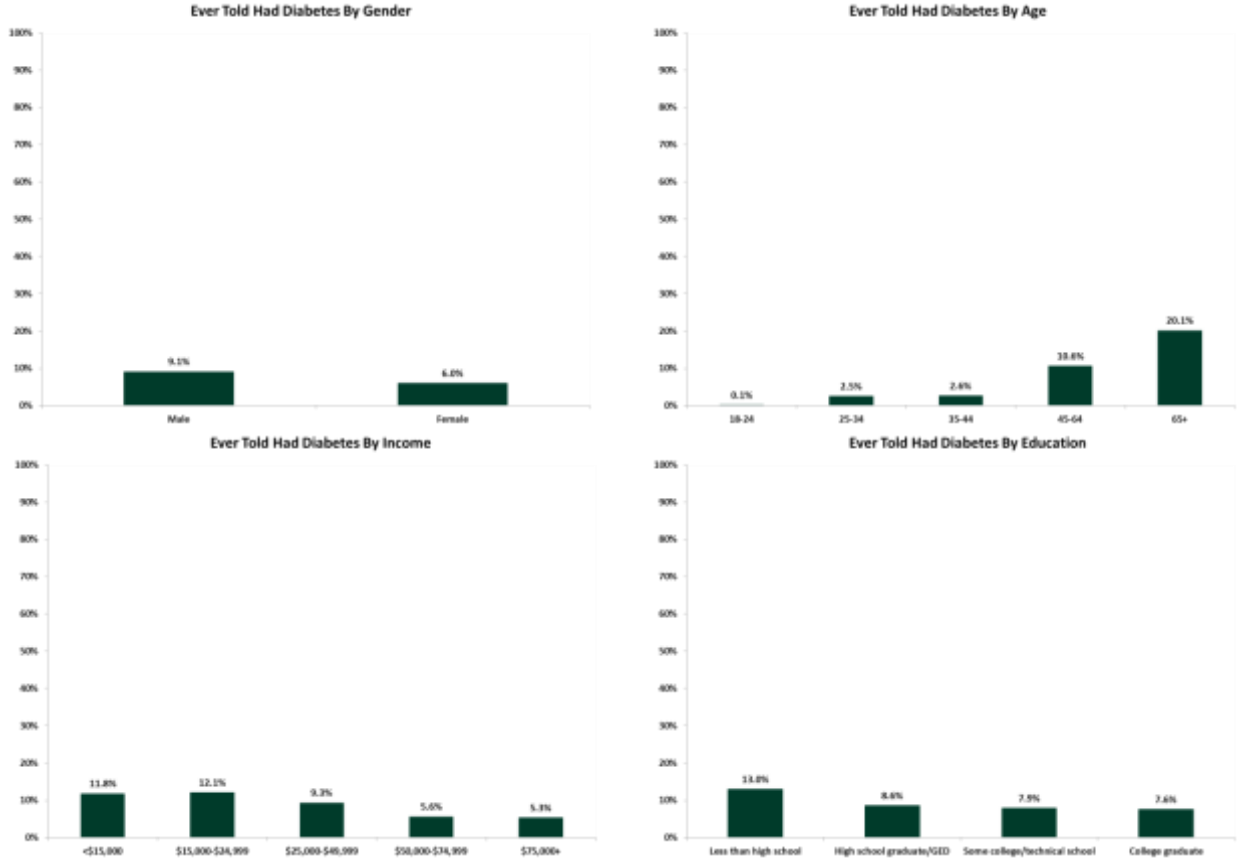
Figure 118 - Ever Told Had Diabetes, 2010-2014, 5 Year Trend



Source: Alaska Behavioral Risk Factor Surveillance System Data

Where statistically significant differences were observed based on demographic variables for respondents who reported they have ever been told they had diabetes are illustrated in Figure 119. Males (9.1%) were more likely to report they have been told they have diabetes when compared to females (6.0%). Respondents age 65 and older (20.1%) were more likely to report they have been told they have diabetes compared to younger respondents. Respondents with household incomes of $75,000 or greater (5.3%) were less likely to report they have ever been told they have diabetes compared to those with lower household incomes. Respondents who did not graduate high school (13.0%) were more likely to report they have been told they have diabetes compared to those who completed higher levels of education.

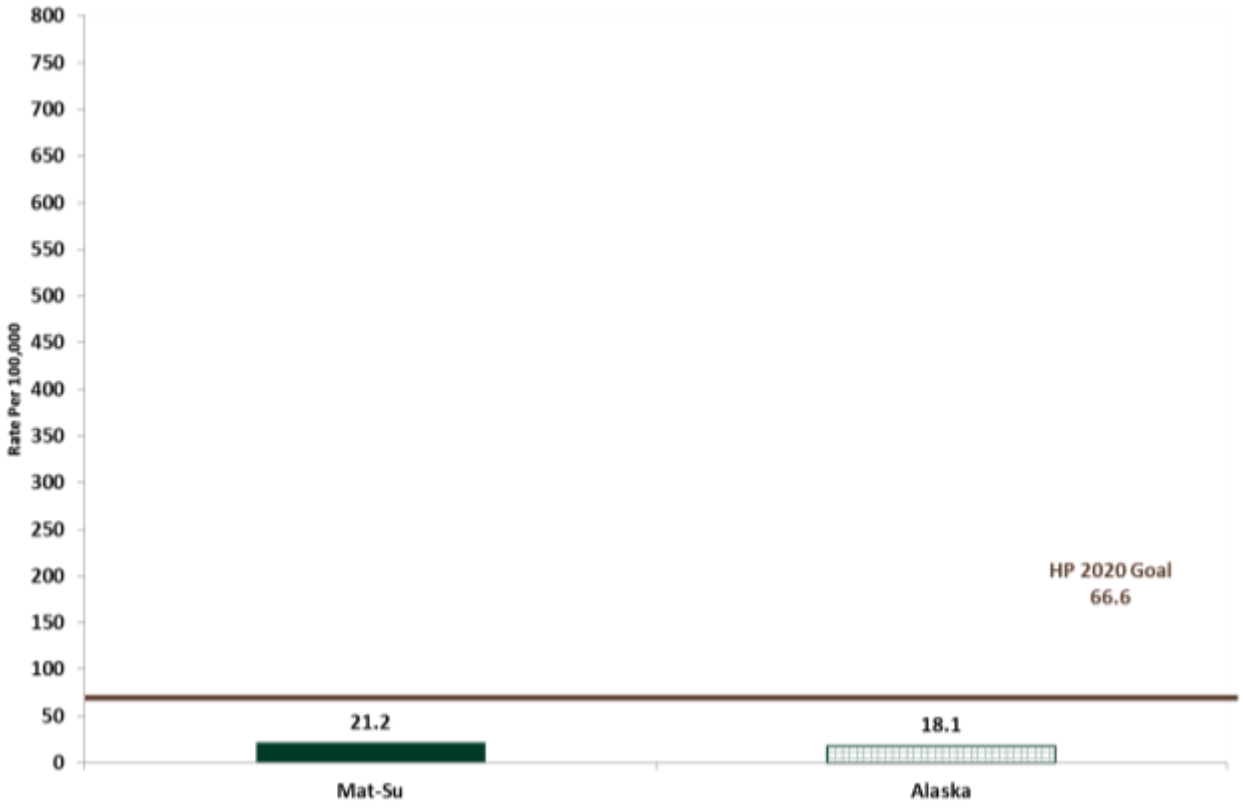
Figure 119 - Ever Told Had Diabetes, Significant Differences



Source: Alaska Behavioral Risk Factor Surveillance System Data

According to the Alaska Department of Vital Statistics Death Certificate data, Figure 120 shows the diabetes mortality rate for Mat-Su and Alaska during the combined years of 2011-2015. Mat-Su (21.2) had a slightly higher diabetes mortality rate when compared to the state (18.1). Mat-Su and the state meet and well exceed the Healthy People 2020 Goal (66.6).

Figure 120 - Diabetes Mortality Rate, 2011-2015

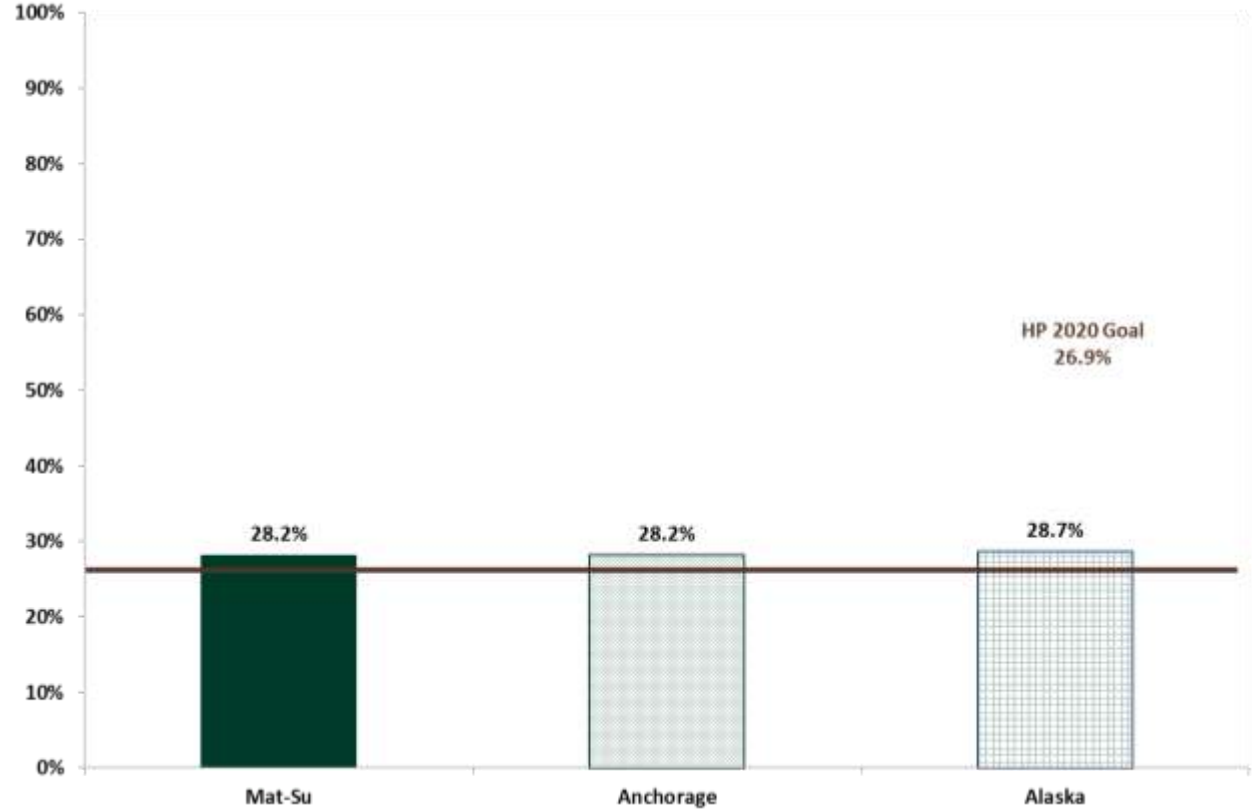


Source: Alaska Department of Vital Statistics Death Certificate Data, Healthy People 2020

Heart Health

As reported in the Alaska Behavioral Risk Factor Surveillance System, Figure 121 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who self-reported they have ever been told they have high blood pressure during the combined years of 2009, 2011, 2013, and 2014. A comparable percentage of respondents in Mat-Su (28.2%) reported they have been told they have high blood pressure when compared to respondents in Anchorage (28.2%) and Alaska (28.7%). Mat-Su, Anchorage and Alaska are just above the Healthy People 2020 Goal of 26.9%.

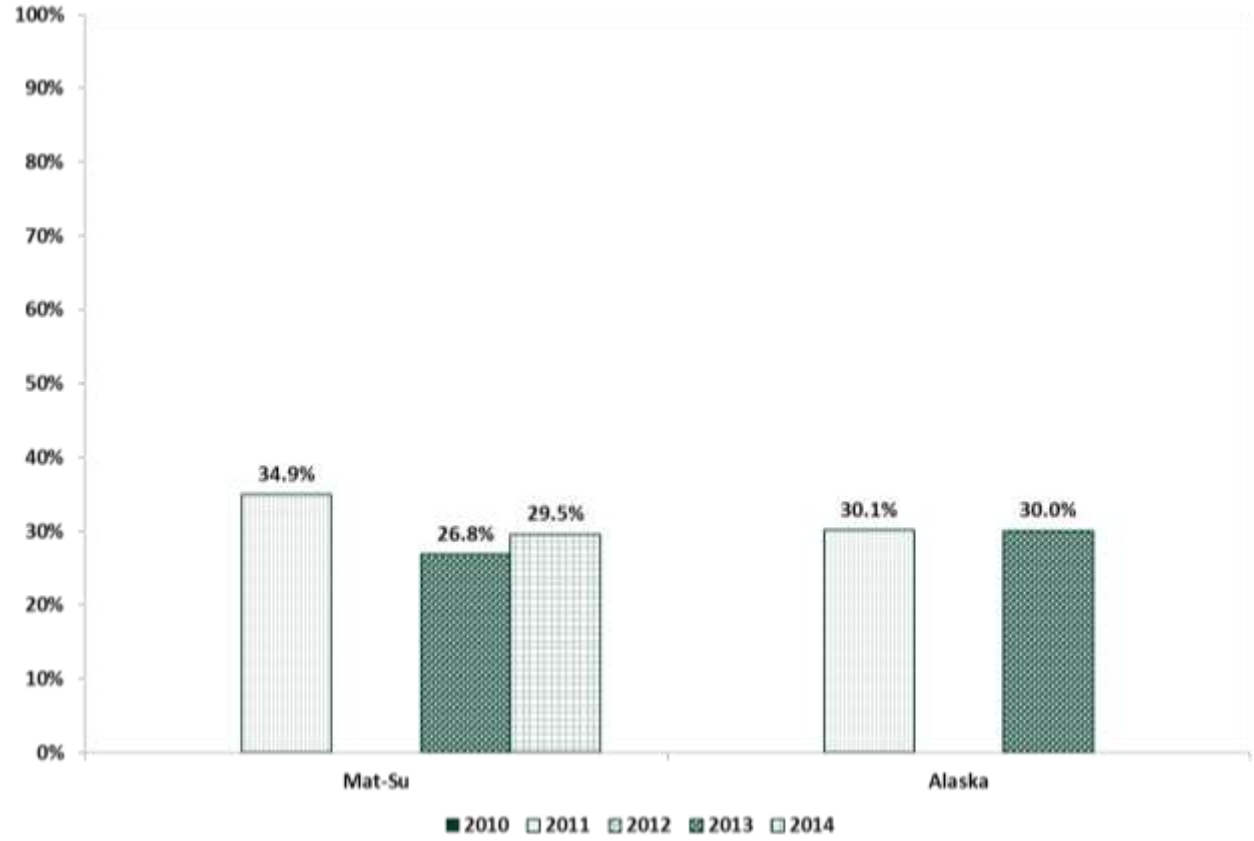
Figure 121 - Ever Told Had High Blood Pressure, 2009, 2011, 2013, and 2014



Source: Alaska Behavioral Risk Factor Surveillance System Data, Healthy People 2020

While this particular question was asked only asked sporadically over the past several years, Figure 122 illustrates the five-year trend for the percentage of respondents in Mat-Su and Alaska who reported they have ever been told they have high blood pressure, where data is available. Between 2013 (26.8%) and 2014 (29.5%), there was an increase in the percentage of Mat-Su respondents who reported they have ever been told they have high blood pressure. In 2013, compared to the state (30.0%), Mat-Su (26.8%) had a smaller percentage of respondents reporting they had ever been told they had high blood pressure.

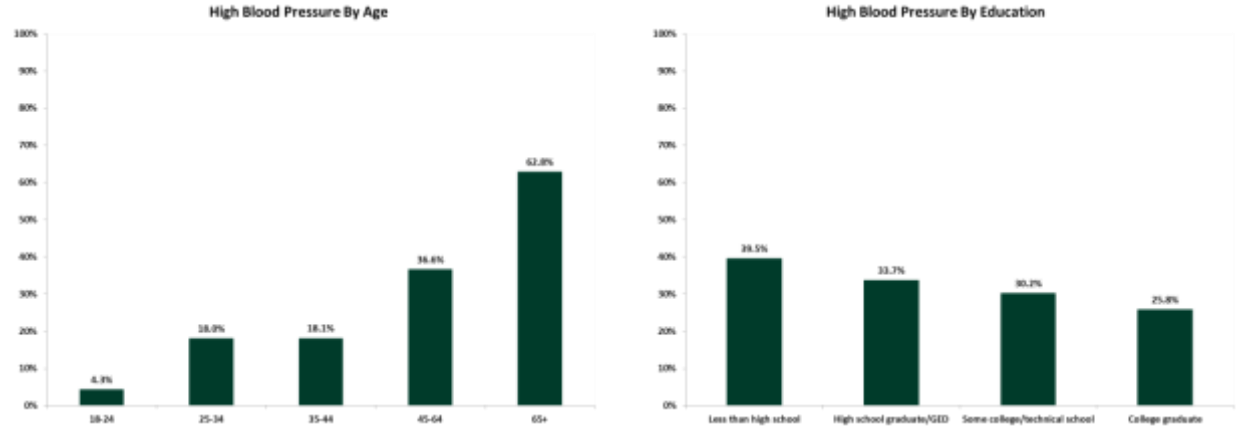
Figure 122 - Ever Told Had High Blood Pressure, Trend



Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System, **Figure 123** illustrates the demographic variables where a statistically significant difference was observed for respondents who self-reported having ever been told they had high blood pressure for the combined years of 2009, 2011, 2013, and 2014. Respondents over the age of 65 and those that did not graduate high school are more likely to have ever been told they have high blood pressure.

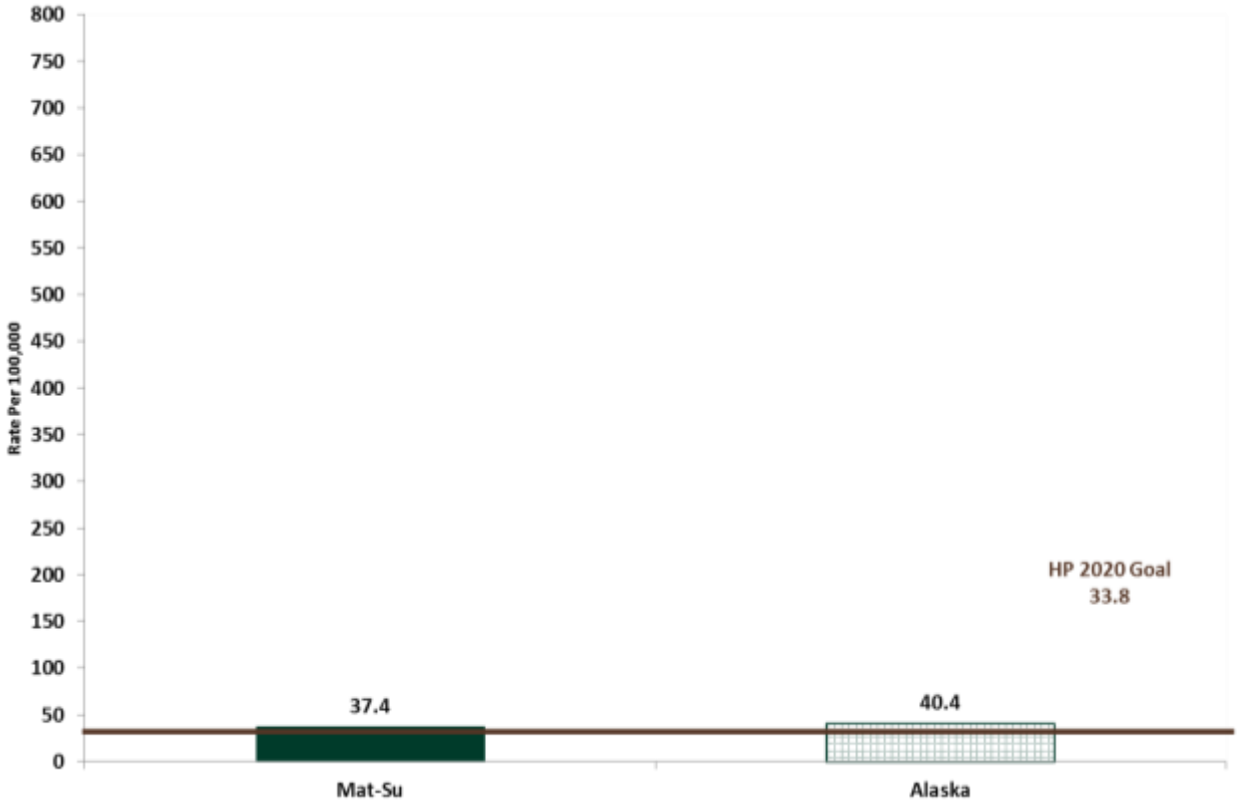
Figure 123 - Ever Told Had High Blood Pressure, Significant Differences



Source: Alaska Behavioral Risk Factor Surveillance System Data

According to the Alaska Department of Vital Statistics Death Certificate data, **Figure 124** shows the cerebrovascular mortality rate for Mat-Su and Alaska during the combined years of 2011-2015. Mat-Su (37.4) had a slightly lower cerebrovascular mortality rate when compared to the state (40.4). Both the Mat-Su and the state rates are slightly higher than the Healthy People 2020 Goal (33.8).

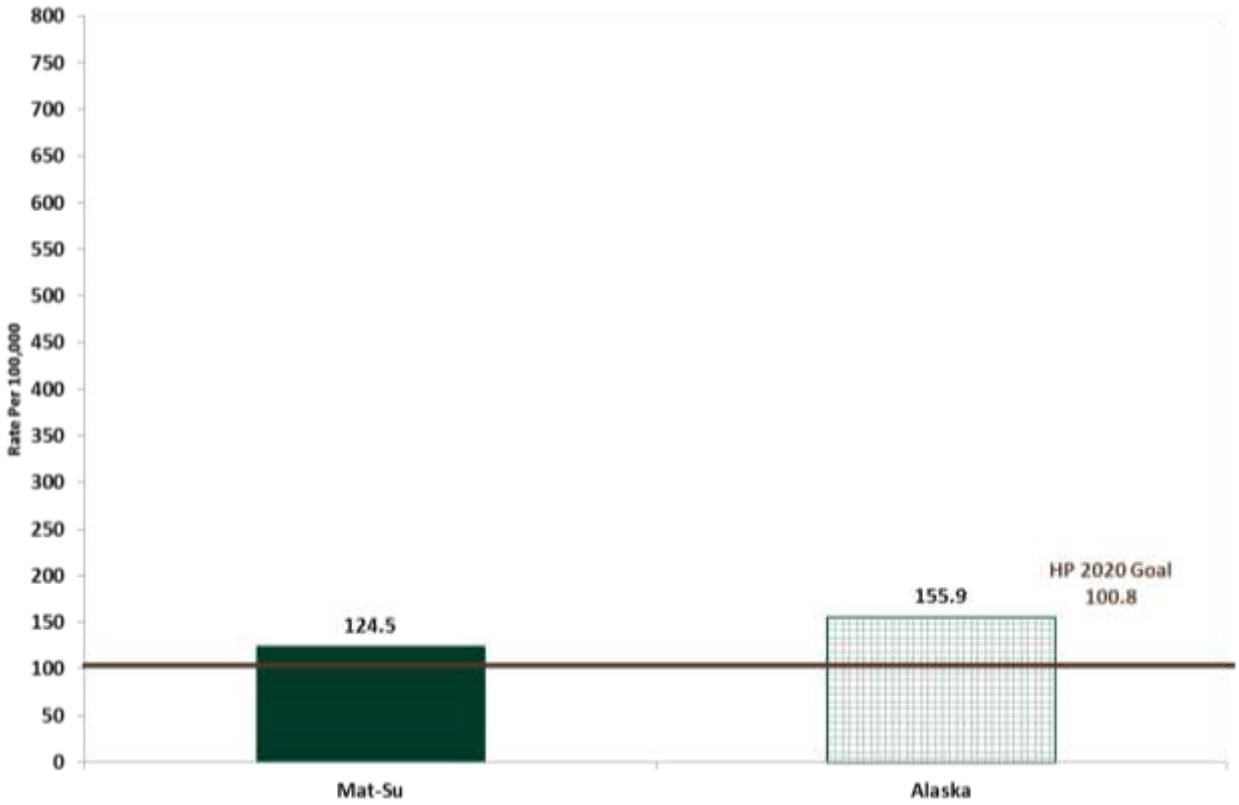
Figure 124 - Cerebrovascular Mortality Rate, 2011-2015



Source: Alaska Department of Vital Statistics Death Certificate Data, Healthy People 2020

The heart disease mortality rate for Mat-Su and Alaska during the combined years of 2011-2015 from the Alaska Department of Vital Statistics Death Certificate data is outlined in Figure 125. Mat-Su (124.5) had a slightly lower heart disease mortality rate when compared to the state (155.9). Mat-Su and the state rates are both higher than the Healthy People 2020 Goal (100.8).

Figure 125 - Heart Disease Mortality Rate, 2011-2015

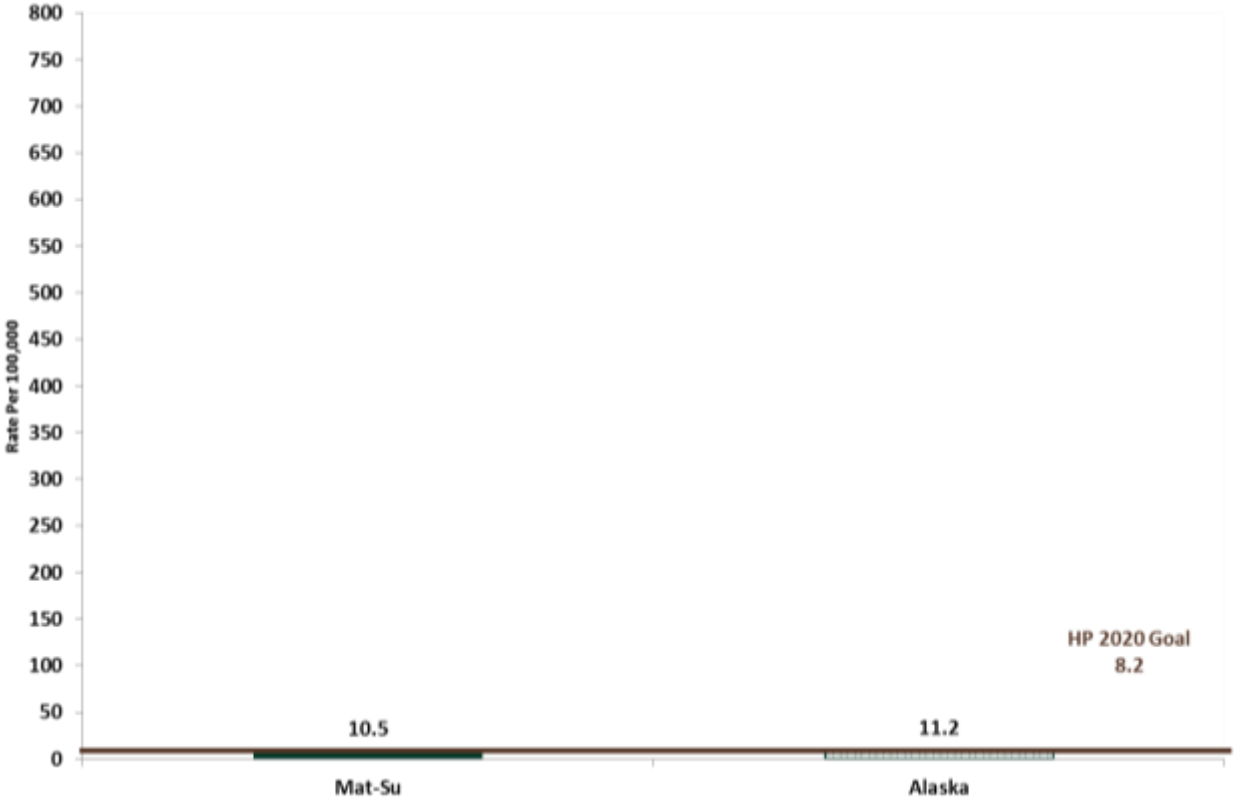


Source: Alaska Department of Vital Statistics Death Certificate Data, Healthy People 2020

Liver Disease

According to the Alaska Department of Vital Statistics Death Certificate data, **Figure 126** shows the liver disease mortality rate for Mat-Su and Alaska during the combined years of 2011-2015. Mat-Su (10.5) had a comparable liver disease mortality rate when compared to the state (11.2). Mat-Su and Alaska rates are slightly above the Healthy People 2020 Goal of 8.2.

Figure 126 - Liver Disease Mortality Rate, 2011-2015

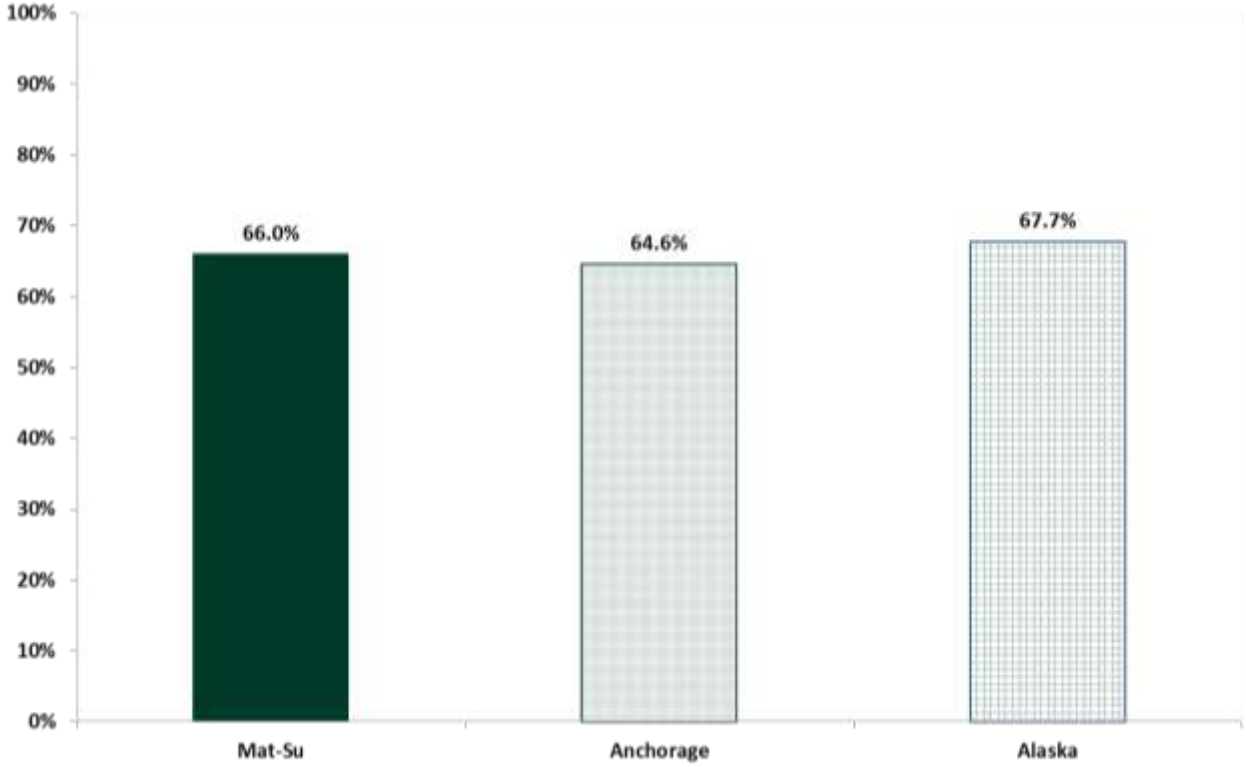


Source: Alaska Department of Vital Statistics Death Certificate Data, Healthy People 2020

Mental Health

As reported in the Alaska Behavioral Risk Factor Surveillance System, Figure 127 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who reported having no poor mental health days in last month during the combined years of 2010-2014. A comparable percentage of Mat-Su respondents (66.0%) reported their mental health as good when compared to Anchorage (64.6%) and Alaska (67.7%).

Figure 127 - Reports no Poor Mental Health Days in Last Month, 2010-2014

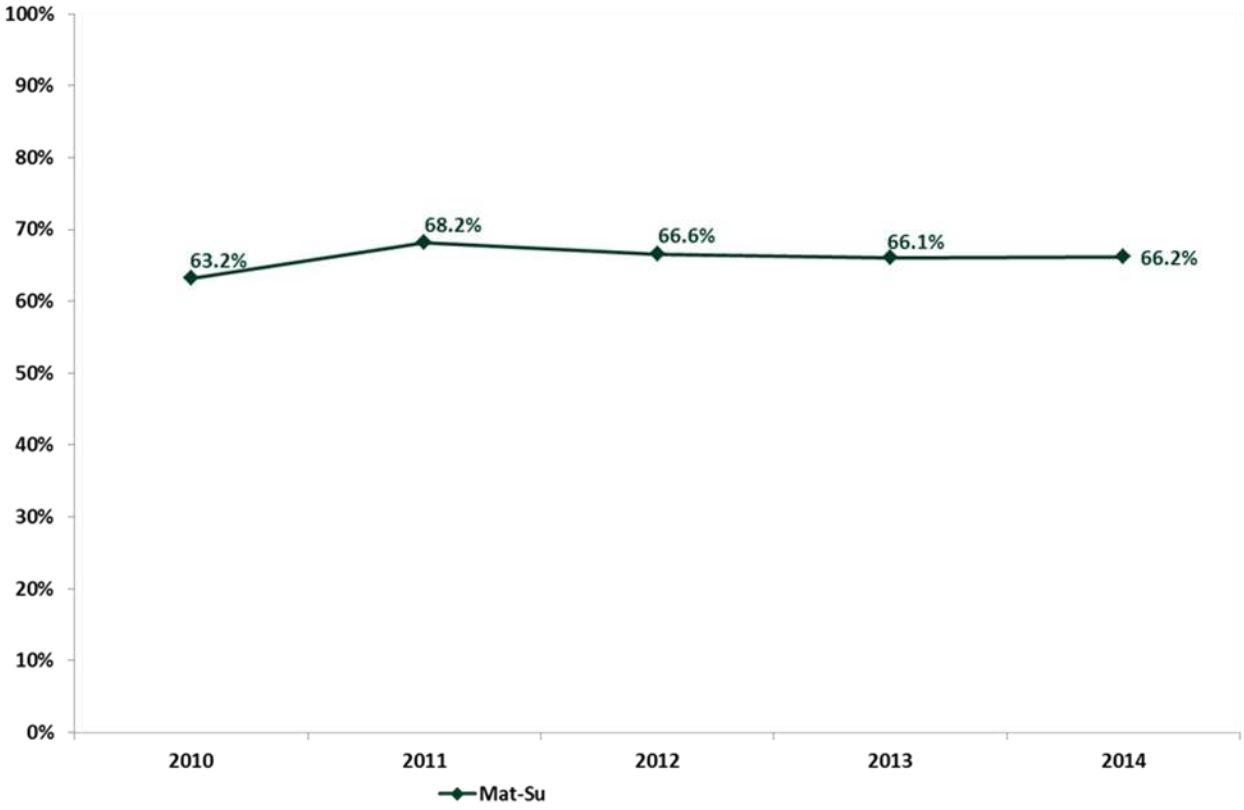


Original Question: Thinking about your mental health, which includes stress, depression and problems with emotions, for how many days during the past 30 days was your mental health not good? (% no days is reported)

Source: Alaska Behavioral Risk Factor Surveillance System Data

According to the Alaska Behavioral Risk Factor Surveillance System data, Figure 128 illustrates the five-year trend for the percentage of respondents in Mat-Su who reported having zero days in the past 30 where they were bothered by stress, depression or emotional problems. The percentage of respondents in Mat-Su reporting no poor mental health days in last month has remained steady in recent years.

Figure 128: Reports no Poor Mental Health Days in Last Month, 2010-2014, 5 Year Trend

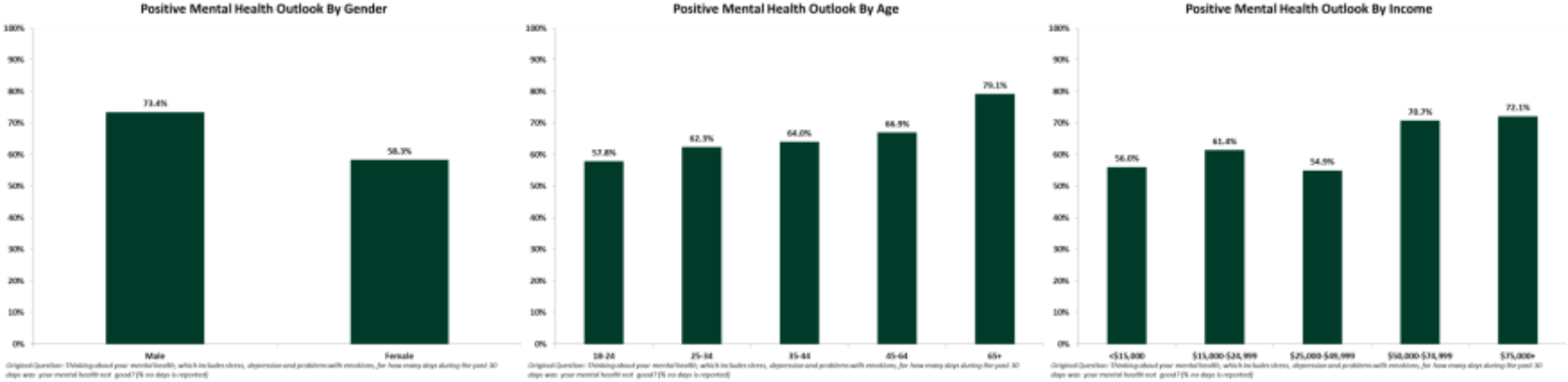


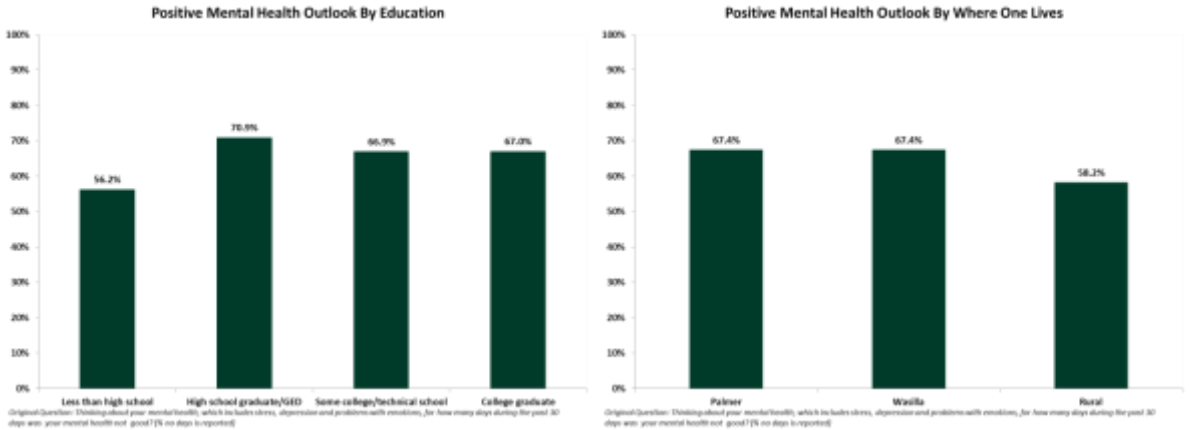
Original Question: Thinking about your mental health, which includes stress, depression and problems with emotions, for how many days during the past 30 days was your mental health not good? (% no days is reported)

Source: Alaska Behavioral Risk Factor Surveillance System Data

Based on data from the Alaska Behavioral Risk Factor Surveillance System, **Figure 129** illustrates the demographic variables where a statistically significant difference was observed for respondents who self-reported having no poor mental health days in last month. Females (58.3%) were more likely to report being bothered by stress, depression or emotional problems than males (73.4%). Older respondents (79.1%) were more likely to report having no poor mental health days in last month than younger respondents. Respondents with incomes of $25,000 to $49,999 (54.9%) were less likely to report having a positive mental health than other income groups. Those who did not graduate high school (56.2%) were more likely to report being stressed, depressed, or bothered by emotional problems than those with higher levels of education. Rural respondents (58.2%) were less likely to report having no poor mental health days in last month compared to others.

Figure 129 - Reports no Poor Mental Health Days in Last Month, Significant Differences

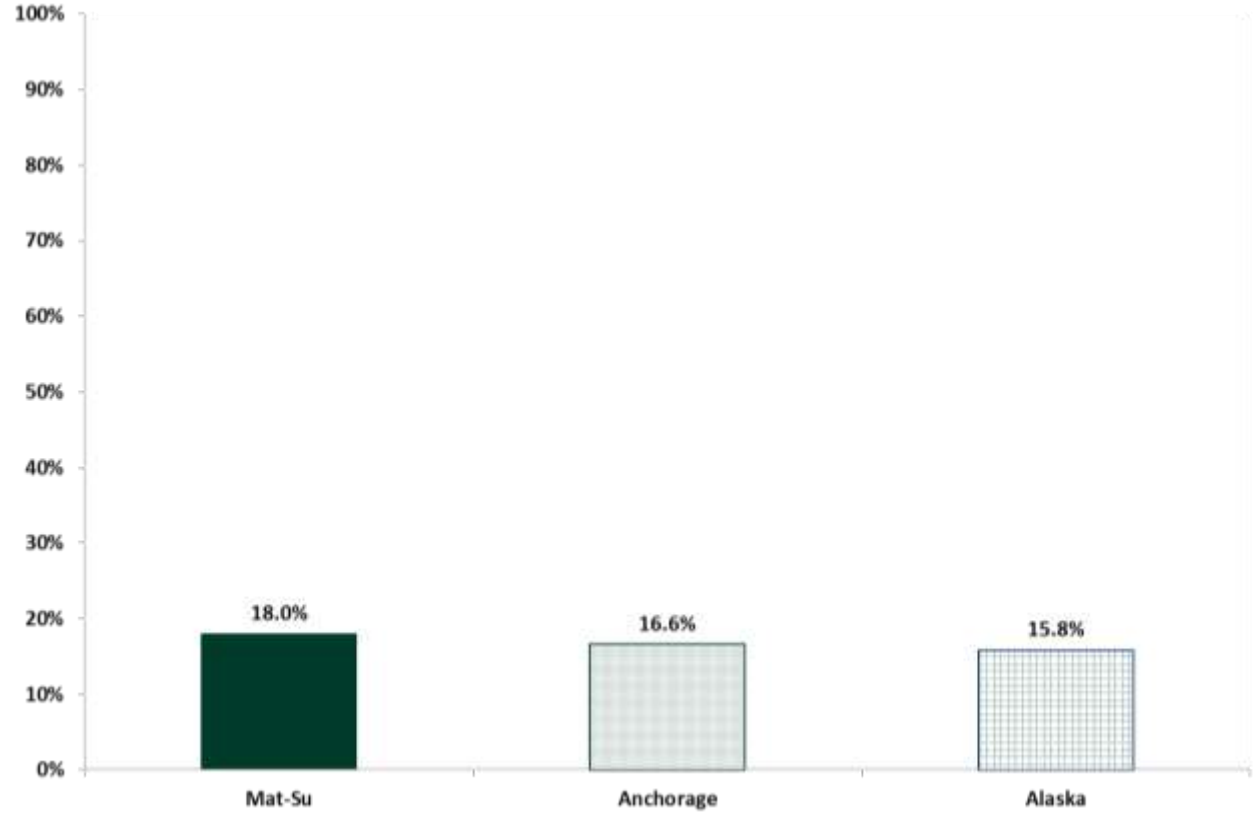




Source: Alaska Behavioral Risk Factor Surveillance System Data

The percentage of Alaska Behavioral Factor Surveillance System respondents in Mat-Su, Anchorage and Alaska who reported that they have ever been told they have depressive disorder during the combined years of 2010-2014 is outlined in Figure 130. A slightly higher percentage of Mat-Su respondents (18.0%) reported having ever been told they have a depressive disorder when compared to respondents from Anchorage (16.6%) and Alaska (15.8%).

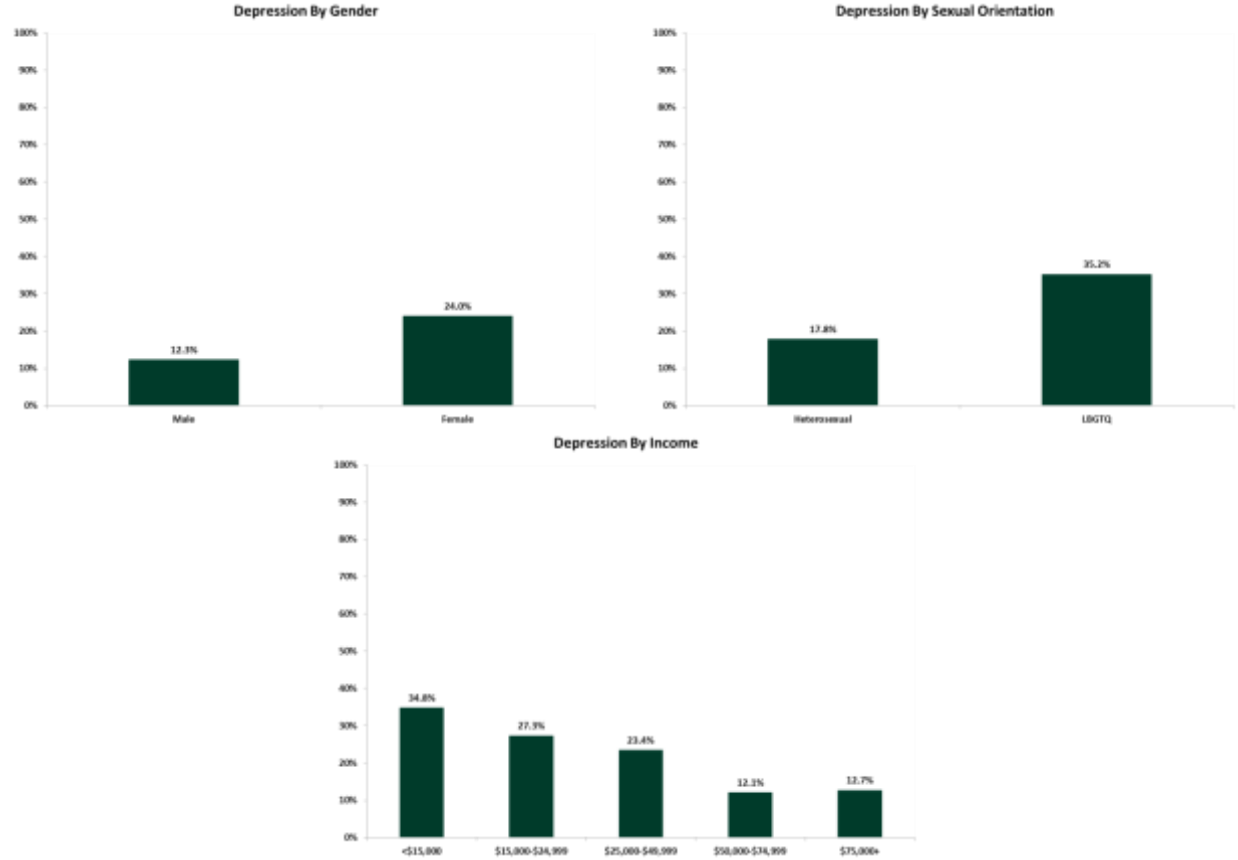
Figure 130 - Ever Told Have Depressive Disorder, 2010-2014, Combined



Source: Alaska Behavioral Risk Factor Surveillance System Data

Where statistically significant differences were observed from the Alaska Behavioral Risk Factor Surveillance System based on demographic variables for respondents who self-reported having ever been told they have a depressive disorder are illustrated in Figure 131. Females, LQBTQ respondents, and respondents with incomes less than $15,000 were more likely to report they have ever been told they have depressive disorder.

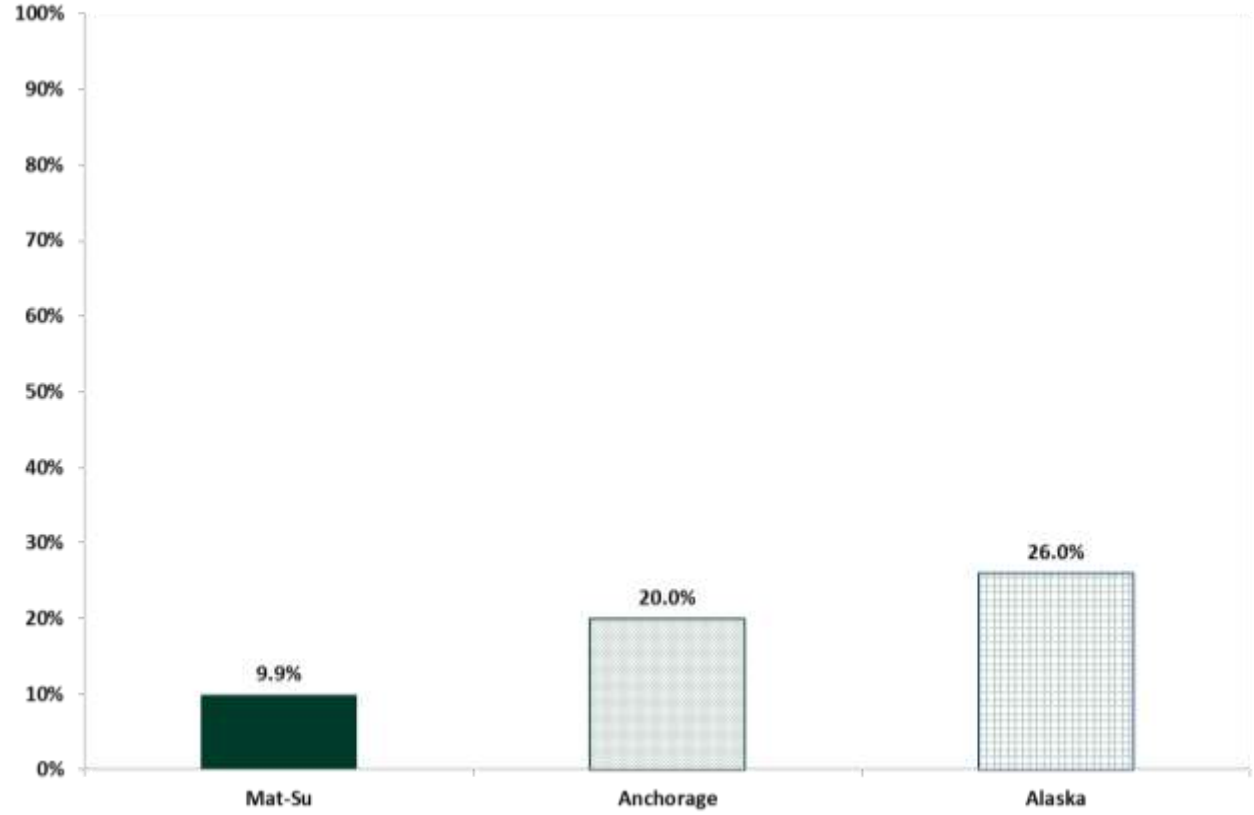
Figure 131 - Ever Told Had Depressive Disorder, Significant Differences



Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System, Figure 132 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who reported that they made a suicide plan in the past 12 months for the combined years of 2010 and 2013. Although there is not a statistically significant difference, Mat-Su (9.9%) had half the percentage of respondents who reported that they made a suicide plan in the past 12 months when compared to respondents from Anchorage (20.0%) and almost a third of the percentage reported statewide (26.0%).

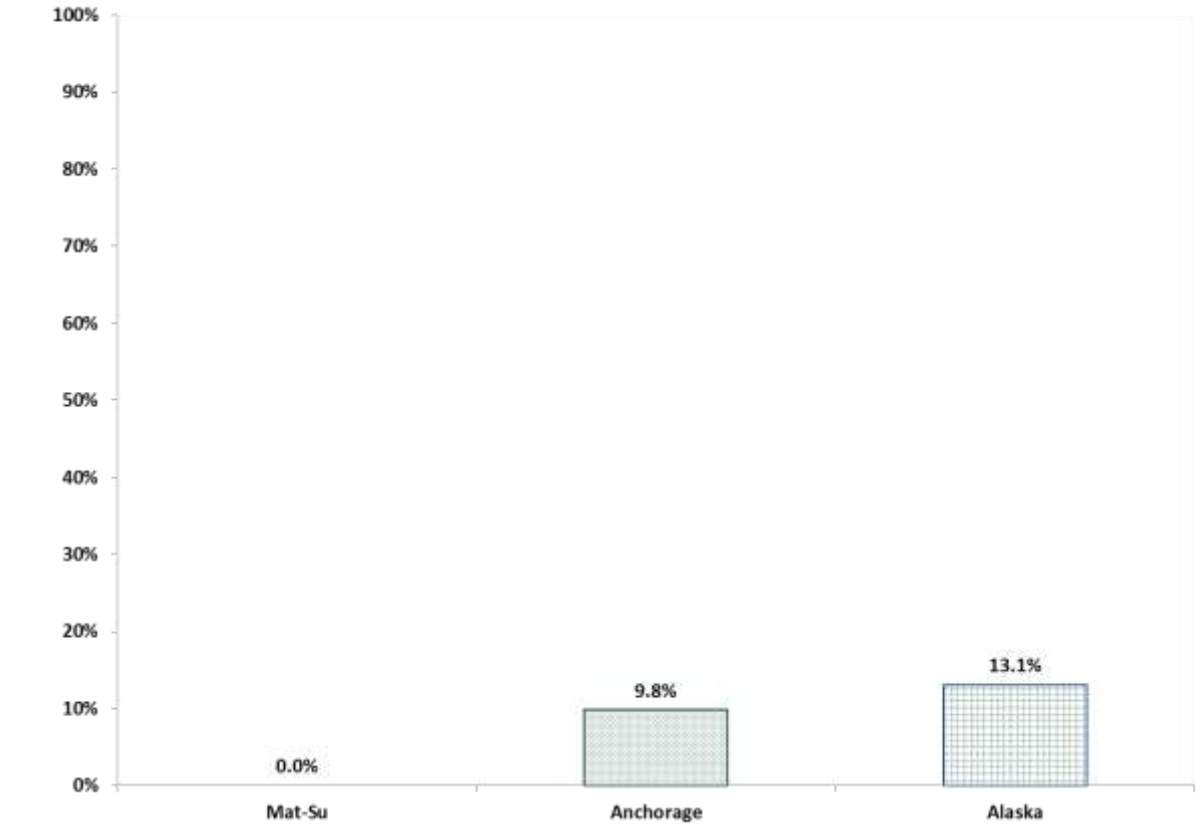
Figure 132 – Made Suicide Plan, Past 12 Months, 2010-2013, Combined



Source: Alaska Behavioral Risk Factor Surveillance System Data

The Alaska Behavioral Risk Factor Surveillance System data in **Figure 133** illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who reported that they attempted suicide in the past 12 months for the combined years of 2010, 2011 and 2013. No one in Mat-Su (0.0%) reported that they attempted suicide during this timeframe, which was lower compared to both the state (13.1%), and Anchorage (9.8%).

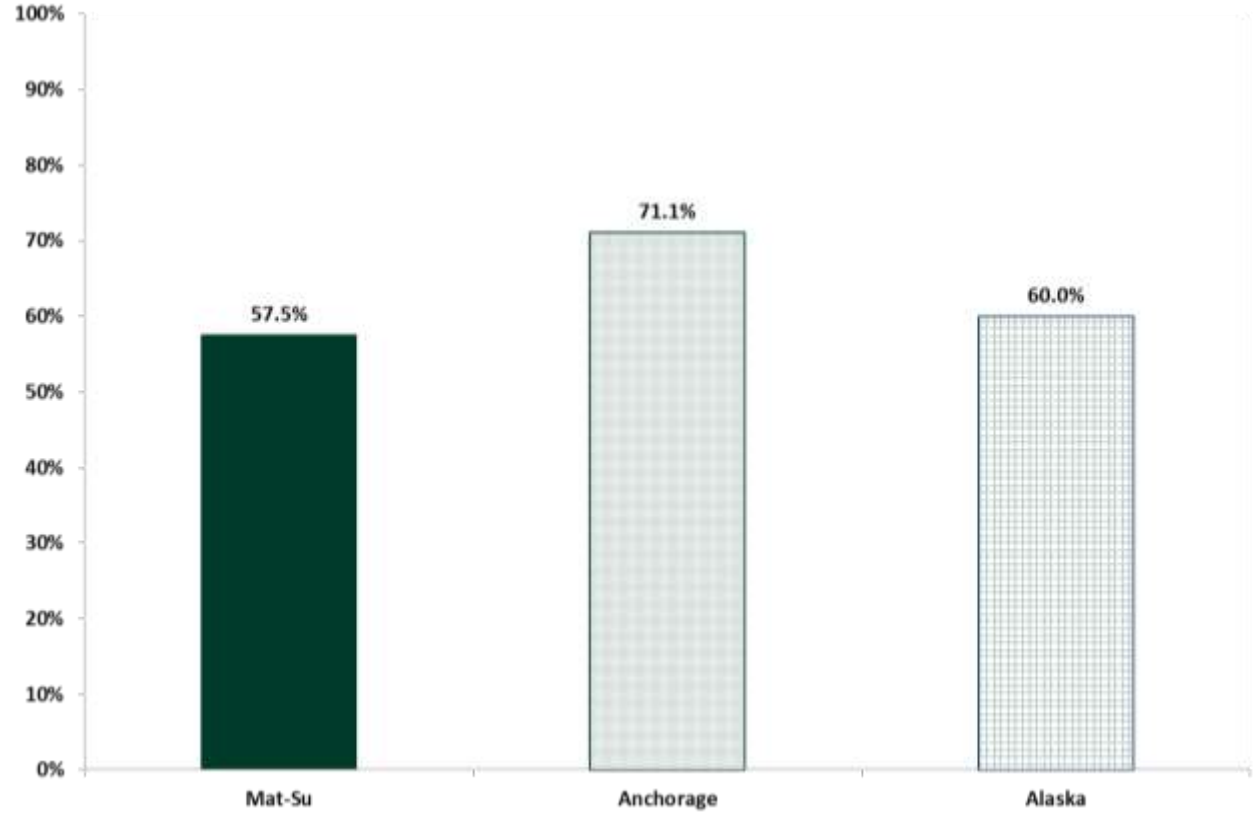
Figure 133 - Attempted Suicide, Past 12 Months



Source: Alaska Behavioral Risk Factor Surveillance System Data

As outlined in the Alaska Behavioral Risk Factor Surveillance System, Figure 134 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who reported that they had thoughts of suicide at least one day during the past 30 days for the combined years of 2010 and 2013. Mat-Su (57.5%) had a smaller percentage of respondents reporting suicide thoughts during the past 30 days when compared to Anchorage (71.1%) and Alaska overall (60.0%).

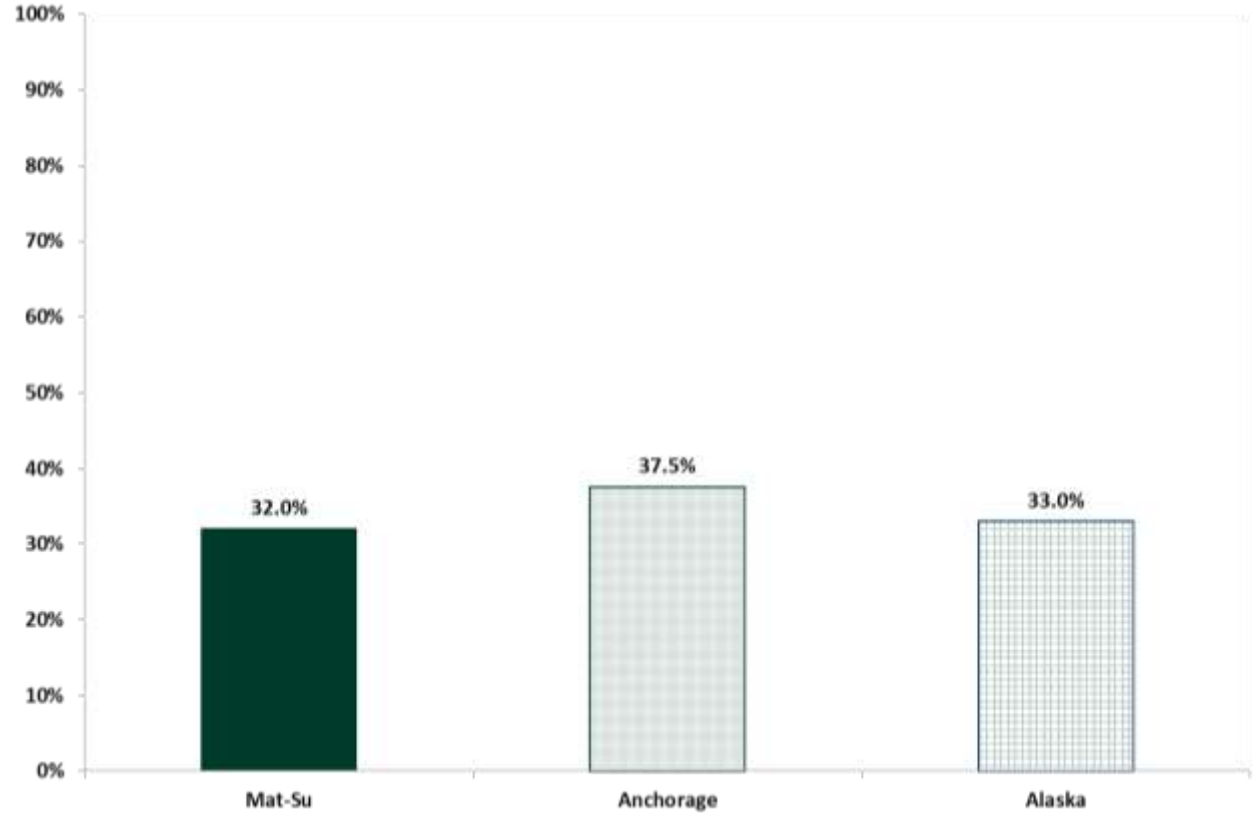
Figure 134 - Suicide Thoughts at least 1 Day, Past 30 Days, 2010-2013, Combined



Source: Alaska Behavioral Risk Factor Surveillance System Data

The percentage of respondents in Mat-Su, Anchorage and Alaska who reported in the Alaska Behavioral Risk Factor Surveillance System that they had thoughts of suicide or hurting themselves over the past 12 months for the combined years of 2010, 2011 and 2013 is outlined in Figure 135. Mat-Su (32.0%) had a smaller percentage of residents reporting thoughts of suicide or hurting themselves when compared to Anchorage (37.5%). Mat-Su had a comparable percentage of residents who indicated that they had thoughts of harming themselves as did those respondents from Alaska overall (33.0%).

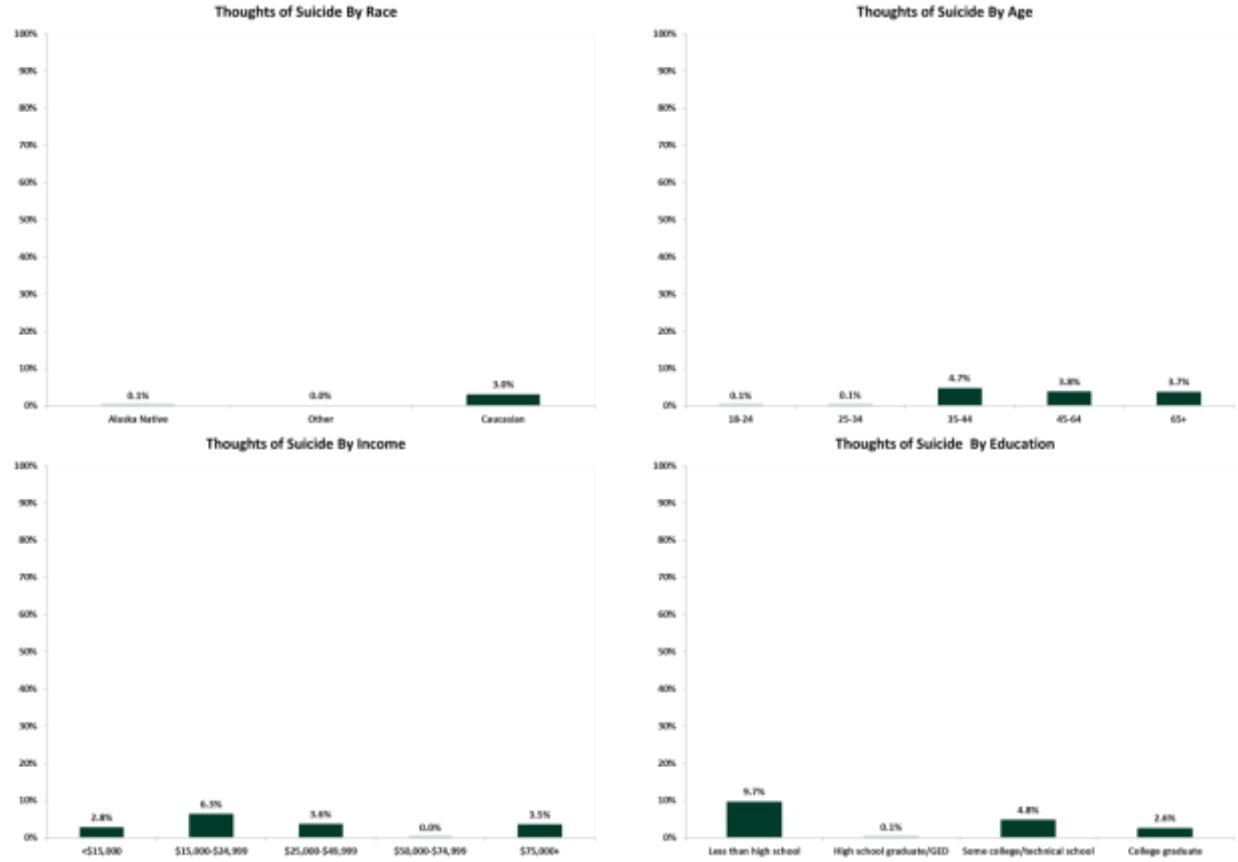
Figure 135 - Thoughts of Suicide or Hurting Self, Past 12 Months, 2010, 2011, 2013 Combined



Source: Alaska Behavioral Risk Factor Surveillance System Data

As reported in the Alaska Behavioral Risk Factor Surveillance System, **Figure 136** illustrates the demographic variables where a statistically significant difference was observed for respondents who report that they have thought about suicide or harming themselves. Caucasian respondents, respondents over the age of 34, those with incomes between $15,000 and $24,999, and those who did not graduate high school are more likely to have thoughts of suicide or harming themselves compared to their counterparts.

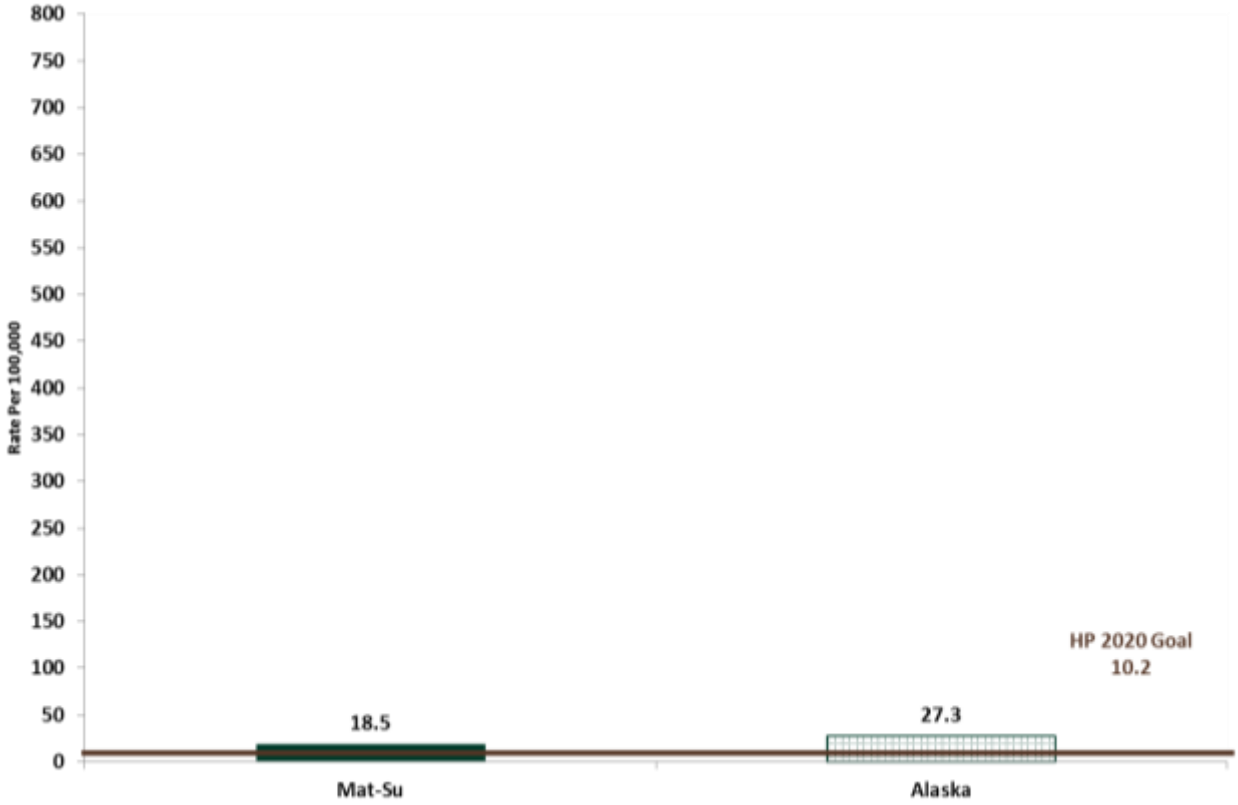
Figure 136 - Thoughts of Suicide or Harming Self, Significant Differences



Source: Alaska Behavioral Risk Factor Surveillance System Data

The Alaska Department of Health and Human Services Bureau of Vital Statistics data in **Figure 137** illustrates the suicide mortality rate for Mat-Su and Alaska during the combined years of 2011-2015. Mat-Su (18.5) had a lower suicide mortality rate when compared to Alaska (27.3). Both rates are higher than the Healthy People 2020 Goal of 10.2.

Figure 137 - Suicide Mortality Rate, 2011- 2015



Source: Alaska Department of Health and Human Services Bureau of Vital Statistics, Healthy People 2020 Goals

The number of behavior health related ambulance emergency calls in Mat-Su in years 2007-2013 is outlined in Table 130. The number of calls related to suicide, assault, or overdose decreased between 2012 and 2013. There was an increase in calls related to other behavioral health issues. The highest number of calls during this timeframe were for suicide or attempted suicide.

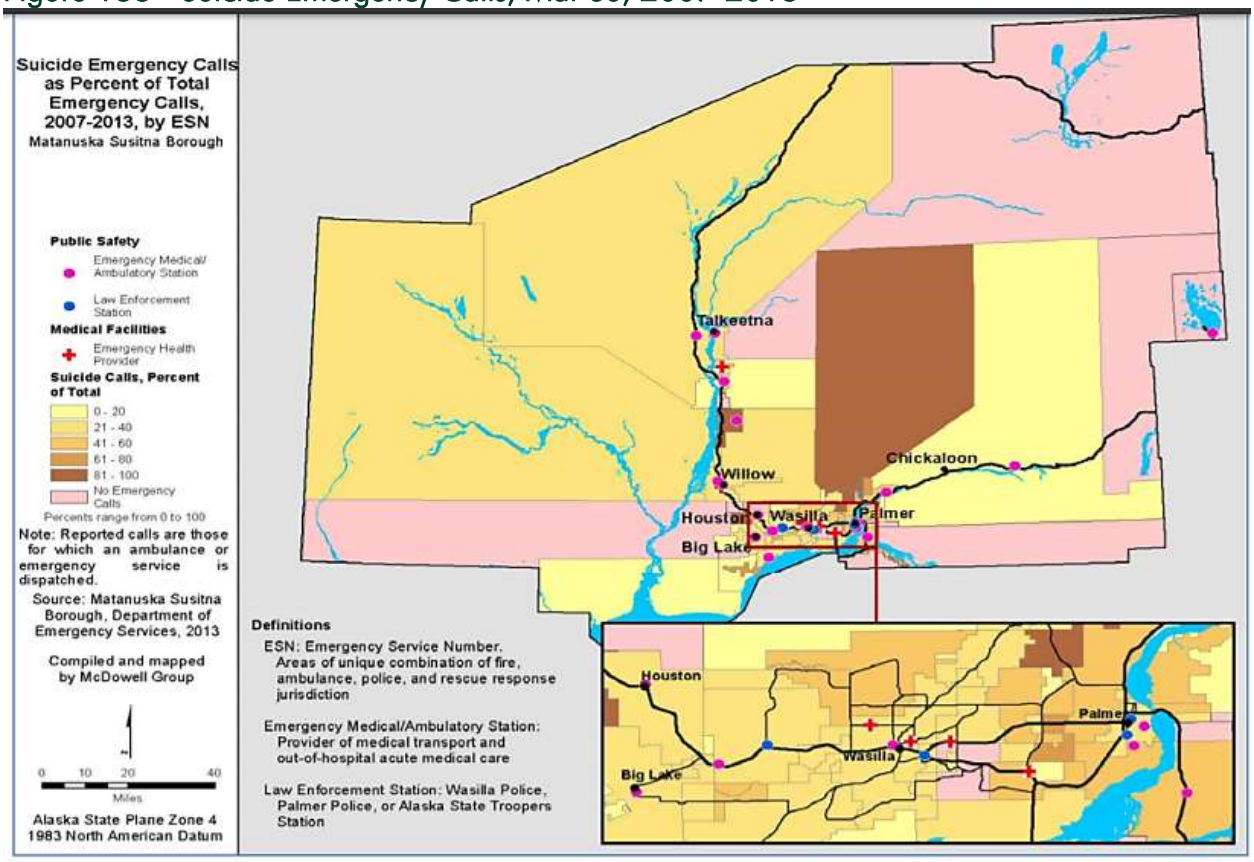
Table 130 - Ambulance Emergency Behavior Health Related Calls, Mat-Su, 2007-2013

BH Type	2007	2008	2009	2010	2011	2012	2013	Total
Suicide, Attempted Suicide	92	141	148	129	190	230	160	1,090
Assault	81	150	132	134	172	155	142	966
Overdose	65	76	86	77	101	100	98	603
Other Behavioral Issues	18	27	31	21	50	47	75	269
Driving under the Influence	6	5	21	15	20	16	16	99
Total Call Responses	262	399	418	376	533	548	491	3,027

Source: Mat-Su Behavioral Health Environmental Scan, 2014

As reported in the Mat-Su Behavioral Health Environmental Scan 2014, **Figure 138** illustrates the location of suicide or attempted suicide calls in Mat-Su for the combined years of 2007-2013 as well as the location of ambulance stations, emergency medical providers and law enforcement offices. Service providers are clustered around Wasilla, while the areas receiving the highest volume of calls appear to be underserved.

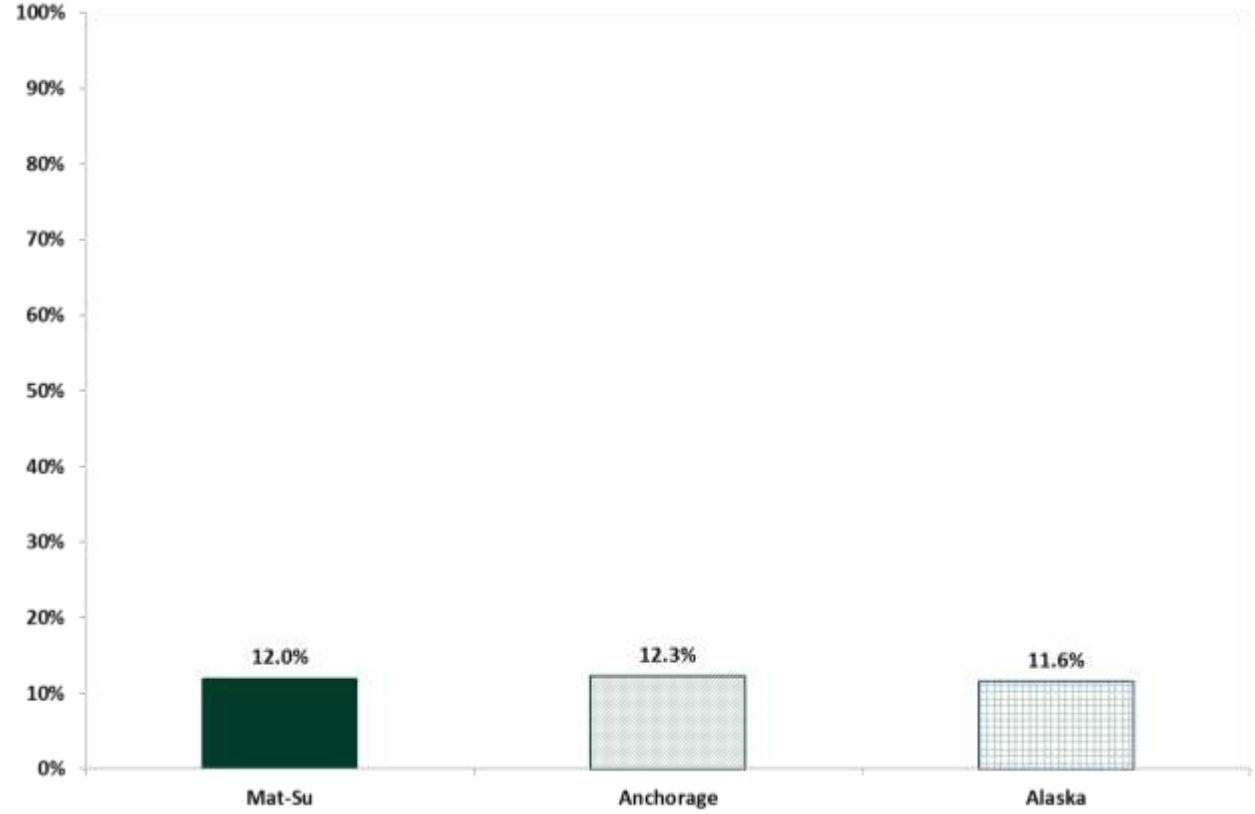
Figure 138 - Suicide Emergency Calls, Mat-Su, 2007-2013



Source: Mat-Su Behavioral Health Environmental Scan, 2014

While the information is dated, it is the most recent available from the Alaska Behavioral Risk Factor Surveillance System. Figure 139 illustrates the percentage of respondents in Mat-Su, Anchorage and Alaska who reported they have ever been told they have an anxiety disorder in 2006. A comparable percentage of respondents in Mat-Su (12.0%), Anchorage (12.3%) and Alaska (11.6%) reported having been told they have an anxiety disorder.

Figure 139 - Ever Told Have an Anxiety Disorder, 2006

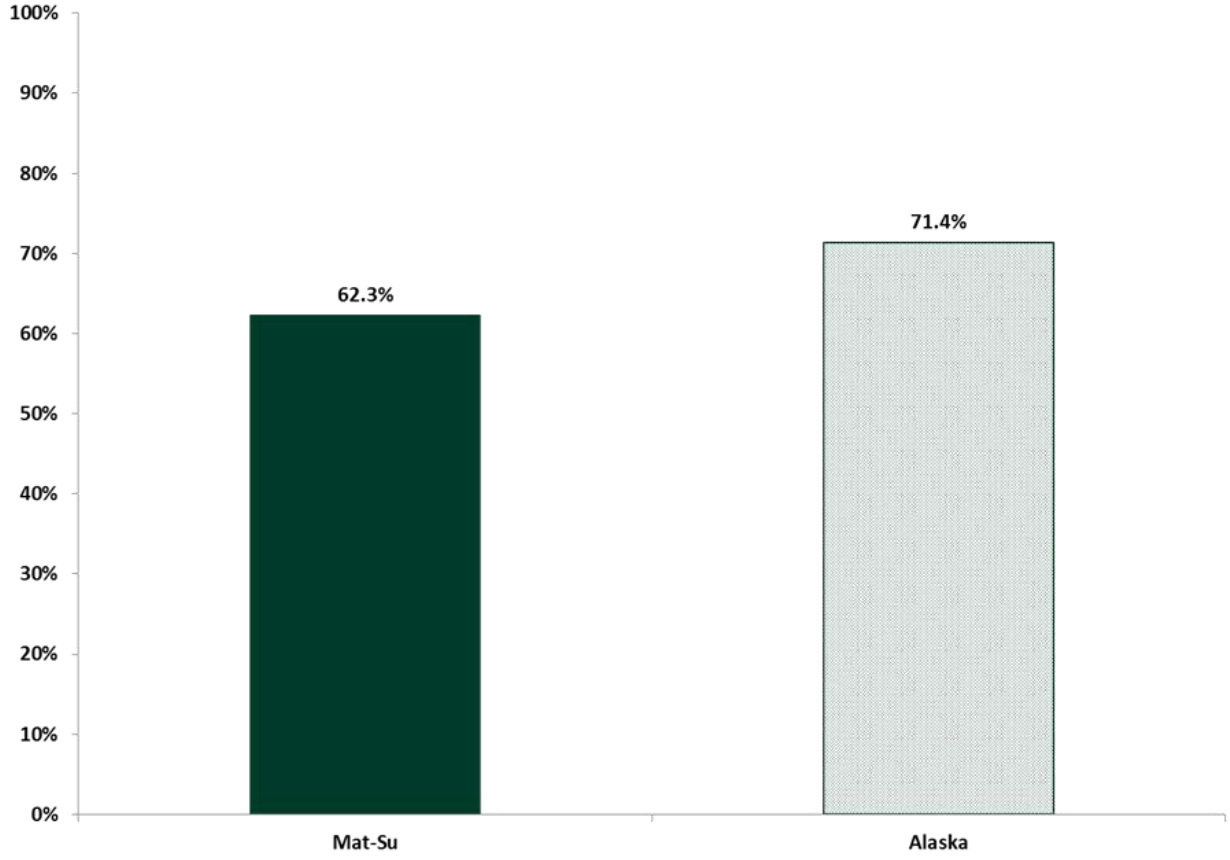


Source: Alaska Behavioral Risk Factor Surveillance System Data

Mothers, Infants and Children

The percentage of children in Mat-Su and Alaska who were immunized during the combined years of 2012-2014 is illustrated in **Figure 140**. Children in Mat-Su (62.3%) were less likely to get vaccinated when compared to children in Alaska overall (71.4%). A statistically significant difference was observed for respondents who reported childhood immunizations.

Figure 140 - Childhood Immunization Rates, 2012-2014



Original Question: Ever delayed or decide not to get vaccine shot or immunization for your child?

Source: Alaska CUBS

The number of students with a disability in Mat-Su and Alaska during the 2014-2015 school year is outlined in Table 131. Approximately 14.5% of the students in Mat-Su had a disability, which is comparable to the percentage of students in Alaska with a disability (13.8%). The most common disability was considered some other health impairment not listed, followed by a speech/language impairment, and orthopedic impairment.

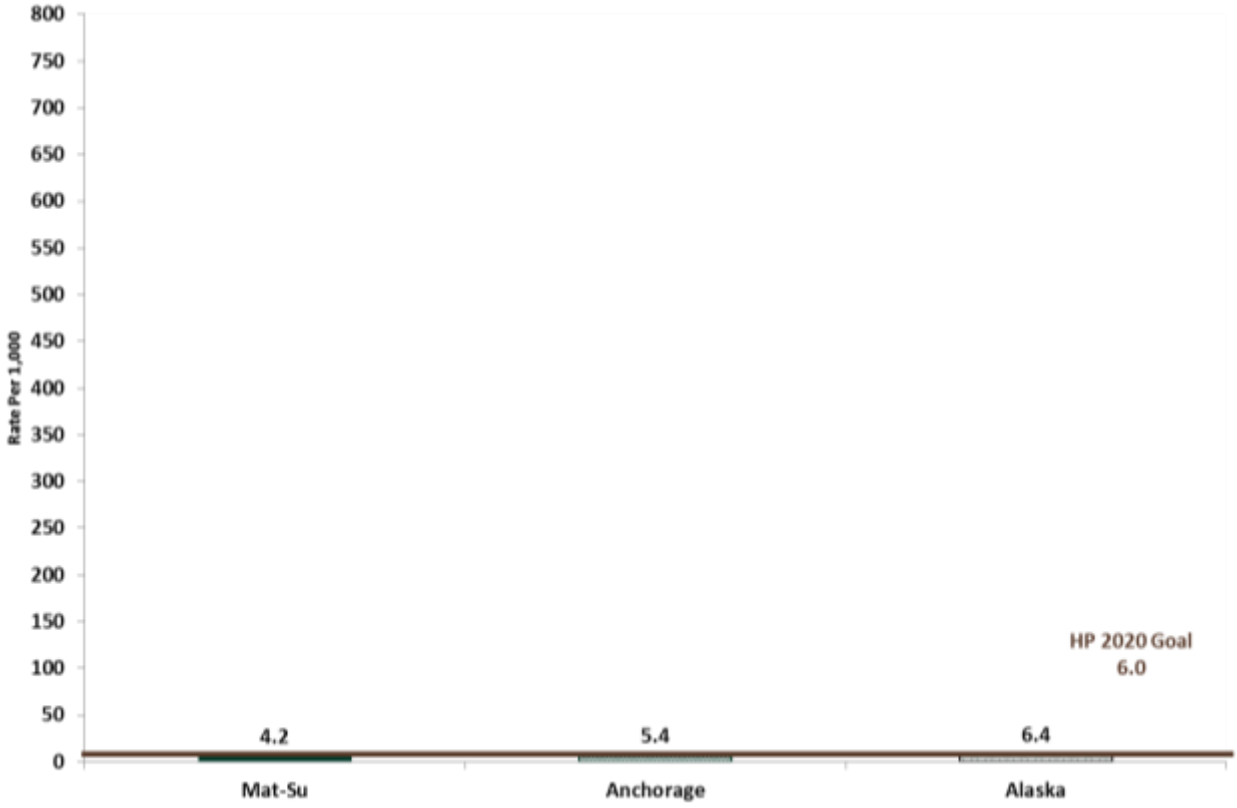
Table 131 - Students (age 3-21) with a Disability, 2014-2015

Disability	Mat-Su	Alaska
Cognitive impairments	73	622
Hearing impaired	26	195
Speech/language impaired	469	3,004
Developmentally delayed	7	46
Visual impairments	157	663
Emotional disturbance	12	79
Orthopedic impairments	348	2,560
Other health impairments	1,008	7,020
Specific learning disabilities	N/A	4
Deaf-blindness	57	458
Multiple disabilities	158	1,201
Autism	3	50
Traumatic brain injury	292	2,121
Total enrollment	18,037	132,966
Total enrollment with disabilities	2,611	18,390

Source: Alaska CUBS

The infant mortality rate for Mat-Su, Anchorage, and Alaska during the combined years of 2011-2015 is illustrated in **Figure 141**. Mat-Su (4.2) had a slightly lower infant mortality rate when compared to Anchorage (5.4) and the state (6.4). Mat-Su and Anchorage meet the Healthy People 2020 Goal (6.0).

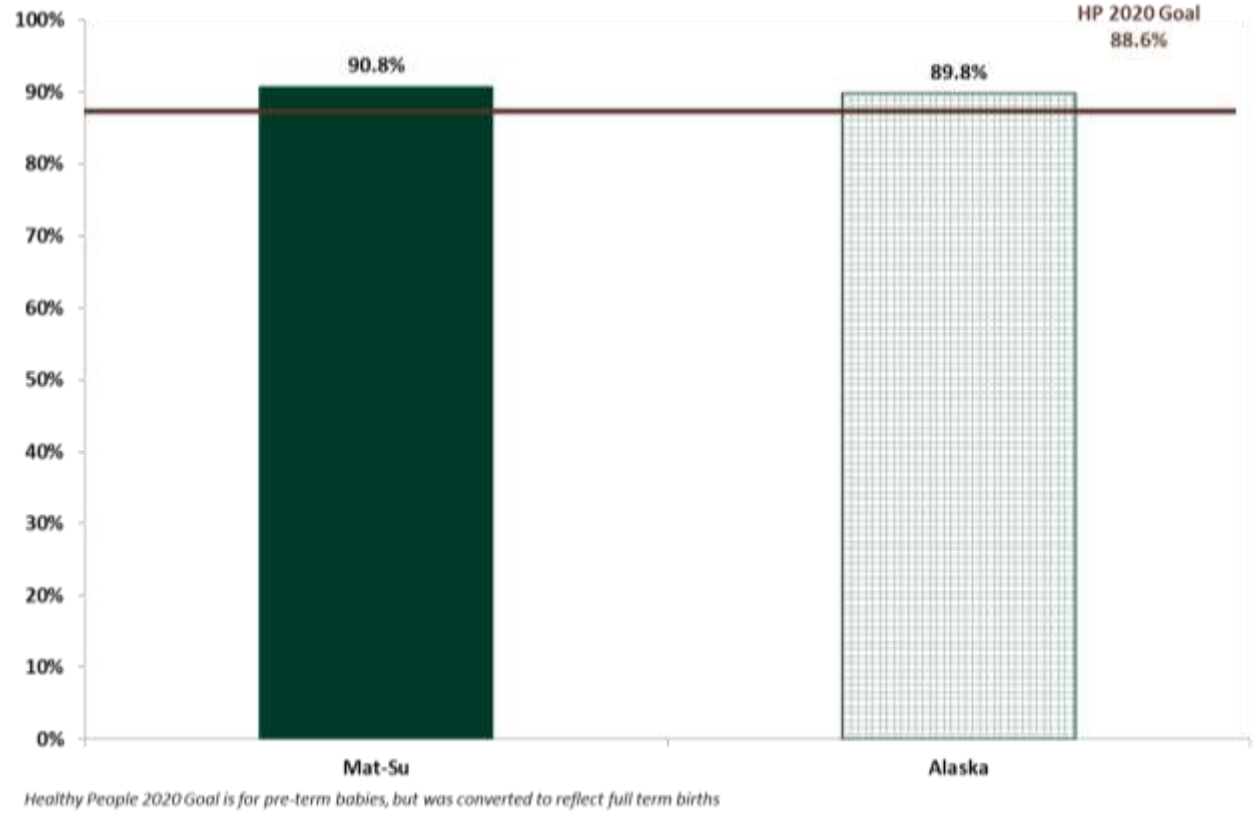
Figure 141 - Infant Mortality Rate, 2011-2015, Combined



Source: Alaska Department of Vital Statistics Death Certificate Data, Healthy People 2020

The Alaska Department of Vital Statistics data reported in **Figure 142** shows the percentage of babies born full term in Mat-Su and Alaska during the combined years of 2011-2015. Mat-Su (90.8%) had a comparable percentage of babies born full gestation as the state (89.8%). Mat-Su and Alaska meet the Healthy People 2020 Goal (88.6%).

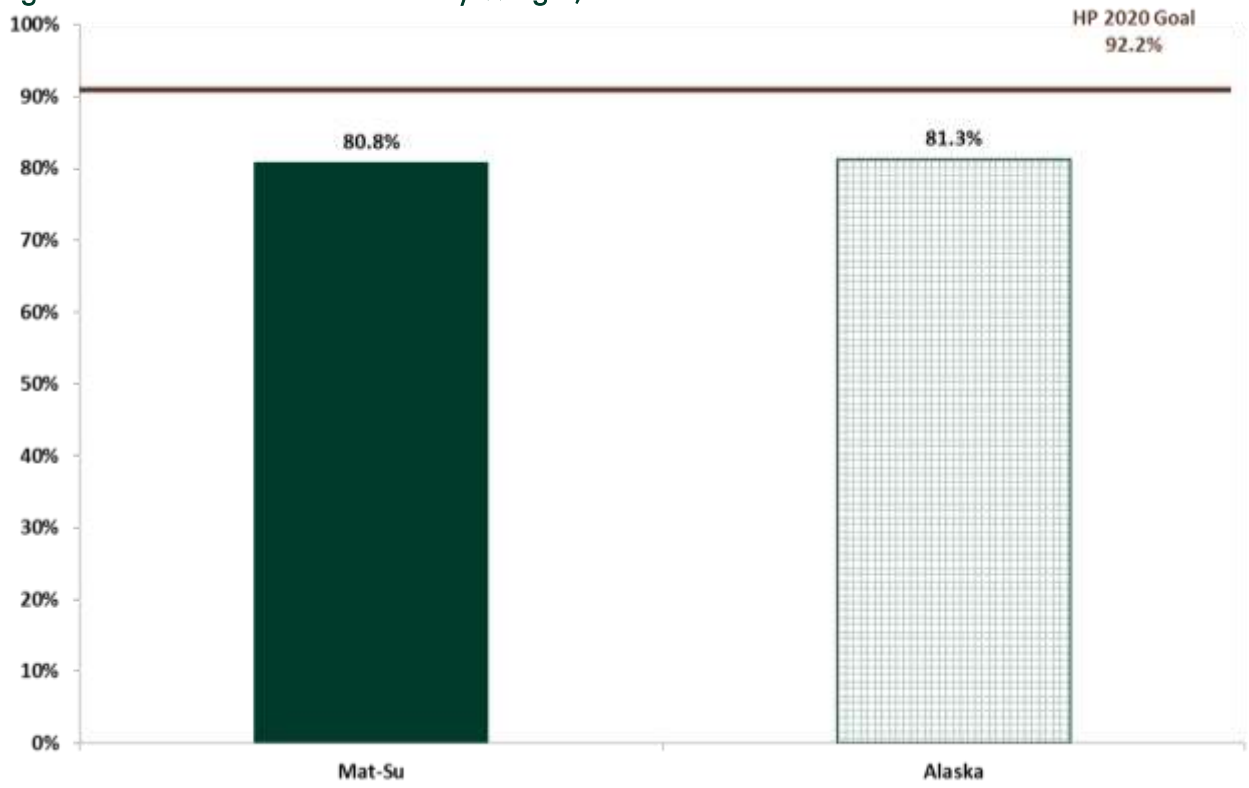
Figure 142 - Babies Born Full Gestation, 2011-2015, Combined



Source: Alaska Department of Vital Statistics, Healthy People 2020

According to the Alaska Department of Vital Statistics data, Figure 143 shows the percentage of babies born a healthy weight in Mat-Su and Alaska during the combined years of 2011-2015. Mat-Su (80.8%) had a comparable percentage of babies born at a healthy weight to the state (81.3%). Mat-Su and Alaska fall below the Healthy People 2020 Goal (92.2%).

Figure 143 - Babies Born a Healthy Weight, 2011-2015



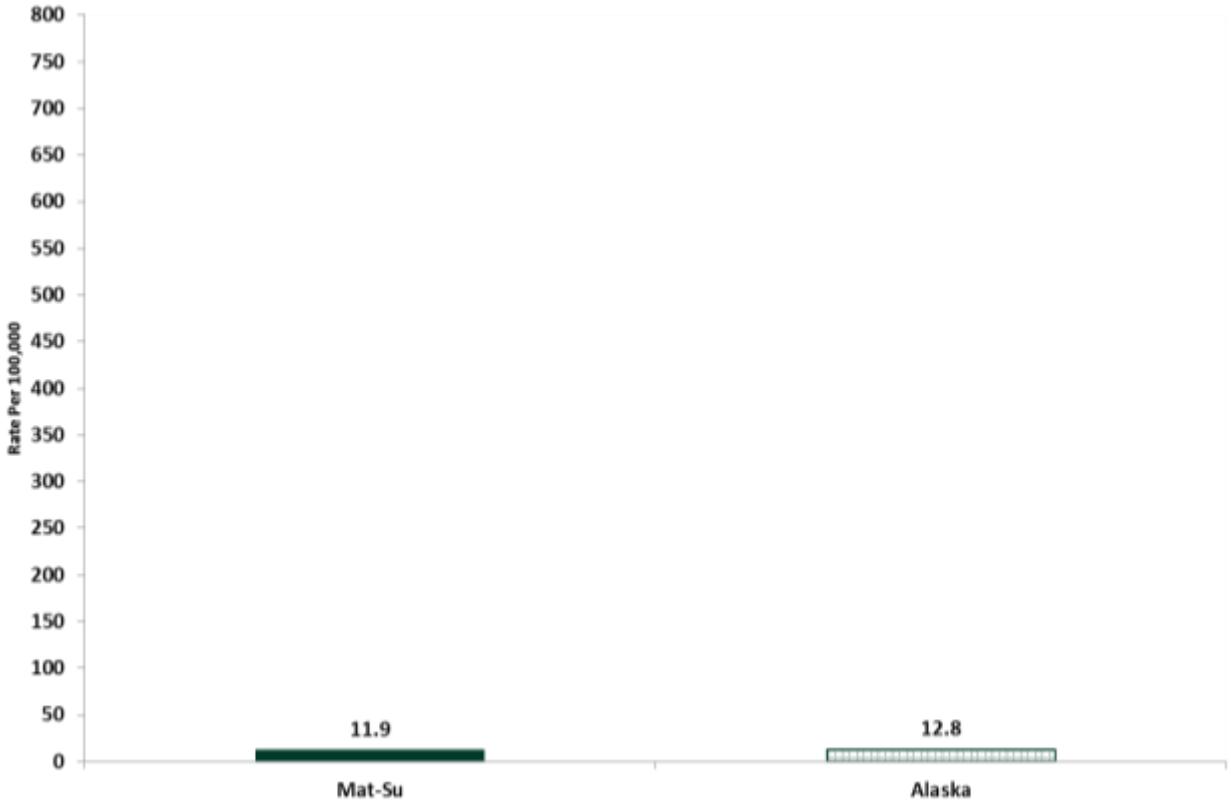
Healthy People 2020 Goal is for low birth weight babies, but was converted to reflect babies born a healthy weight

Source: Alaska Department of Vital Statistics, Healthy People 2020

Infectious Disease

The influenza and pneumonia mortality rate for Mat-Su and Alaska during the combined years of 2011-2015 is outlined by the Alaska Department of Vital Statistics Death Certificate data in **Figure 144**. Mat-Su (11.9) had a comparable influenza and pneumonia mortality rate when compared to the state (12.8).

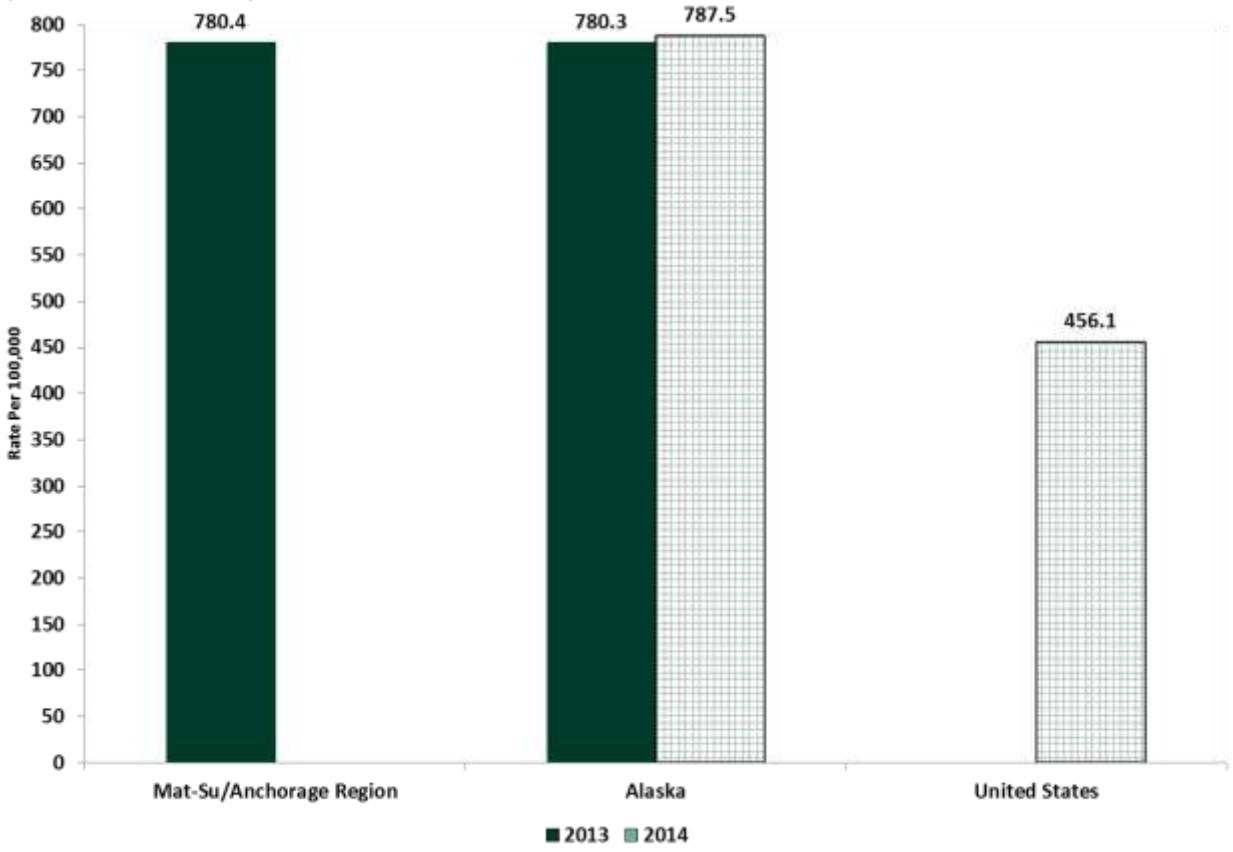
Figure 144 - Influenza and Pneumonia Mortality Rate



Source: Alaska Department of Vital Statistics Death Certificate Data

The chlamydia rate for the Mat-Su/Anchorage Region, Alaska and the United States in 2013 and 2014, where data is available, is outlined in Figure 145. In 2013, the rate in the Mat-Su/Anchorage Region (780.4) was comparable to Alaska (780.3). The rate in the Mat-Su/Anchorage Region and state overall are almost twice as high as that of the U.S. overall (456.1).

Figure 145 - Chlamydia Rate, 2013-2014, Trend

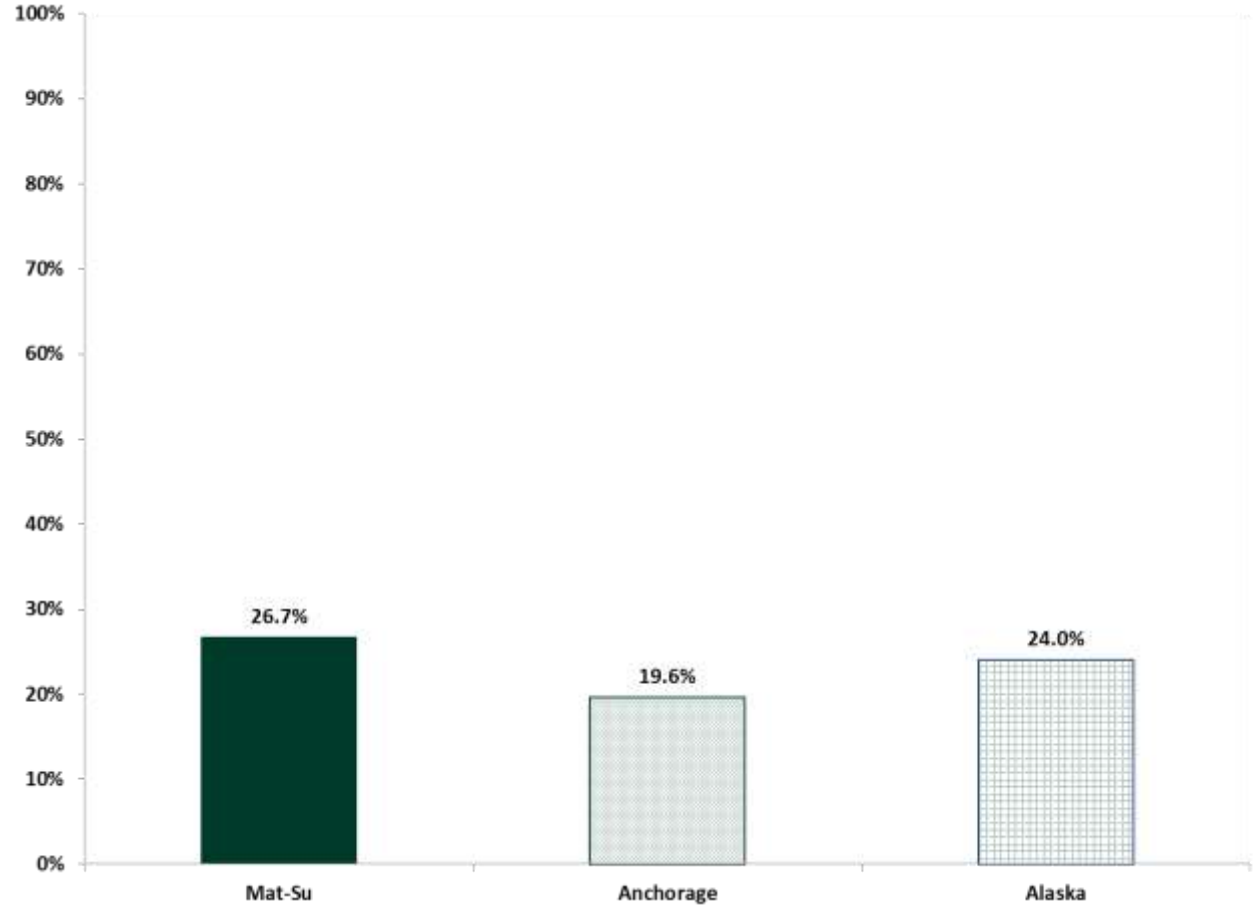


Source: Department of Health and Human Services - Alaska Center for Health Data and Statistics

Other Conditions

Reported in **Figure 146** is the percentage of respondents in Mat-Su, Anchorage and Alaska that reported having ever been told they have arthritis during the combined years of 2011-2014. Mat-Su respondents (26.7%) were more likely to have ever been told they have arthritis when compared to residents in Anchorage (19.6%) and Alaska (24.0%). A statistically significant difference was observed from the Alaska Behavioral Risk Factor Surveillance System data for respondents who have been told they have arthritis.

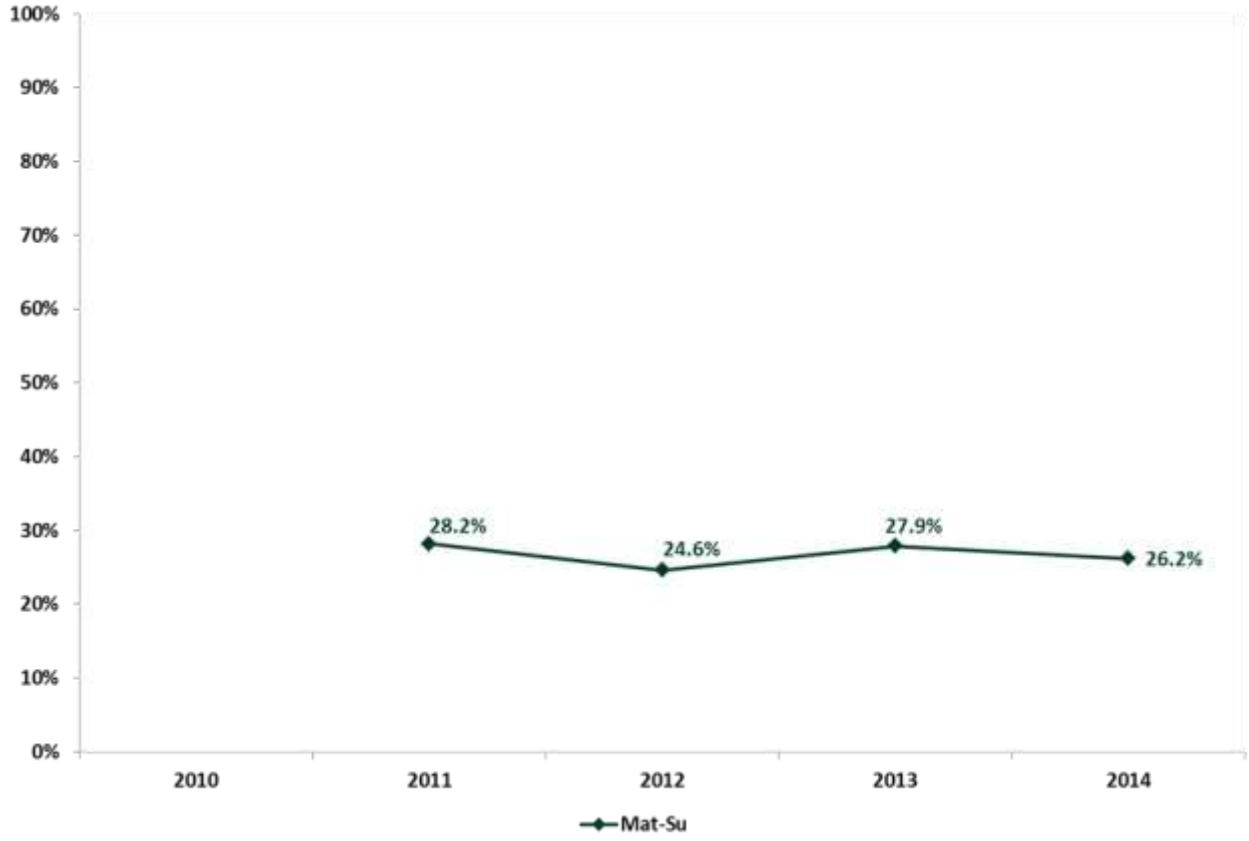
Figure 146 - Ever Told Had Arthritis, 2011-2014, Combined



Source: Alaska Behavioral Risk Factor Surveillance System Data

Based on data available in the Alaska Behavioral Risk Factor Surveillance System, **Figure 147** illustrates the five-year trend for the percentage of respondents in Mat-Su who reported they have ever been told they have arthritis. The question was not asked in 2010. The percentage of respondents who report they have ever been told they had arthritis has fluctuated over the past four years, with a slight decrease observed in the most recent years (27.9% to 26.2%).

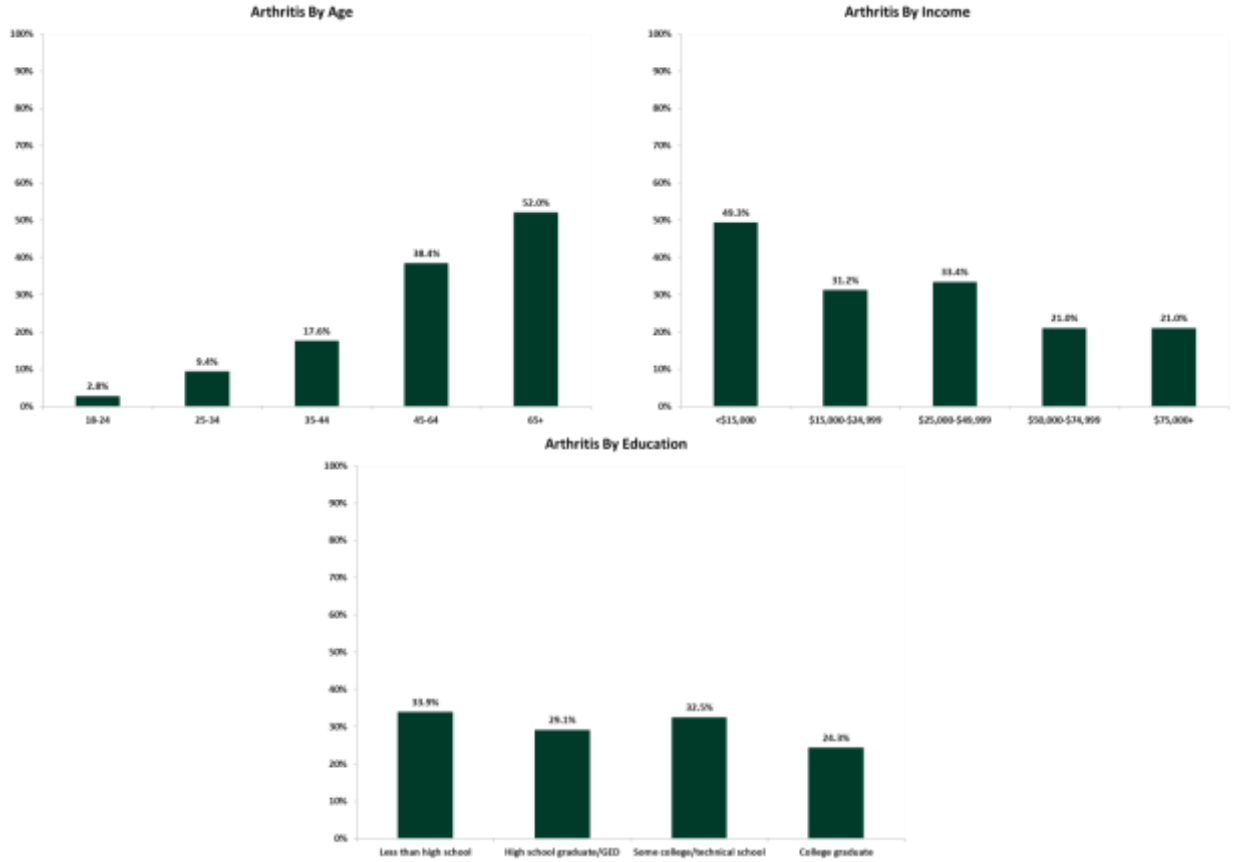
Figure 147 - Ever Told Had Arthritis, 2011-2014, Trend



Source: Alaska Behavioral Risk Factor Surveillance System Data

The statistically significant differences that were observed based on demographic variables for respondents who report that they have ever been told they have arthritis are outlined in Figure 148. Respondents over the age of 65 and those with incomes less than $15,000 were more likely to report they have ever been told they have arthritis when compared to younger respondents or those with higher income. Respondents who are college graduates were less likely to report having ever been told they have arthritis when compared to respondents with any other level of educational attainment.

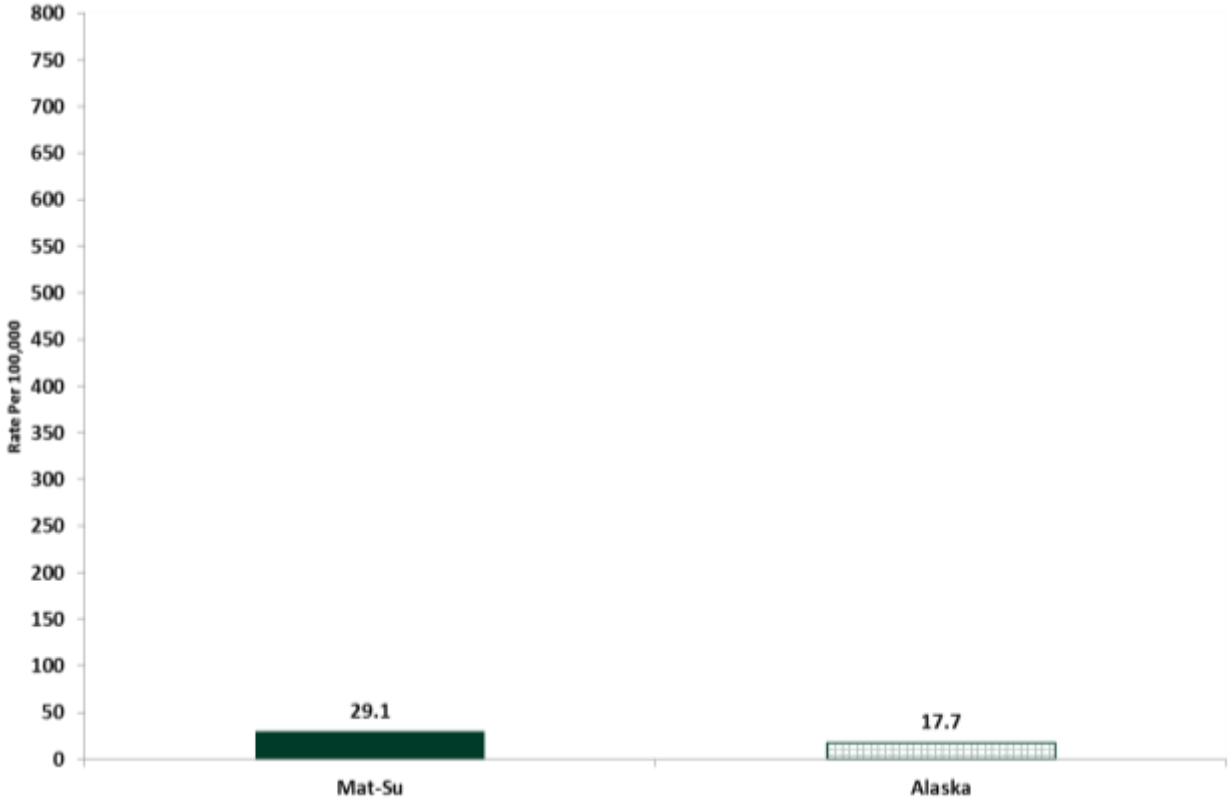
Figure 148 - Ever Told Had Arthritis, Significant Differences, 2011-2014



Source: Alaska Behavioral Risk Factor Surveillance System Data

According to Alaska Department of Vital Statistics Death Certificate data, **Figure 149** shows the Alzheimer mortality rate for Mat-Su and Alaska during the combined years of 2011-2015. Mat-Su (29.1) had a slightly higher Alzheimer mortality rate when compared to the state (17.7).

Figure 149 - Alzheimer Mortality Rate, 2011-2015, Combined



Source: Alaska Department of Vital Statistics Death Certificate Data

Focus Group Participant Survey Identified Goals

Prior to engaging in the discussion at focus groups, many of the participants were asked to complete a short paper survey to provide input on several selected questions. In one of the sections of the survey, participants were asked to rank order the "Top 5" goals for the Mat-Su region from 1-5, using a pre-prepared list of possible goals. Table 132 shows the rank ordered goals for Mat-Su from the 2013 CHNA, as well as the top goals identified by focus group participants during the 2016 CHNA. The number one goal for both 2013 and 2016 was "Mat-Su children are safe and well-cared for."

Table 132 - Top Focus Group Goals Identified 2016 versus 2013

2016 Top Goals Identified in Focus Group Participant Survey	2013 Top Goals Identified in Focus Groups*
1. Mat-Su children are safe and well-cared for	1. Children are safe and well-cared for
2. Mat-Su residents are able to find/access/ benefit from health care	2. All residents are drug-free and sober or drink responsibility
3. Mat-Su residents are drug-free and sober or drink responsibly	3. All residents have access to health care services
4. Mat-Su residents live in a violence-free community	4. (three-way tie) All residents have access to mental health services, all residents have healthy relationships; all residents live in a violence-free community
5. Mat-Su residents are at a healthy weight	

Source: Mat-Su CHNA Focus Groups, Strategy Solutions, Inc., 2016

*Note that the methodology to identify and rank goals in the two needs assessments was very different

Other focus group participants were asked to complete a survey at the conclusion of the focus group where they identified the top five goals they thought should be focused on as part of the Mat-Su CHNA. The summary of goals ranked by focus group participants is outlined in Table 133 below. The number one goal in both 2013 and 2016 was "Mat-Su children are safe and well cared for." This was also the top identified goal for professionals, community members, Tribal participants, rural participants, government representatives and millennials.

Table 133 - Mat-Su Health Goals, Focus Group Surveys

SUMMARY OF MAT-SU HEALTH GOALS

Ranked #1
Ranked #2
Ranked #3
Ranked #4
Ranked #5
Ranked #6
Ranked #7
Ranked #8

	MAT-SU RESIDENTS ARE INJURY-FREE	MAT-SU RESIDENTS ARE CANCER-FREE	MAT-SU RESIDENTS ARE AT A HEALTHY WEIGHT	MAT-SU RESIDENTS HAVE EXCELLENT CULTURAL/MENTAL/SPIRITUAL HEALTH	MAT-SU CHILDREN ARE SAFE AND WELL-CARED FOR	MAT-SU RESIDENTS ARE ABLE TO FIND/ACCESS/BENEFIT FROM HEALTH CARE	MAT-SU RESIDENTS ARE ABLE TO FIND/ACCESS/BENEFIT FROM MENTAL HEALTH CARE	MAT-SU RESIDENTS ARE DRUG-FREE AND SOBER OR DRINK RESPONSIBLY	MAT-SU RESIDENTS HAVE HEALTHY RELATIONSHIPS	MAT-SU RESIDENTS ARE TOBACCO-FREE	MAT-SU RESIDENTS LIVE IN A VIOLENCE-FREE COMMUNITY
2013 CHNA					●	◔	○	◕	○		○
Total Surveys			○		●		◕	◔			○
Professionals					●		◔	◕		○	○
Community			○		●		◕	◔	○		
Child Providers/CCS CHNA					◕	○	◔	●			○
Hospitals				○	◔	◔	◔	◕	○		●
Providers				○	◕	◕	●	◔			○
Tribal/Knik and Chickaloon CHNA			◔	○	●	◕					○
Community Residents/MSHS CHNA			○		◕	◔	○	◔			●
Seniors			○		◔	●	○	○	◕		●
Rural/			○		●	◕	○	○			◔
Government				●	●	●	●	◕			◕
Millennials					●	◔	◕	◕	○		○

Source: Mat-Su CHNA Focus Groups, Strategy Solutions, Inc., 2016

Intercept survey respondents were also asked to identify the top goal for the region over the next three years. **Table 134** lists the goals that were discussed. The most frequently mentioned goals included transportation and drug and alcohol services.

Table 134 - Mat-Su Health Goals, Intercept Surveys

Intercept Surveys, N=43		
3 Year Goal	Food Bank N=21	Sunshine Clinic Patients N=22
Homeless Shelters/Food(Teen and Adults)	●	●
Domestic Violence Services	●	●
Drug & Alcohol Services		●
Access to Dental Services	●	●
Access to Mental Health Services		●
Access to Doctors/Clinics	●	●
Affordable Care	●	●
Healthcare Insurance for Everyone	●	●
Senior Care (In Home)	●	●
Hospice Services		●
Job Services	●	
Safe and Affordable Housing	●	●
Affordable Fresh Fruits and Vegetables		●
Solve Refuse Problem	●	
Solve lack of Water Resources	●	
Centers for Recreation and Exercise	●	●
Transportation	●	●
More Food Pantries	●	●
Help with Disabled People	●	
Family Support	●	
Affordable Housing		●

Source: Mat-Su CHNA Intercept Surveys, Strategy Solutions, Inc., 2016

● Identified by less than 5 respondents

● Identified by 5 to less than 10 respondents

● Identified by 100 to less than 20 respondents

Focus Group Survey respondents were also asked in an open ended question to identify changes that they thought needed to be made in order to create a healthier Mat-Su. Table 135 below outlines the various topics that were identified. The darker the circle, the greater the number of people who identified that topic on the focus group participant survey.

Table 135 - Changes for a Healthier Mat-Su Identified by Focus Groups

	Clusters						
Changes for Healthier Mat-Su	Tribal/ Chickaloon	Community Residents	Seniors	Rural	Sunshine	Government	Millennials
Affordable Healthcare							
Drug and Alcohol Services (Detox Center)/Reduce Drugs and Alcohol							
Mental Health Services							
Transportation							
Family Support/Connection							
Youth Activities/Safe Environment/No or Low Cost							
Recreation Opportunities							
Healthy Food/Nutrition							
More Community Programs/Resources							
Help for the Homeless							
Collaboration Between Providers							
Community Clinic							
More Job Opportunities							
Adjust Welfare system							
Sex Education in High School							

	Clusters						
Changes for Healthier Mat-Su	Tribal/ Chickaloon	Community Residents	Seniors	Rural	Sunshine	Government	Millennials
Advocates							
Care Coordinators	●	●					
More Rights for Accompanied Youth							●
Peer to Peer Support	●						●
Create Accountability		●					
Holistic Approaches to Health							
Places to Exercise	●	●	●	●			
Health Providers (Lack of)		●					●
Community Schools				●			
Collaboration Between Agencies and Police		●					●
Education Available to All		●					●
Dental (Reduce Cost and Free Clinic)							
Healthy Housing	●	●					●
Smoke Free	●	●					
Access to Senior Centers/Community Centers			●	●	●	●	●

Source: 2016 Mat-Su CHNA Focus Group Participant Surveys

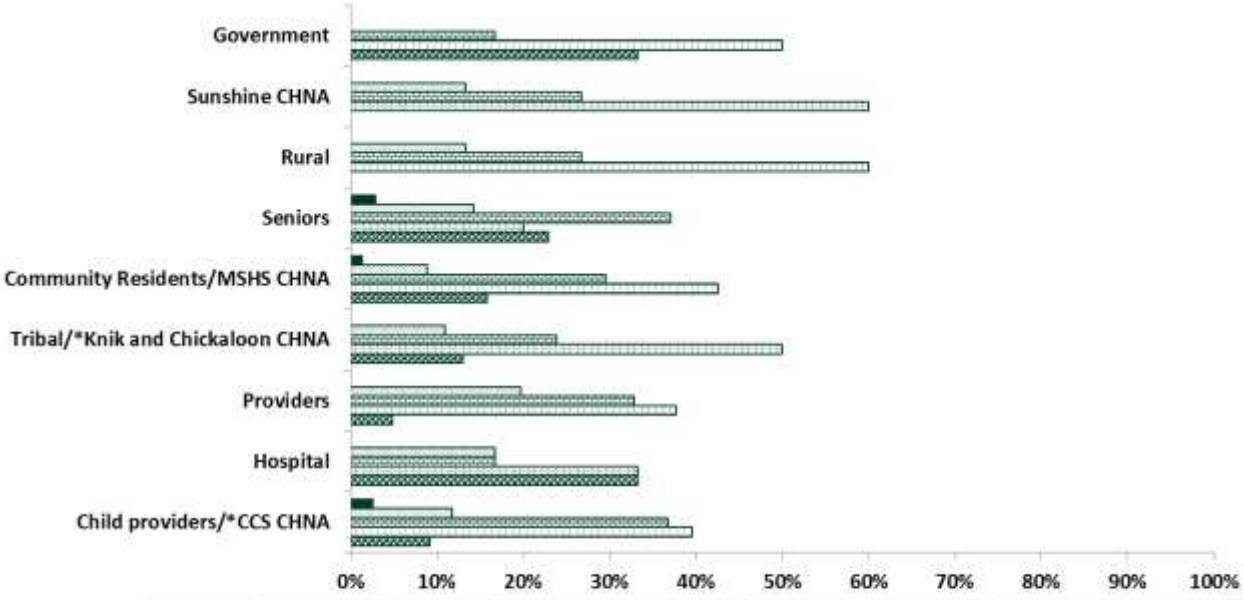
● Identified by less than 5 respondents

● Identified by 5 to less than 10 respondents

● Identified by 10 to less than 20 respondents

Focus group participants were asked to rate their personal health status on a 5-point scale: Excellent, Very Good, Good, Fair or Poor. Figure 150 illustrates the responses sorted by the type of focus group the individual participated in. The largest percentage of respondents indicated that their health was Very Good. Participants from the Rural and Sunshine CHNA clusters were more likely to rate their personal health status as Very Good (60.0%), while hospital providers and government participants were more likely to rate their health as Excellent (33%). Seniors tended to rate their health the lowest with 17.2% of participants rating their personal health status Fair or Poor. Rural and Sunshine CHNA cluster participants were the only groups with no participants rating their personal health as Excellent.

Figure 150 - Personal Health Rating by Focus Group Community Clusters



	Child providers/* CCS CHNA	Hospital	Providers	Tribal/*Knik and Chickaloon CHNA	Community Residents/MSHS CHNA	Seniors	Rural	Sunshine CHNA	Government
Poor	2.6%				1.4%	2.9%			
Fair	11.8%	16.7%	19.7%	10.9%	8.9%	14.3%	13.3%	13.3%	
Good	36.8%	16.7%	32.8%	23.9%	29.5%	37.1%	26.7%	26.7%	16.7%
Very good	39.5%	33.3%	37.7%	50.0%	42.5%	20.0%	60.0%	60.0%	50.0%
Excellent	9.2%	33.3%	4.9%	13.0%	15.8%	22.9%			33.3%

Source: 2016 Mat-Su CHNA Focus Group Participant Surveys, N=433

In the Focus Group Participant Surveys, respondents were also asked to identify key needs and challenges facing the community. Table 136 outlines the groups and the numbers of people within a cluster of focus groups that identified a topic. More community focus group participants identified drug and alcohol addiction, affordable care, and access to healthy food more frequently as community needs.

Table 136 - Community Needs/Challenges Identified in Focus Groups by Cluster

	Clusters						
Keys Needs/Challenges	Tribal	Community	Seniors	Rural	Sunshine	Government	Millennials
Addiction (Drug and Alcohol)/Addiction Services							
Transportation							
Mental Health/Mental Health Services							
Access to Care/Providers/Resources							
Affordable Care							
Poverty/Financial Stress							
Access to Affordable, Healthy Food							
Child Trauma							
Safe, Affordable Housing							
Domestic Violence/Domestic Violence Services							
Access/Focus on Prevention							
Parenting Education/Support							
Emergency Shelters							
Job Experience/Opportunities							
Healthy Relationships/Support System							

	Clusters						
Keys Needs/Challenges	Tribal	Community	Seniors	Rural	Sunshine	Government	Millennials
Safe Communities	●			●			
Healthy Lifestyle (Exercise, Food)		●		●	●		●
Dental Care		●					●
Obesity	●						
LGBTQ Education							●
Education on Health Care Services	●	●		●	●		●
Family Stress		●		●		●	●
Women's Care/Services			●	●			●
Activities for Everyone	●	●		●			●
Lack of Hospice Care			●	●			●
Community Center	●	●	●	●	●		●
Elder Care	●	●		●	●		●
Native Food Gatherings	●		●	●			●
Lack of Daycare				●	●		●
Affordable Health Insurance				●	●		●

Source: 2016 Mat-Su CHNA Focus Group Participant Surveys

Identified by less than 5 respondents ●

Identified by 5 to less than 10 respondents ●

Identified by 10 to less than 20 respondents ●

Intercept survey respondents were asked to identify the resources that help people make healthy decisions. Table 137 lists the topics that were discussed. The most frequently mentioned resources included access to healthy food, public transportation, mental health services, affordable health care, and availability of health care/doctors.

Table 137 - Resources that Support Healthy Decisions, Intercept Surveys

Intercept Surveys, N=43 Help Make Healthy Decisions	Food Bank Users, N=21	Sunshine Clinic Patients, N=22
Access To Public Transportation	●	○
Access to Healthy Food/Food Banks	○	●
Domestic Violence Services		○
Drug and Alcohol Rehab Services	○	○
Mental Health Services	○	●
Affordable Health Care/Insurance	○	●
Availability of Health Care/Doctors	○	●
Affordable/Safe Housing	○	
Disabled or Unemployed Workers	○	
Family Support	○	○
More Job Opportunities	○	○
Fitness Facilities		○
Education Opportunities		○
Vocational Schooling		○
Hospice Care		○
Community Rec Centers		○
Safe Water	○	○
Holistic /Alternate Approach to Medical Care		○
Teaching Health Education		○
Policing		○
Teen Center		○
Senior Center		○
Fear Stigma of Being Labeled	○	
Poverty	○	

Source: Mat-Su CHNA Intercept Surveys, Strategy Solutions, Inc., 2016

○ Identified by less than 5 respondents ● Identified by 5 to less than 10 respondents
● Identified by 10 to less than 20 respondents

During the MSHF Annual Meeting, participants were asked to complete a survey. One of the questions asked identified the top social needs and challenges for optimal health and wellbeing in Mat-Su. The top identified needs are listed in **Table 138** below, with the availability of resources to meet daily needs identified as the top need.

Table 138 – Identified Social Needs/Challenges

MSHF Annual Meeting	
Social Needs/Challenges for Optimal Health and Wellbeing	Ranking, N=32
Availability of Resources to Meet Daily Needs	●
Access to Educational, Economic and Job Opportunities	○
Access to Health Care Services	●
Quality of Education and Job Training	●
Availability of Community Based Resources in Support of Community	●
Transportation Options	●
Public Safety	○
Social support	●
Social Norms and Attitudes (e.g. Discrimination, Racism)	○
Exposure to Crime, Violence and Social Disorder	○
Socioeconomic Conditions	○
Residential Segregation	○
Access to Mass Media and Emerging Technologies	○
Culture	○

Source: 2016 Mat-Su CHNA Focus Group Participant Surveys

● Ranked #1
● Ranked #2
● Ranked #3
○ Ranked #4
○ Ranked #5
● Ranked #6
● Ranked #7
○ Ranked #8

Intercept survey participants were asked to identify services and supports that were needed in the community. Table 139 outlines the topics identified. Affordable health services and a low cost rec center were identified by the most people.

Table 139 - Services/Supports Needed, Focus Group Participant Surveys

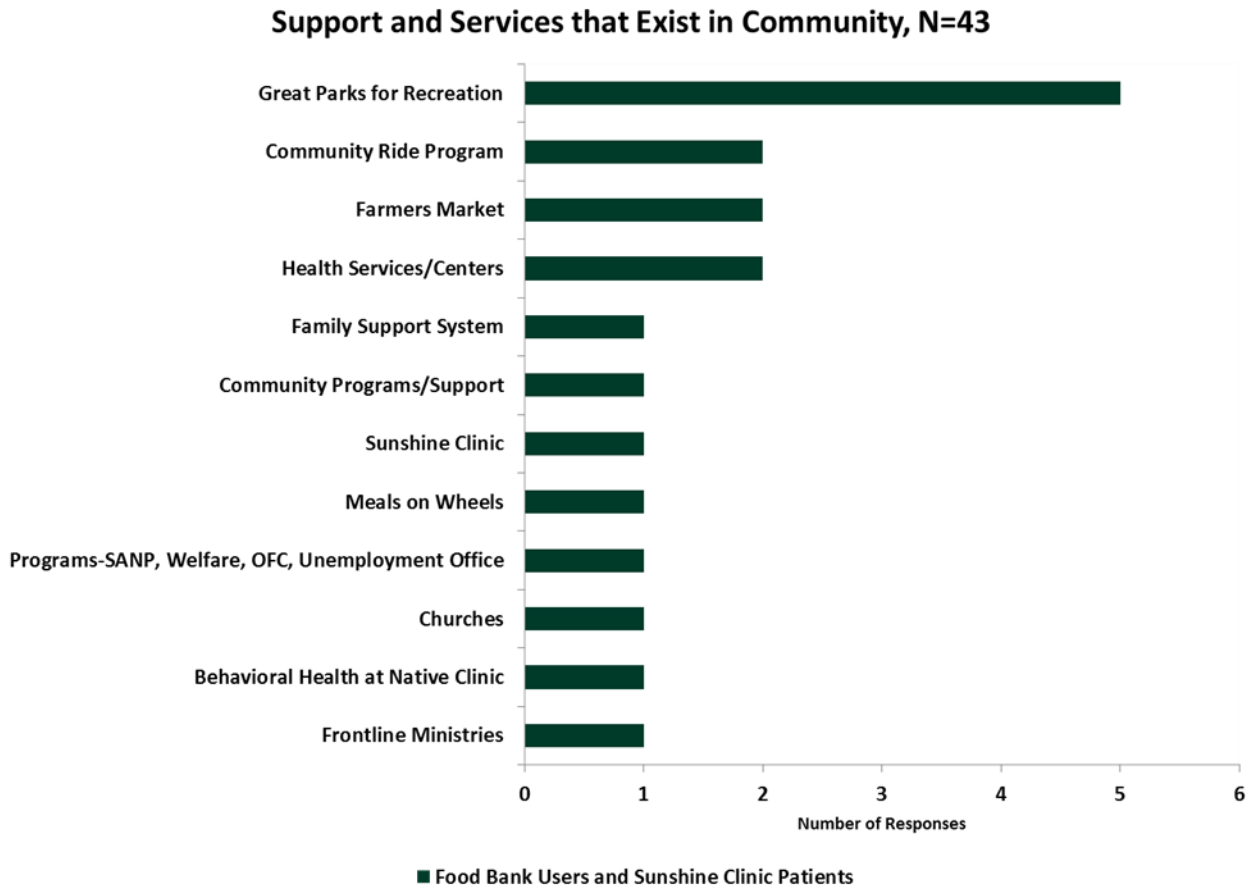
Intercept Surveys, N=43 Services /Support Needed	Food Bank, N=21	Sunshine Clinic Patients, N=22
Low Cost Rec Center	●	●
Better Transportation	●	●
Clean Water for All	●	●
Senior/Disabled Support	●	●
Increase MASCOT Funding	●	
Homeless Shelter	●	
Detox for Women	●	
Young Parent Classes	●	
Nutrition and Cooking Classes	●	●
Support LGBT People	●	
Drug and Alcohol Services	●	●
Mental Health Services	●	●
Affordable Health Services		●
Information of What Services are Available	●	●
Hospice	●	●
Healthy Foods		●
Employment		●
Affordable Housing		●
Poverty		●
Community Gardens		●
Educational Opportunities		●
State Police Troopers		●

Source: Mat-Su CHNA Intercept Surveys, Strategy Solutions, Inc., 2016

● Identified by less than 5 respondents ● Identified by 5 to less than 10 respondents
● Identified by 10 to less than 20 respondents

Participants of the Intercept Surveys were also asked to identify services and supports that already exist in the community. Figure 151 illustrates the various supports and services identified by clients of the Food Bank and Sunshine Clinic in the intercept surveys that were conducted in lieu of focus groups. The most frequent services and supports identified were great parks for recreation (5), Community Ride Program (2), Farmers Market (2) and health services/centers (2).

Figure 151 - Community Supports and Services Identified, Intercept Surveys



Source: Mat-Su CHNA Focus Group Intercept Survey, 2016

Tables 140 through 144 indicate the various topics that were discussed as open ended questions in the focus groups and stakeholder interviews. Tables are broken out by participant cluster. Each cell with a mark indicates that the topic was discussed within that group; a blank space indicates the topic was not discussed. Access to mental health services and the ACEs scores were identified in most of the focus groups.

Tables 140 through 144 outline the *Factors that Impact Health*.

Table 140 - Factors That Impact Health Identified by Child & Youth Provider and Youth

2016 Mat-Su Focus Groups/Interviews: Child & Youth Providers and Youth								
Factors That Impact Health	Alaska Family Services Case Managers	OCS	CCIS Board	School Counselors	LGBTQ (teens)	My House (teens)	Nutaqsaviik Providers	Nurses
Access to mental health and substance abuse services; there are long waiting lists for detox centers, substance abuse/rehab, mental health services	●	●	●	●		●	●	
Access to health care, dental and vision care	●				●			●
Access to peer support and advocacy when needed	●					●		
Adverse childhood experiences (ACEs)		●	●	●			●	
Affordable/stable housing	●	●					●	●
Affordability of health care insurance	●							●
Aging services				●				
Availability of information and support to live a healthy lifestyle				●		●		

2016 Mat-Su Focus Groups/Interviews: Child & Youth Providers and Youth								
Factors That Impact Health	Alaska Family Services Case Managers	OCS	CCIS Board	School Counselors	LGBTQ (teens)	My House (teens)	Nutaqsaviik Providers	Nurses
Culture of health expectation				●		●	●	
Creative freedom						●		
Child care							●	
Doctors will treat symptoms/ medicate and not find out or address the root cause	●							
Lack of crisis services	●							
Drugs/substance abuse/family or child		●	●					●
Education; there are lots of issues with kids not finishing school				●				
Food quality and insecurity; lack of fresh fruits and vegetables	●		●	●				●
Genetics			●					
Isolation			●					
Lack of resources for "working" poor	●						●	
Motivation				●				

2016 Mat-Su Focus Groups/Interviews: Child & Youth Providers and Youth								
Factors That Impact Health	Alaska Family Services Case Managers	OCS	CCIS Board	School Counselors	LGBTQ (teens)	My House (teens)	Nutaqsaviik Providers	Nurses
Oral health						●		
Parental/family involvement and support for families; grandparents raising children	●		●					●
Poverty			●	●			●	
Physical activity				●		●		●
Sexual abuse		●						
Lack of basic services (electricity/running water)		●						
Safe places and activities for children/youth						●		
Stress						●		
Transportation; lack of public transportation	●	●				●	●	●
Amount of time spent in the car commuting to work			●					
Discrimination in the schools and in the streets					●			

2016 Mat-Su Focus Groups/Interviews: Child & Youth Providers and Youth								
Factors That Impact Health	Alaska Family Services Case Managers	OCS	CCIS Board	School Counselors	LGBTQ (teens)	My House (teens)	Nutaqsaviik Providers	Nurses
Technology affecting the amount of activity			●					●
Weather					●			

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Table 141 - Factors that Impact Health Identified by Community/Residents

2016 Mat-Su Focus Groups/Interviews: Community/Resident Groups								
Factors That Impact Health	Wasilla Community	Wasilla Rotary	Palmer Community	Talkeetna Community	Palmer Seniors	Hispanic	Chickaloon Elders	Willow
Access to mental health and substance abuse services; there are long waiting lists for detox centers, substance abuse/rehab, mental health services			●	●				
Access to health care, dental and vision care	●	●		●			●	

2016 Mat-Su Focus Groups/Interviews: Community/Resident Groups								
Factors That Impact Health	Wasilla Community	Wasilla Rotary	Palmer Community	Talkeetna Community	Palmer Seniors	Hispanic	Chickaloon Elders	Willow
Access to peer support and advocacy when needed								
Adverse childhood experiences (ACEs)		●						
Affordable/stable Housing			●	●	●			
Affordability of health care insurance				●		●		
Aging services	●							
Availability of information and support to live a healthy lifestyle	●	●	●		●		●	
Culture of health expectation	●		●	●		●		
Creative freedom								
Child care	●							
Doctors will treat symptoms/ medicate and not find out or address the root cause								

2016 Mat-Su Focus Groups/Interviews: Community/Resident Groups								
Factors That Impact Health	Wasilla Community	Wasilla Rotary	Palmer Community	Talkeetna Community	Palmer Seniors	Hispanic	Chickaloon Elders	Willow
Lack of crisis and specialized services		●						
Drugs/substance abuse/family or child	●			●				
Education; there are lots of issues with kids not finishing school							●	●
Food quality and insecurity; lack of fresh fruits and vegetables	●	●						●
Genetics/age					●			
Isolation	●	●		●				
Lack of resources for "working" poor						●		
Motivation								
Oral health/access to dental care						●		
Parental/family involvement and support for families; grandparents raising children			●	●	●			●
Poverty/income	●			●	●		●	●

2016 Mat-Su Focus Groups/Interviews: Community/Resident Groups								
Factors That Impact Health	Wasilla Community	Wasilla Rotary	Palmer Community	Talkeetna Community	Palmer Seniors	Hispanic	Chickaloon Elders	Willow
Physical activity/ recreation	●		●	●			●	
Family, sexual or child abuse		●						●
Lack of basic services (electricity/running water)	●							●
Safe places and activities for children/youth					●		●	
Stress	●							
Transportation; lack of public transportation	●	●	●		●			●
Amount of time spent in the car commuting to work			●					
Discrimination in the schools and in the streets					●			
Technology affecting the amount of activity		●	●					
Weather	●	●				●		

2016 Mat-Su Focus Groups/Interviews: Community/Resident Groups								
Factors That Impact Health	Wasilla Community	Wasilla Rotary	Palmer Community	Talkeetna Community	Palmer Seniors	Hispanic	Chickaloon Elders	Willow
Attitude/sense of community/ connection/self esteem	●	●	●				●	●
Employment/job	●				●			
Access to nature					●			●
Environmental hazards	●				●			●
Language barriers						●		
Fear of the unknown				●				
Chronic diseases	●							
Spirituality	●							
Sidewalks							●	

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Table 142 - Factors that Impact Health Identified by Providers

2016 Mat-Su Focus Groups/Interviews: Provider Groups						
Factors That Impact Health	High Utilizers	Public Health Nursing	Providers	Sunshine Clinic Staff	Steering Committee	Mat-Su Health Services
Access to mental health and substance abuse services; there are long waiting lists for detox centers, substance abuse/rehab, mental health services	●	●	●	●		●
Access to health care, dental and vision care		●	●			
Access to peer support and advocacy when needed			●			
Adverse childhood experiences (ACEs)		●	●	●	●	
Affordable/stable housing		●	●	●	●	
Affordability of health care insurance	●		●	●		●
Aging services				●	●	
Availability of information and support to live a healthy lifestyle	●		●	●	●	●
Culture of health expectation	●		●		●	●
Creative freedom						

2016 Mat-Su Focus Groups/Interviews: Provider Groups						
Factors That Impact Health	High Utilizers	Public Health Nursing	Providers	Sunshine Clinic Staff	Steering Committee	Mat-Su Health Services
Child Care					●	●
Doctors will treat symptoms/ medicate and not find out or address the root cause						●
Lack of crisis services	●					
Drugs/substance abuse/family or child	●	●			●	
Education; literacy			●	●	●	
Food quality and insecurity; lack of fresh fruits and vegetables		●	●	●		●
Genetics				●		
Isolation		●	●	●		
Lack of resources for "working" poor		●				
Motivation				●		
Oral health/access to dental care			●			
Parental/family involvement and support for families; grandparents raising children		●	●	●	●	●
Poverty/income	●	●				●

2016 Mat-Su Focus Groups/Interviews: Provider Groups						
Factors That Impact Health	High Utilizers	Public Health Nursing	Providers	Sunshine Clinic Staff	Steering Committee	Mat-Su Health Services
Physical activity		●				
Sexual and other types of physical abuse		●			●	
Lack of basic services and infrastructure(electricity/ running water)		●			●	
Safe places and activities for children/youth						●
Stress						
Transportation; lack of public transportation	●	●	●		●	●
Amount of time spent in the car commuting to work			●			
Discrimination in the schools and in the streets						
Technology affecting the amount of activity						
Weather		●	●	●	●	●
Attitude/ sense of community/connection/ self esteem		●	●	●		●
Employment/job			●		●	
Access to nature						
Environmental hazards						

2016 Mat-Su Focus Groups/Interviews: Provider Groups						
Factors That Impact Health	High Utilizers	Public Health Nursing	Providers	Sunshine Clinic Staff	Steering Committee	Mat-Su Health Services
Language barriers						
Fear of the unknown			●			
Chronic diseases						
Spirituality						
Sidewalks						
Technology/broadband					●	
Access to the legal system			●		●	

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Table 143 - Factors that Impact Health Identify by Hospital Staff

2016 Mat-Su Focus Groups/Interviews: Hospital Staff		
Factors That Impact Health	High Utilizers	Hospital Social Workers
Access to mental health and substance abuse services; there are long waiting lists for detox centers, substance abuse/rehab, mental health services	●	●
Access to health care, dental and vision care		
Access to peer support and advocacy when needed		
Adverse childhood experiences (ACEs)		
Affordable/stable housing		
Affordability of health care insurance	●	●
Aging services		
Availability of information and support to live a healthy lifestyle	●	
Culture of health expectation	●	
Creative freedom		
Child care		
Doctors will treat symptoms/ medicate and not find out or address the root cause		
Lack of crisis services	●	
Drugs/substance abuse/family or child	●	●
Education; there are lots of issues with kids not finishing school		
Food quality and insecurity; lack of fresh fruits and vegetables		
Genetics/age		
Isolation		
Lack of resources for "working" poor		
Motivation		

2016 Mat-Su Focus Groups/Interviews: Hospital Staff		
Factors That Impact Health	High Utilizers	Hospital Social Workers
Oral health/access to dental care		
Parental/family involvement and support for families; grandparents raising children		●
Poverty/income	●	
Physical activity /recreation		
Family, sexual or child abuse		●
Lack of basic services (electricity/running water)		
Safe places and activities for children/youth		●
Stress		●
Transportation; lack of public transportation	●	
Amount of time spent in the car commuting to work		
Discrimination in the schools and in the streets		
Technology affecting the amount of activity		
Weather		
Attitude/sense of community/connection/self esteem		
Employment/Job		
Access to nature		
Environmental hazards		
Language barriers		
Fear of the unknown		
Chronic diseases		
Spirituality		
Sidewalks		

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Table 144 - Factors that Impact Health Identify by Government

2016 Focus Groups/Interviews: Government			
Factors That Impact Health	Mat-Su Borough Planning	Mayor	Judges
Access to mental health and substance abuse services; there are long waiting lists for detox centers, substance abuse/rehab, mental health services	●		●
Access to health care, dental and vision care	●		●
Access to peer support and advocacy when needed			
Adverse childhood experiences (ACEs)			●
Affordable/stable/ workforce housing	●		●
Affordability of health care insurance			
Aging services			
Availability of information and support to live a healthy lifestyle			●
Culture of health expectation		●	●
Creative freedom			
Child care			
Doctors will treat symptoms/ medicate and not find out or address the root cause			
Lack of crisis services			●
Drugs/substance abuse/family or child		●	●
Education; literacy		●	●
Food quality and insecurity; lack of fresh fruits and vegetables		●	●

2016 Focus Groups/Interviews: Government			
Factors That Impact Health	Mat-Su Borough Planning	Mayor	Judges
Genetics			
Isolation	●		●
Lack of resources for "working" poor			
Motivation			
Oral health/access to dental care			
Parental/family involvement and support for families; grandparents raising children			●
Poverty/income	●	●	●
Physical activity /access to recreation opportunities		●	
Sexual and other types of physical abuse		●	●
Lack of basic services and infrastructure(electricity/ running water)			
Safe places and activities for children/youth			
Stress			●
Transportation; lack of public transportation	●	●	●
Amount of time spent in the car commuting to work		●	
Discrimination in the schools and in the streets			
Technology affecting the amount of activity			
Weather		●	
Attitude/ sense of community/connection/self esteem			●
Employment/job			
Access to nature			
Environmental hazards	●		

2016 Focus Groups/Interviews: Government			
Factors That Impact Health	Mat-Su Borough Planning	Mayor	Judges
Language barriers			
Fear of the unknown			
Chronic diseases			
Spirituality			
Sidewalks			
Technology/broadband			
Access to the legal system			
Geography/size of region	●		
Air quality	●		

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

In response to an open-ended question, focus group and interview participants were asked to identify community needs related to creating a healthy community.

Tables 145 through 149 outline the community needs identified by the focus group and stakeholder interview participants. Tables are broken out by participant cluster. Each cell with a mark indicates that the topic was discussed within that group; a blank space indicates the topic was not discussed.

Table 145 - Community Needs Identified by Child & Youth Providers and Youth

2016 Mat-Su Focus Groups/Interviews: Child & Youth Providers and Youth:								
Community Needs	Alaska Family Services Case Managers	OCS	CCIS Board	School Counselors	LGBTQ (teens)	My House	Nutaqsaviik Providers	Nurses
Assisted living				●				
Child protection systems							●	
Sense of community/ connectedness							●	●
Detox		●				●		●
Dietitians/education on healthy eating			●					●
Foster care for teens				●				
Early education/ Headstart			●				●	
Elementary school counselors/services				●				●
Employment/jobs						●		
Food banks				●				
Substance abuse treatment	●	●				●		●
Housing for disabled Veterans	●							
Hotline		●						
Long-term family housing	●							

2016 Mat-Su Focus Groups/Interviews: Child & Youth Providers and Youth:								
Community Needs	Alaska Family Services Case Managers	OCS	CCIS Board	School Counselors	LGBTQ (teens)	My House	Nutaqsaviik Providers	Nurses
Parent education		●					●	●
Preventative services		●	●			●	●	●
Recreational activities			●	●			●	●
Resource directory		●						
Restaurants			●					
School-based health clinic				●				
Specialists	●							
Special education teachers			●					
Support services						●	●	
Transportation	●	●	●			●	●	●
Youth boot camp		●						

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Table 146 - Community Needs Identified by Community/Residents

2016 Mat-Su Focus Groups/Interviews: Community/Residents								
Community Needs	Wasilla Community	Wasilla Rotary	Palmer Community	Talkeetna Community	Palmer Seniors	Hispanic	Chickaloon Elders	Willow
Assisted living								
Child protection systems	●							
Sense of community/ connectedness	●		●	●	●			●
Detox								
Dietitians/education on healthy eating								
Foster care for teens								
Early education/ Headstart						●		●
School counselors/ mental health services		●		●				
Employment/jobs/job training	●					●		
Food banks/summer nutrition for kids	●		●					
Substance abuse treatment	●			●				●
Housing for disabled Veterans								
Hotline/help navigate system		●			●			
Long-term family housing	●							

2016 Mat-Su Focus Groups/Interviews: Community/Residents								
Community Needs	Wasilla Community	Wasilla Rotary	Palmer Community	Talkeetna Community	Palmer Seniors	Hispanic	Chickaloon Elders	Willow
Parent education			●					
Preventative services	●			●	●	●		
Recreational activities (affordable or free)	●		●			●		
Resource directory/ central communication		●						●
Restaurants								
School-based health clinic								
Specialists		●						
Special education teachers								
Support services	●		●	●			●	
Transportation	●		●		●		●	
Youth boot camp								
Safe routes to school			●					
Safe places for kids	●		●					
Money				●				
Sustainability				●				
Local food production	●							
Roads							●	

2016 Mat-Su Focus Groups/Interviews: Community/Residents								
Community Needs	Wasilla Community	Wasilla Rotary	Palmer Community	Talkeetna Community	Palmer Seniors	Hispanic	Chickaloon Elders	Willow
Longer hours for services							●	
Another hospital							●	
Grocery store								●
Education to reduce stigma		●						

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Table 147 - Community Needs Identified by Providers

2016 Mat-Su Focus Groups/Interviews: Providers								
Community Needs	High Utilizers	Public Health Nursing	Providers	Sunshine Clinic Staff	Steering Committee	Mat-Su Health Services		
Assisted living				●				
Child protection systems								
Sense of community/ connectedness				●				
Detox			●	●				
Dietitians/education on healthy eating								
Foster care for teens								
Early education/ Headstart/ childcare			●	●				
Elementary school counselors/services								

2016 Mat-Su Focus Groups/Interviews: Providers								
Community Needs	High Utilizers	Public Health Nursing	Providers	Sunshine Clinic Staff	Steering Committee	Mat-Su Health Services		
Employment/jobs/income				●		●		
Food banks/affordable food			●					
Substance abuse treatment		●		●				
Housing for Veterans								
Hotline/communication			●			●		
Long-term family housing			●	●		●		
Parent education	●	●		●				
Preventative services			●					
Recreational activities/pool	●	●		●				
Resource directory								
Restaurants								
School-based health clinic								
Specialists			●	●				
Special education teachers								
Support services	●	●		●		●		
Transportation		●	●			●		
Youth boot camp								
Safe routes to school								
Safe places for kids	●							

2016 Mat-Su Focus Groups/Interviews: Providers								
Community Needs	High Utilizers	Public Health Nursing	Providers	Sunshine Clinic Staff	Steering Committee	Mat-Su Health Services		
Money								
Sustainability								
Local food production			●					
Roads								
Longer hours for services								
Another hospital								
Grocery store								
Elder care/Alzheimer's care				●				
Access to primary care			●					
Re-entry support		●						
Housing			●	●		●		
Infrastructure						●		
Alternative health services				●				

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Table 148 - Community Needs Identified by Hospital Staff

2016 Mat-Su Focus Groups/Interviews: Hospital Staff		
Community Needs	High Utilizers	Hospital Social Workers
Assisted living		●
Child protection systems		●
Sense of community/ connectedness		●
Detox		
Dietitians/education on healthy eating		
Foster care for teens		●
Early education/Headstart		
School counselors/services		
Employment/jobs/job training		
Foodbanks/summer nutrition for kids		
Substance abuse treatment		●
Housing for disabled Veterans		
Hotline/help navigate system		●
Long-term family housing		
Parent education	●	●
Preventative services		●
Recreational activities (affordable or free)	●	●
Resource directory/central communication		
Restaurants		
School-based health clinic		
Specialists		
Special education teachers		

2016 Mat-Su Focus Groups/Interviews: Hospital Staff		
Community Needs	High Utilizers	Hospital Social Workers
Support services	●	●
Transportation		
Youth boot camp		
Safe routes to school		
Safe places for kids	●	
Money		
Sustainability		
Local food production		
Roads		
Longer hours for services		
Another hospital		
Grocery store		
Elder care/Alzheimer's care		●
Access to primary care		●

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Table 149 - Community Needs Identified by Government

2016 Mat-Su Focus Groups/Interviews: Government			
Community Needs	Mat-Su Borough Planning	Mayor	Judges
Assisted living			
Child protection systems			
Sense of community/connectedness			●

2016 Mat-Su Focus Groups/Interviews: Government			
Community Needs	Mat-Su Borough Planning	Mayor	Judges
Detox			●
Dietitians/education on healthy eating			
Foster care for teens			
Early education/ Headstart/ childcare			
Elementary school counselors/services			
Employment/jobs/income		●	
Foodbanks/affordable food			
Substance abuse treatment			●
Housing for Veterans	●		
Hotline/communication			●
Long-term family housing	●		●
Parent education			
Preventative services			●
Recreational activities/pool			
Resource directory			●
Restaurants			
School-based health clinic			
Specialists			
Special education teachers			
Support services			●
Transportation	●		●
Youth boot camp			
Safe routes to school			

2016 Mat-Su Focus Groups/Interviews: Government			
Community Needs	Mat-Su Borough Planning	Mayor	Judges
Safe places for kids			
Money	●		
Sustainability		●	
Local food production			
Roads	●		
Longer hours for services			
Another hospital			
Grocery Store			
Elder care/Alzheimer's care			
Access to primary care			
Re-entry support			
Housing	●		
Infrastructure			
Alternative Health Services			
Emergency Planning	●	●	

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Focus group and interview participants were also asked to identify assets and resources that can help create a healthier community. Table 150 below outlines the assets discussed, along with the number of groups in each cluster that discussed the topic.

Table 150 - Community Assets Identified in Focus Groups by Cluster

	Group					
Community Assets	Children/Youth	Community Groups	Government	Hospital Staff	Providers	Total
Public transit (Mat-Su Transit and Sunshine)	2	4	0	2	3	11
Churches	3	3	1	0	3	10
Parks & recreational activities	2	4	1	0	3	10
Food bank/pantry	2	2	0	1	4	9
School systems	3	2	2	0	2	9
Mat-Su Health Services	2	2	0	2	2	8
Primary care clinics	-	4	0	1	3	8
Knik House	4	0	1	1	1	7
My House	3	1	1	0	1	6
Community/senior center	-	3	1	0	2	6
Alaska Family Services	2	0	1	1	1	5
MSHF	2	1	1	0	1	5
Promise	2	1	0	0	2	5
Nugens Ranch	1	0	1	1	1	4
Physicians/providers	1	1	1	0	1	4
Library	-	2	0	-	2	4
Denali Family Services	2	0	0	0	1	3
Family support system	1	2	0	0	0	3
Farmers market	2	1	0	0	0	3
Job corp	2	1	0	0	0	3
Presbyterian Hospitality House – emergency shelter for kids	2	0	0	1	0	3
Self-help groups such as AA, NA, Al-Anon	1	0	1	1	0	3
Agriculture	1	1	0	0	0	2

Community Assets	Group					
	Children/Youth	Community Groups	Government	Hospital Staff	Providers	Total
Asset Alaska	1	1	0	0	0	2
Boys and Girls Club	1	1	0	0	0	2
Governments (borough and city)	1	0	1	0	0	2
Headstart and Early Headstart	1	0	0	0	1	2
Lending Closet/Thrift stores	1	0	0	0	1	2
Pregnancy Center	1	0	0	1	0	2
Providence	1	0	0	1	0	2
Women's healthcare	1	0	0	1	0	2
YAK Fun Center for Kids	1	1	0	0	0	2
Bike Shops	-	1	1	0	0	2
Heartreach	-	-	0	-	2	2
Coalitions	-	-	1	-	1	2
Business groups & orgs./clubs	-	2	-	-	-	2
ACEs trainers	1	0	0	0	0	1
Akela (in Palmer)	1	0	0	0	0	1
Beacon	1	0	0	0	0	1
Domestic violence shelter	1	0	0	0	0	1
First responders	1	0	0	0	0	1
Full Circle	1	0	0	0	0	1
GSAs	1	0	0	0	0	1
Insurance	1	0	0	0	0	1
J&J independent living	1	0	0	0	0	1
Knik Tribal Hospital	1	0	0	0	0	1
McKean challenge	1	0	0	0	0	1
Sex education	1	0	0	0	0	1

Community Assets	Group					
	Children/Youth	Community Groups	Government	Hospital Staff	Providers	Total
South Central Foundation	1	0	0	0	0	1
United Way	1	0	0	0	0	1
WIC	1	0	0	0	0	1
Yenlo Housing	1	0	0	0	0	1
Willow Health Organization	-	-	0	-	1	1
Public health	-	-	0	-	1	1
Referral system/211	-	-	0	-	1	1
Veteran services	-	-	0	-	1	1
American Lung Association	-	-	0	-	1	1
Rescue Mission in Anchorage	-	-	-	1	-	1
Alaska Dream Center	-	-	-	1	-	1
Youth court	-	-	1	-	-	1
Native community	-	-	1	-	-	1
Turning Leaf	-	-	1	-	-	1
Cultural activities	-	1	-	-	-	1
Meals on Wheels	-	1	-	-	-	1
Community Foundation	-	1	-	-	-	1
Hotline	-	1	-	-	-	1
WACO	-	1	-	-	-	1

Source: 2016 Mat-Su CHNA Focus Groups

Focus group and interview participants were also asked to identify factors that impact health. Table 151 below outlines the needs discussed, along with the number of groups in each cluster that identified and discussed the topic.

Table 151 – Factors that Impact Health Identified in Focus Groups by Cluster

Factors That Impact Health	Children/ Youth	Community/ Residents	Providers	Hospital Staff	Government	Total
Transportation; lack of public transportation	5	6	5	1	3	20
Access to mental health and substance abuse services; there are long waiting lists for detox centers, substance abuse/rehab, mental health services	6	2	5	2	2	17
Poverty/income	3	6	3	1	3	16
Availability of information and support to live a healthy lifestyle	2	5	5	1	2	15
Parental/family involvement and support for families; grandparents raising children	3	4	5	1	1	14
Access to health care, dental and vision care	3	6	2	0	2	13
Food quality and insecurity; lack of fresh fruits and vegetables	4	3	4	0	2	13
Culture of health expectation	3	4	4	1	0	12
Drugs/substance abuse/family or child	3	2	3	2	2	12
Adverse childhood experiences (ACEs)	4	1	4	0	2	11
Affordable/stable housing	4	3	4	0	0	11
Weather	1	4	5	0	1	11
Affordability of health care insurance	2	2	4	2	0	10
Isolation	1	4	3	0	2	10
Attitude/ Sense of community/connection/self esteem	-	5	4	0	1	10
Education; literacy	1	3	3	0	2	9
Physical activity	3	4	1	0	1	9

Factors That Impact Health	Children/ Youth	Community/ Residents	Providers	Hospital Staff	Government	Total
Sexual and other types of physical abuse	1	2	2	1	2	8
Aging services	1	1	2	0	1	5
Lack of crisis services	1	1	1	1	1	5
Lack of resources for "working" poor	2	2	1	0	0	5
Lack of basic services and infrastructure(electricity/ running water)	1	2	2	0	0	5
Safe places and activities for children/youth	1	2	1	1	0	5
Amount of time spent in the car commuting to work	1	2	1	0	1	5
Access to peer support and advocacy when needed	2	0	1	0	1	4
Child care	1	1	2	0	0	4
Stress	1	1	0	1	1	4
Technology affecting the amount of activity	2	2	0	0	0	4
Employment/job	-	2	2	0	0	4
Environmental hazards	-	3	0	0	1	4
Genetics	1	1	1	0	0	3
Oral health/access to dental care	1	1	1	0	0	3
Doctors will treat symptoms/ medicate and not find out or address the root cause	1	0	1	0	0	2
Motivation	1	0	1	0	0	2
Discrimination in the schools and in the streets	1	1	0	0	0	2
Access to nature	-	2	0	0	0	2
Fear of the unknown	-	1	1	0	0	2
Spirituality	-	2	0	0	0	2
Access to the legal system	-	-	2	-	0	2
Creative freedom	1	0	0	0	0	1

Factors That Impact Health	Children/ Youth	Community/ Residents	Providers	Hospital Staff	Government	Total
Language barriers	-	1	0	0	0	1
Chronic diseases	-	1	0	0	0	1
Sidewalks	-	1	0	0	0	1
Technology/broadband	-	-	1	-	0	1
Geography/size of region	-	-	-	-	1	1

Source: 2016 Mat-Su CHNA Focus Groups

Focus group and interview participants were also asked to identify community needs. Table 152 below outlines the needs discussed, along with the number of groups in each cluster that identified and discussed the topic.

Table 152 - Community Needs Identified in Focus Groups by Cluster

Community Needs	Children/Youth	Community Groups	Providers	Hospital Staff	Government	Total
Transportation	6	5	3	0	2	16
Support services	2	4	4	2	1	13
Preventative services	5	4	1	1	1	12
Recreational activities/pool	4	3	3	2	0	12
Substance abuse treatment	4	3	2	1	1	11
Sense of community/connectedness	2	5	1	1	1	10
Parent education	3	1	3	2	0	9
Hotline/communication	1	2	2	1	1	7
Long-term family housing	1	1	3	0	2	7
Detox	3	0	2	0	1	6
Early education/Headstart/childcare	2	2	2	0	0	6
Employment/jobs/income	1	2	2	0	1	6
Elementary school counselors/services	2	3	0	0	0	5
Foodbanks/affordable food	1	3	1	0	0	5

Community Needs	Children/Youth	Community Groups	Providers	Hospital Staff	Government	Total
Resource directory	1	2	0	0	1	4
Specialists	1	1	2	0	0	4
Safe places for kids	-	2	1	1	0	4
Housing	-	-	3	-	1	4
Assisted living	1	0	1	1	0	3
Child protection systems	1	1	0	1	0	3
Dietitians/education on healthy eating	2	1	0	0	0	3
Foster care for teens	1	0	0	1	0	2
Housing for Veterans	1	0	0	0	1	2
Money	-	1	0	0	1	2
Sustainability	-	1	0	0	1	2
Local food production	-	1	1	0	0	2
Roads	-	1	0	0	1	2
Elder care/Alzheimer's care	-	-	1	1	0	2
Access to primary care	-	-	1	1	0	2
Emergency planning	-	-	-	-	2	2
Restaurants	1	0	0	0	0	1
School based health clinic	1	0	0	0	0	1
Special education teachers	1	0	0	0	0	1
Youth boot camp	1	0	0	0	0	1
Safe routes to school	-	1	0	0	0	1
Longer hours for services	-	1	0	0	0	1
Another hospital	-	1	0	0	0	1
Grocery store	-	1	0	0	0	1
Re-entry support	-	-	1	-	0	1
Infrastructure	-	-	1	-	0	1
Alternative health services	-	-	1	-	0	1

Community Needs	Children/Youth	Community Groups	Providers	Hospital Staff	Government	Total
Education to reduce stigma	-	1	-	-	-	1

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Focus group and interview participants were asked to rate the health status of the community. Those who rated the community health status as Good, Very Good or Excellent were asked to share what they were thinking related to their rating. Table 153 below outlines topics discussed, along with the number of groups in each cluster that identified and discussed the topic.

Table 153 - Comments Related to Positive Community Health Status Rating

Reasons for Healthy Community Rating Good	Children/Youth	Community Groups	Government	Hospital Staff	Providers	Total
People are active and involved /healthy	1	3	1	1	2	8
Health care available	1	2	1	0	1	5
Good hiking trails/walking	-	3	1	0	0	4
Some people can afford what they need	2	0	0	0	0	2
Good schools	1	1	0	0	0	2
Government	-	1	1	0	0	2
Fairly wealthy community	-	2	0	0	0	2
Healthy food	-	2	0	0	0	2
Rapid transit/free bus for kids	-	1	0	0	0	1
Nordic Ski Club	-	1	0	0	0	1
Strong sense of community here	-	-	0	-	1	1

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Focus group and interview participants who rated the community health status as Fair or Poor were also asked to share what they were thinking related to their rating. **Table 154** below outlines topics discussed, along with the number of groups in each cluster that identified and discussed the topic.

Table 154 - Comments Related to Community Health Rating Less Than Good

Reasons for Healthy Community Rating Less than Good	Children/Youth	Community Groups	Government	Hospital Staff	Providers	Total
Drugs/substance abuse	4	6	1	1	5	17
Food access/quality not good	2	3	0	1	3	9
Mental health/depression	2	2	1	1	3	9
Broken families/unhealthy family life/trauma	2	2	1	0	3	8
Not enough physical activity	1	4	0	0	1	6
Homelessness	1	4	0	0	1	6
Domestic violence	1	1	1	0	2	5
Lack of prevention	-	3	-	0	-	3
Access to resources	-	2	-	1	-	3
Obesity	2	0	0	0	0	2
Sex education	1	1	0	0	0	2
Intergenerational incarceration/crime rates	-	-	0	-	2	2
Lack of transportation	-	2	-	0	-	2
Poor sexual habits	1	0	0	0	0	1
Sick kids	1	0	0	0	0	1
Immunization rates	-	-	0	-	1	1
STD rates	-	-	0	-	1	1
Large and diverse region	-	-	0	-	1	1
Weather	-	1	-	0	-	1
Poverty	-	1	-	0	-	1

Source: 2016 Mat-Su CHNA Focus Groups and Stakeholder Interviews

Focus group participants were also asked to identify the features of their vision of a healthy community. Table 155 outlines the various responses along with the number of groups that discussed the topic.

Table 155 - Ideal Healthy Community by Focus Group Cluster

Ideal Healthy Community	Children/Youth	Community Groups	Government	Hospital Staff	Providers	Total
Access to health care/universal health care	4	5	-	1	4	14
Parks (safe) & recreation	3	6	-	0	5	14
Community "ownership"/connections	2	5	-	1	4	12
Transportation	3	2	2	0	5	12
Affordable housing (no homelessness)	3	0	-	2	4	9
Drugs to disappear	2	3	-	0	4	9
Education	1	2	-	0	6	9
Low unemployment/jobs	3	0	-	2	4	9
Preventative services	-	2	1	2	4	9
Healthy relationships and healthy lifestyles	-	-	1	2	6	9
Access to mental health and substance abuse services	4	1	-	0	2	7
Healthy foods (no junk food in stores)	1	2	-	0	4	7
Mentorship	3	1	-	0	2	6
High graduation rates	1	2	-	0	2	5
Planning and zoning/healthy infrastructure	2	0	1	0	2	5
Early education	-	-	0	2	3	5
Community garden	1	0	-	0	3	4
Safe children	-	-	0	1	3	4
Immediate access to services to address needs	-	-	0	1	3	4
Affordable child care	1	1	-	0	1	3
Cultural diversity	1	0	-	2	0	3
Knowledge of resources	1	1	-	0	1	3

Ideal Healthy Community	Children/Youth	Community Groups	Government	Hospital Staff	Providers	Total
Schools	1	0	0	0	2	3
Families on bikes/children playing outside	-	2	1	0	0	3
Accountability /civic engagement	-	1	1	0	1	3
Community Center	-	-	1	-	2	3
Elder care	1	0	-	0	1	2
Hospitals	1	0	-	1	0	2
No smoking	1	1	0	0	0	2
Clean air	-	-	1	-	1	2
Road system	-	-	2	-	-	2
Dental care at school	-	1	0	0	0	1
Mindfulness/emotional intelligence training	-	1	0	0	0	1
Cut out all the bad stuff	-	1	0	0	0	1
Everyone has an equal shot	-	1	0	0	0	1

Source: 2016 Mat-Su CHNA Focus Groups

Focus group participants were also asked to identify goals to aspire to in order to create a healthier community. Table 156 outlines the various responses, along with the number of groups that discussed the topic.

Table 156 - Community Goals by Focus Group Cluster

Goals	Children/Youth	Community Groups	Government	Hospital Staff	Providers	Total
Family connections/family support/parent training/ intergenerational activities	3	8	1	2	4	18
Detox, rehab and residential care	6	1	1	2	4	14
More preventative services/education (including nutrition)	5	5	1	0	2	13
Access to mental health services	4	0	1	2	3	10
Transportation	3	4	0	1	2	10
Access to health care	2	2	1	1	3	9
Affordable housing (no homelessness)	3	2	0	0	4	9
No drugs	1	6	0	0	2	9
Job training	1	1	1	0	3	6
Recreation (indoor)	1	4	0	0	1	6
Tolerance/less judgmental people	1	1	1	1	2	6
Healthy eating/food	-	4	0	0	2	6
Education	-	1	1	1	2	5
Jobs/living wage	1	0	0	0	3	4
Safe neighborhoods; walking/bike paths	1	2	0	0	1	4
Swimming pool	-	3	0	0	1	4
Trauma informed care	2	0	0	0	1	3
Community Center	-	2	0	0	1	3
No childhood trauma	-	2	0	0	1	3
Personal responsibility	-	2	0	0	1	3
Mentoring	1	1	0	0	0	2

Goals	Children/Youth	Community Groups	Government	Hospital Staff	Providers	Total
Better trained doctors	-	2	0	0	0	2
Early care and education	-	2	0	0	0	2
Community schools program	-	1	0	0	1	2
Specialists	1	0	0	0	0	1
Hospital in Palmer	-	1	0	0	0	1
Safer roads	-	1	0	0	0	1
Senior theatre	-	1	0	0	0	1
YMCA	-	-	0	-	1	1
Retirement community	-	-	0	-	1	1
Leadership development	-	-	0	-	1	1
Home health and hospice	-	-	0	-	1	1
Infrastructure/planning	-	-	1	-	-	1

Source: 2016 Mat-Su CHNA Focus Groups

Mat-Su Community Health Assessment Household Survey

PHONE # _____ **SURVEY #** _____

INTERVIEWER NAME _____ **DATE** _____ **Cell/Landline**

Hi, my name is _____ with the McDowell Group. We're conducting a study for the MSHF to better understand health issues in the Mat-Su Borough. I'd like to ask you a few questions.

[READ] All information gathered in this survey will be kept confidential and reported only as group totals.

1. **Do you currently live in the Mat-Su Borough?** 01❒ Yes 02❒ No (thank and end survey)

2. **What community do you live in?**

01❒ Big Lake	07❒ Farm Loop	13❒ Knik River	19❒ Point MacKenzie	25❒ Tanaina
02❒ Buffalo Soapstone Creek	08❒ Fishhook	14❒ Lake Louise	20❒ Skwentna	26❒ Trapper
03❒ Butte	09❒ Gateway	15❒ Lazy Mountain	21❒ Susitna	27❒ Wasilla
04❒ Chase	10❒ Glacier View	16❒ Meadow Lakes	22❒ Susitna North	28❒ Willow
05❒ Chickaloon	11❒ Houston	17❒ Palmer	23❒ Sutton/Alpine	29❒ Other
06❒ Eureka	12❒ Knik-Fairview	18❒ Petersville	24❒ Talkeetna	

_____

3. **In what year were you born? 19____** *(if 2000 or later, thank and end survey)* ❒ Refused *(thank and end)*

4. **Overall, would you rate your health status as excellent, very good, good, fair, or poor?**

01❒ Excellent	04❒ Fair	06❒ Don't know
02❒ Very good	05❒ Poor	07❒ Refused
03❒ Good		

5. **Compared to 12 months ago, would you say your health status is….?** *(Read 1-3. Check only one)*

01❒ Better	04❒ Don't know
02❒ The same	05❒ Refused
03❒ Worse	

6. **Overall, would you rate the health status of the people who live in the Mat-Su Borough as excellent, very good, good, fair, or poor?**

01❒ Excellent	04❒ Fair	06❒ Don't know
02❒ Very good	05❒ Poor	07❒ Refused
03❒ Good		

7. Overall, would you rate the quality of life in the Mat-Su Borough as excellent, very good, good, fair, or poor?

01❒ Excellent
02❒ Very good
03❒ Good
04❒ Fair
05❒ Poor
06❒ Don't know
07❒ Refused

8. In the past 12 months, did you or any members of your household experience any of the following?

(Rotate Questions)	*Yes*	*No*	*Don't know*	*Ref*
a. Not knowing where to go for medical care	1❒	2❒	3❒	4❒
b. Not knowing where to go for mental health care	1❒	2❒	3❒	4❒
c. Drug or alcohol abuse	1❒	2❒	3❒	4❒
d. A mental health concern	1❒	2❒	3❒	4❒
e. Violence, or threats of violence, between family members within the household	1❒	2❒	3❒	4❒
f. Not being able to get transportation to medical or other health appointments	1❒	2❒	3❒	4❒
g. Not being able to get transportation to work or school	1❒	2❒	3❒	4❒
h. Not knowing where to get help with a substance abuse problem	1❒	2❒	3❒	4❒
i. Not seeking health care because you could not afford it	1❒	2❒	3❒	4❒
j. Inability to get a health care appointment at a time that worked for your household	1❒	2❒	3❒	4❒
f. Inability to get information because you did not have access to a computer	1❒	2❒	3❒	4❒

9. In the past 12 months, did you or any members of your household go without any of the following?

(Rotate Questions)	*Yes*	*No*	*Don't know*	*Refused*
a. Housing	1❒	2❒	3❒	4❒
b. Utilities, such as heat or electricity, for your home	1❒	2❒	3❒	4❒
c. Reliable transportation	1❒	2❒	3❒	4❒
d. Food	1❒	2❒	3❒	4❒
e. Needed health care services	1❒	2❒	3❒	4❒
f. Needed prescriptions or medications	1❒	2❒	3❒	4❒
g. Needed dental services	1❒	2❒	3❒	4❒

10. In your neighborhood, do you feel very safe, somewhat safe, or not safe?

01❒ Very safe
02❒ Somewhat safe
03❒ Not safe
04❒ Don't know
05❒ Refused

11. About what number of people can you count on to help you with a practical problem, such as you need a ride to a medical appointment?

#_____ 01❒ Don't know 02❒ Refused

12. Do you and people in your community do favors for each other very often, often, sometimes, rarely, or never?

01❒ Very often
02❒ Often
03❒ Sometimes
04❒ Rarely
05❒ Never
06❒ Don't know
07❒ Refused

13. Do you reach outside your circle of friends to give or receive help very often, often, sometimes, rarely, or never?

01❒ Very often
02❒ Often
03❒ Sometimes
04❒ Rarely
05❒ Never
06❒ Don't know
07❒ Refused

14. If you needed help in an emergency, would you be very comfortable, somewhat comfortable, or not comfortable asking others in your immediate neighborhood for help?

01❒ Very comfortable
02❒ Somewhat comfortable
03❒ Not comfortable
04❒ Don't know
05❒ Refused

15. If you saw a child from your immediate neighborhood skipping school, would you very likely, somewhat likely, somewhat unlikely, or very unlikely report this to the child's parent or school?

01❒ Very likely
02❒ Somewhat likely
03❒ Somewhat unlikely
04❒ Very unlikely
05❒ Don't know
06❒ Refused

16. If you needed help to care for your children, such as you needed someone to watch your child for a few hours when you were at a medical appointment or to pick them up from school, would you be very likely, somewhat likely, somewhat unlikely, or very unlikely to ask for help?

01❒ Very likely
02❒ Somewhat likely
03❒ Somewhat unlikely
04❒ Very unlikely
05❒ Don't know
06❒ Refused
07❒ Don't have children

17. If you need to get advice on how to handle a problem, such as financial, emotional, or work-related issue, who would you ask for help? *(Check all responses. Don't prompt for additional responses)*

01❒ Family member
02❒ Neighbor
03❒ Church leader
04❒ Friend
05❒ Co-worker
06❒ Other: _____
07❒ Don't know
08❒ Refused

18. In the past 12 months, have you volunteered for any local groups, such as a church group or other non-profit?

01❒ Yes 02❒ No 03❒ Don't know 04❒ Refused

19. In the past 12 months, have you very often, often, sometimes, rarely, or never helped a person in need outside your family and other relatives who lives in your community?

01❒ Very often
02❒ Often
03❒ Sometimes
04❒ Rarely
05❒ Never
06❒ Don't know
07❒ Refused

20. In the past 6 months, have you attended a local community event, such as a church event, school gathering, school concert, or craft show?

01❒ Yes 02❒ No 03❒ Don't know 04❒ Refused

21. In general, on a scale from 1 to 10, with one being very unsatisfied and 10 being very satisfied, how satisfied are you with your life? *(Circle one)*

1 2 3 4 5 6 7 8 9 10

01❒ Don't know 02❒ Refused

22. Which statement best describes your employment status? Are you... (Read 1-10, check only one)

01❒ Employed full-time year-round
02❒ Employed *part-time* year-round
03❒ Employed full-time seasonally
04❒ Employed *part-time* seasonally
05❒ Unemployed, looking for work *(Skip to Q. 25)*
06❒ Unemployed, not looking for work *(Skip to Q. 25)*
07❒ Student *(Skip to Q. 25)*
08❒ Retired *(Skip to Q. 25)*
09❒ Disabled *(Skip to Q. 25)*
10❒ Homemaker *(Skip to Q. 25)*
11❒ Don't know
12❒ Refused

23. In general, on a scale from 1 to 10, with one being very unsatisfied and 10 being very satisfied, how satisfied are you with your present employment? *(Circle one)*

1 2 3 4 5 6 7 8 9 10

02❒ Don't know 03❒ Refused

24. If you work outside the home, about how many miles do you travel to work one-way each day?

#_____ miles

01❒ Don't work outside of home 02❒ Don't know 03❒Refused

25. What types of health coverage or insurance do you or members of your household have? *(Don't read list. Check ALL that apply)*

01❒ None
02❒ Medicaid
03❒ Medicare
04❒ Denali KidCare
05❒ Veterans Administration
06❒ Tribal Health System/Indian Health Service
07❒ Champus/Tricare
08❒ Workers' Compensation
09❒ Private (Aetna, Premera, etc.)
10❒ Other _____
11❒ Don't know
12❒ Refused

26. Please indicate whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with each of the following statements.

(Rotate questions)	*Strongly Agree*	*Somewhat Agree*	*Somewhat Disagree*	*Strongly Disagree*	*Don't know*	*Refused*
a. My favorite places are outside, in nature.	1❒	2❒	3❒	4❒	5❒	6❒
b. I think about how my actions affect the earth.	1❒	2❒	3❒	4❒	5❒	6❒
c. I take notice of wildlife wherever I am.	1❒	2❒	3❒	4❒	5❒	6❒
d. My relationship to nature is an important part of who I am.	1❒	2❒	3❒	4❒	5❒	6❒
e. The outside environment is a source of health problems where I live.	1❒	2❒	3❒	4❒	5❒	6❒

27. Are you very familiar, somewhat familiar, or not familiar with the term "Adverse Childhood Experiences"?

01❒ Very familiar
02❒ Somewhat familiar
03❒ Not familiar
04❒ Don't know
05❒ Refused

***(READ):* I have just a few more questions for demographic purposes.**

28. Including yourself, how many people live in your household for at least 6 months of the year?

#_____ *(If 1, skip to Q30)* 01❒ Refused

29. Of the people living in your household, how many are under the age of 18?

#_____ 01❒ Refused

30. What is the highest level of education you have had the opportunity to obtain? *(Do not read. Check one.)*

01❒ High school degree or less
02❒ Some college/Associate's/Certificate/Trade school
03❒ Bachelor's
04❒ Master's/PhD/Professional degree (lawyer/doctor)
05❒ Don't know
06❒ Other _____
07❒ Refused

31. In general, on a scale from 1 to 10, with one being very unsatisfied and 10 being very satisfied, how satisfied are you the level of education you have attained? *(Circle one)*

1 2 3 4 5 6 7 8 9 10

01❒ Don't know 02❒ Refused

32. Please stop me at the category that best describes your <u>total household</u> income in 2015. *(Read 1-6)*

1❒ Less than $25,000
2❒ $25,000 to $50,000
3❒ $50,001 to $75,000
4❒ $75,001 to $100,000
5❒ $100,001 to $125,000
6❒ Over $125,000
7❒ Don't know
8❒ Refused

33. What race or ethnic group do you identify as?
(Do not read, check all that apply.)

1❒ White
2❒ American Indian or Alaska Native
3❒ Black or African-American
4❒ Asian
5❒ Hispanic or Latino
6❒ Native Hawaiian or Pacific Islander
7❒ Other_____
8❒ Don't know
9❒ Refused

34. What race or ethnic group do you think <u>others</u> identify you as?
(Do not read, check all that apply.)

1❒ White
2❒ American Indian or Alaska Native
3❒ Black or African-American
4❒ Asian
5❒ Hispanic or Latino
6❒ Native Hawaiian or Pacific Islander
7❒ Other_____
8❒ Don't know
9❒ Refused

35. Within the past 12 months, when seeking health care, do you feel your experiences were better, worse, or the same as the health care experienced by people of other races?

01❒ Better
02❒ Worse
03❒ The same
04❒ Don't know
05❒ Refused

***[READ]:* Finally, the MSHF is assessing demographics around sexual orientation and gender identity.**

36. Would you be comfortable answering questions about your own sexual orientation and gender identity?

01❒ Yes (go on to Q37)
02❒ No 03❒ Don't know 04❒ Refused

Thank and end survey (fill out Q41)

37. Do you consider yourself to be…? *(Read 1-4. Check only one)*

01❒ Heterosexual or straight
02❒ Gay or lesbian
03❒ Bisexual
04❒ Other
05❒ Don't know
06❒ Refused

38. Do you consider yourself to be transgender?

01❒ No (skip to Q. 40)
02❒ Yes (continue to Q.39)
04❒ Don't know (skip to Q. 40)
05❒ Refused (skip to Q. 40)

39. What gender do you identify as?

01❒ Male
02❒ Female
03❒ Gender nonconforming
04❒ Don't know
05❒ Refused

40. Within the past 12 months, when seeking health care, do you feel your experiences were better, worse, or the same as the health care experienced by people of other sexual orientations or gender identities?

01❒ Better
02❒ Worse
03❒ The same
04❒ Don't know
05❒ Refused

Thank you for participating in this survey!

41. DO NOT ASK

1❒ Male 2❒ Female 3❒ Unknown

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Appendix F: Focus Group Topic Guide

Focus Group Topic Guide 60-90 Minute Version

Introduction

FOR MSHF REP TO READ: Hello, my name is _____ and I work at the MSHF. We are here to gather information for a Community Health Needs Assessment. The MSHF has shared ownership and governance of the Mat-Su Regional Medical Center. In this role, we are considered a "non-profit hospital" and are required by the Affordable Care Act to conduct a community health needs assessment every 3 years.

The results of this needs assessment will help to guide the Foundation and the community in creating a healthier Mat-Su. We are holding several community meetings and focus groups across the borough in order to hear about the opportunities and barriers that residents face in trying to access care and make healthy choices in their lives.

I would like to introduce to you, Debbie Thompson and Jacqui Catrabone from Strategy Solutions who will be leading the focus groups today.

The information you share with us will be used in a report on health in Mat-Su and help us figure what is going right and how we can improve the health of residents in Mat-Su.

There are a few guidelines I would like to go over with you that we use in focus groups.

- One is that you speak up and only one person speaks at a time. This makes it clearer on the recording that we are making and easier for the person who transcribes the tape.
- The other thing is, please say exactly what you think. There IS no right or wrong answers in this. We're just as interested in your concerns as well as your support for any of the ideas that are brought up, so feel free to express your true opinions, even if you disagree with an idea that is being discussed.
- Your participation is totally anonymous. We don't want to know anyone's full names. What you say in this room will only be reported with everyone else's views in a report – and will not be associated with you specifically.

We want to talk about things that are related to a person's health and affect their ability to make healthy choices. One example of this is where they work and the income they earn. If a person doesn't have enough money to pay for insurance copays, deductibles, medication, or medical bills they will not get the necessary treatment they need.

Another example is the educational level of a person – higher education is associated with a longer life and a greater likelihood of obtaining or understanding basic health information and finding services needed to make appropriate health decisions.

Another factor is one's culture. In some cultures one is not supposed to look directly at a provider – however a provider may not know this and may think that the person is depressed. These are all factors that are related to where we live, learn, work, and play and they can really affect a person's health.

Some other factors are: (point to this printed sheet that is hanging on the wall)

- where one lives – neighborhood, type of housing
- what type of job they have,
- a person's income and benefits
- if they have supportive family and/or friends in their lives,
- if they feel safe in their neighborhood,
- if they have transportation,
- their age,
- if they experience social acceptance or discrimination, and
- if they have access to nature, and
- if their home or neighborhood has environmental hazards

Research shows that communities with access to healthy foods, quality affordable housing, good schools, and safe places to play are healthier than those that don't. Health is largely influenced by the choices we make for ourselves and our families. AND our communities can be developed to increase people's opportunities to make those healthy choices.

Over the next hour or so we will be talking about your impressions of the overall health status of Mat-Su and the conditions that exist in Mat-Su that help people make healthy choices.

Factors that Affect Health

1. This question is for community groups: I just mentioned some factors that impact a person's health. What do you think about these factors – do you think that they affect the health of people living in Mat-Su? How?
    a. What other factors contribute to health or help Mat-Su residents make healthy decisions? (Add these factors to the list that is started above so everyone can see them. Correct them if they start veering away from social determinants)

Build list into OptionFinder and say: "I would like you to pick up your keypads. We are going to go through this list and rate how affected you or your family have been by each of these factors in the past year on a 5 point scale where 5=Very Serious Affect, 4=Serious Affect,

3=Somewhat of an Affect, 2=Small Affect, 1=No Affect. If you do not know how to rate a factor I am going to ask you to hit the star/asterisk key on your keypad."

OR

1. THIS QUESTION IS ONLY FOR PROFESSIONAL GROUPS When you think of the children and families you work with or serve which of these factors on the list stick out to you as being really important. (Substitute the population they work with and note which ones they mention)
    a. What other factors contribute to health or affect the people you work with in having the opportunity to make healthy decisions? (Add these factors to the list that is started above so everyone can see them. Correct them if they start veering away from social determinants)

Build list into OptionFinder and say: "I would like you to pick up your keypads. We are going to go through this list and rate how much of an affect you think each of these factors has had on the people you work with in the past year on a 5 point scale where 5=Very Serious Affect, 4=Serious Affect, 3=Somewhat of an Affect, 2=Small Affect, 1=No Affect. If you do not know how to rate a factor I am going to ask you to hit the star/asterisk key on your keypad."

Now let's go around the room (round robin) with this question

2. What is one thing you are thankful for that helps you be able to make healthy choices in your life?

(If they start mentioning barriers to access make separate running list on flip chart of these)

Services and Supports that Help Address the "Factors"

3. Given this list of factors, what do you consider to be the services/supports that exist in Mat-Su that help children/families/adults with these factors?

    a. What else do we have in Mat-Su that help people make good decisions about their health?
4. What additional things do we need in Mat-Su to help people have the opportunity to lead a healthy life?

Barriers to Accessing Healthcare and Support

5. What other barriers are there that affect how people can access care and support? (Add to barrier flip chart sheet or create barriers list)

Health Status of Mat-Su Health Residents

Overall, how would you rate the health status of children and families you work with in Mat-Su? (show the graph) (Excellent, Very Good, Good, Fair, Poor) Note: If someone asks how we define community, ask, "How would you define it?" (flip chart vote/electronic vote)

Why do you say that?

6. What percentage of residents of Mat-Su have a minimum baseline of all the factors we mentioned (point to list) that allow them to make healthy decisions? (answers to choose from < 25%; 26-50%; 51-75%; >75%). (show answers on flip charts with their dots or through computer voting)

Why do you say that?

7. What strengths does Mat-Su have in terms of having it be a healthy place to live?

Vision of a Healthier Mat-Su

8. What do you think an ideal "healthy community" looks like? What are the characteristics, available services, etc. Think outside the box….

9. Based on your definition, please rate your level of agreement with the following statement: Mat-Su is currently a "healthy community". Please rate your level of agreement on a 5 point scale where 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree. (show answers on flip charts with their dots or through computer voting)

Why do you say that?

10. Who should be involved in making Mat-Su a healthier community?

11. If Mat-Su could set and achieve one goal over the next three years, moving toward a healthier Mat-Su, what would it be?

Build list into OptionFinder and ask "I am going to ask you to pick up your keypads again and answer how important you think each of these is to focus on over the next 3 years to create a healthier Mat-Su, on a 5 point scale where 5=Very Important, 3=Somewhat Important, and 1=Not Important, you can rate any number between 1 and 5."

Focus Group Topic Guide 60 Minute Version

Introduction

FOR MSHF REP TO READ: Hello, my name is _____ and I work at the MSHF. We are here to gather information for a Community Health Needs Assessment. The MSHF has shared ownership and governance of the Mat-Su Regional Medical Center. In this role, we are considered a "non-profit hospital" and are required by the Affordable Care Act to conduct a community health needs assessment every 3 years.

The results of this needs assessment will help to guide the Foundation and the community in creating a healthier Mat-Su. We are holding several community meetings and focus groups across the borough in order to hear about the opportunities and barriers that residents face in trying to access care and make healthy choices in their lives.

I would like to introduce to you, Debbie Thompson and Jacqui Catrabone from Strategy Solutions who will be leading the focus groups today.

There are a few guidelines I would like to go over with you that we use in focus groups.

- One is that you speak up and only one person speaks at a time. This makes it clearer on the recording that we are making and easier for the person who transcribes the tape.
- The other thing is, please say exactly what you think. There IS no right or wrong answers in this. We're just as interested in your concerns as well as your support for any of the ideas that are brought up, so feel free to express your true opinions, even if you disagree with an idea that is being discussed.
- Your participation is totally anonymous. We don't want to know anyone's full names. What you say in this room will only be reported with everyone else's views in a report – and will not be associated with you specifically.

<u>We want to talk about things that are related to a person's health and affect their ability to make healthy choices</u>. One example of this is where they work and the income they earn. If a person doesn't have enough money to pay for insurance copays, deductibles, medication, or medical bills they will not get the necessary treatment they need.

Another example is the educational level of a person – higher education is associated with a longer life and a greater likelihood of obtaining or understanding basic health information and finding services needed to make appropriate health decisions.

Another factor is one's culture. In some cultures one is not supposed to look directly at a provider – however a provider may not know this and may think that the person is depressed. These are all factors that are related to where we live, learn, work, and play and they can really affect a person's health.

Some other factors are: (Point to this printed sheet that is hanging on the wall)

- where one lives – neighborhood, type of housing
- what type of job they have,
- a person's income and benefits
- if they have supportive family and/or friends in their lives,
- if they feel safe in their neighborhood,
- if they have transportation,
- their age,
- if they experience social acceptance or discrimination, and
- if they have access to nature, and
- if their home or neighborhood has environmental hazards

Research shows that communities with access to healthy foods, quality affordable housing, good schools, and safe places to play are healthier than those that don't. Health is largely influenced by the choices we make for ourselves and our families. AND our communities can be developed to increase people's opportunities to make those healthy choices.

Over the next hour or so we will be talking about your impressions of the overall health status of Mat-Su and the conditions that exist in Mat-Su that help people make healthy choices.

Factors that Affect Health

1. This question is for community groups: I just mentioned some factors that impact a person's health. What do you think about these factors – do you think that they affect the health of people living in Mat-Su? How?

a. What other factors contribute to health or help Mat-Su residents make healthy decisions? (Add these factors to the list that is started above so everyone can see them. Correct them if they start veering away from social determinants)

Build list into OptionFinder and say: "I would like you to pick up your keypads. We are going to go through this list and rate how affected you or your family have been by each of these factors in the past year on a 5 point scale where 5=Very Serious Affect, 4=Serious Affect, 3=Somewhat of an Affect, 2=Small Affect, 1=No Affect. If you do not know how to rate a factor I am going to ask you to hit the star/asterisk key on your keypad."

OR

1. This question is only for professional groups When you think of the children and families you work with or serve which of these factors on the list stick out to you as being really important. (Substitute the population they work with and note which ones they mention)
    a. What other factors contribute to health or affect the people you work with in having the opportunity to make healthy decisions? (Add these factors to the list that is started above so everyone can see them. Correct them if they start veering away from social determinants)

Build list into OptionFinder and say: "I would like you to pick up your keypads. We are going to go through this list and rate how much of an affect you think each of these factors has had on the people you work with in the past year on a 5 point scale where 5=Very Serious Affect, 4=Serious Affect, 3=Somewhat of an Affect, 2=Small Affect, 1=No Affect. If you do not know how to rate a factor I am going to ask you to hit the star/asterisk key on your keypad."

(If they start mentioning barriers to access make separate running list on flip chart of these)

Services and Supports that Help Address the "Factors"

2. Given this list of factors, what do you consider to be the services/supports that exist in Mat-Su that help children/families/adults with these factors?

    a. What else do we have in Mat-Su that help people make good decisions about their health?

3. What additional things do we need in Mat-Su to help people have the opportunity to lead a healthy life?

Health Status of Mat-Su Health Residents

4. Overall, how would you rate the health status of children and families you work with in Mat-Su? (show the graph) (Excellent, Very Good, Good, Fair, Poor) Note: If someone asks how we define community, ask, "How would you define it?" (Flip chart vote/electronic vote)

5. What percentage of residents of Mat-Su have a minimum baseline of all the factors we mentioned (point to list) that allow them to make healthy decisions? (answers to choose from < 25%; 26-50%; 51-75%; >75%). (Show answers on flip charts with their dots or through computer voting)

6. What other strengths does Mat-Su have in terms of having it be a healthy place to live?

Vision of a Healthier Mat-Su

7. What do you think an ideal "healthy community" looks like? What are the characteristics, available services, etc. Think outside the box….

   Why do you say that?

8. Based on your definition, please rate your level of agreement with the following statement: Mat-Su is currently a "healthy community". Please rate your level of agreement on a 5 point scale where 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree. (Show answers on flip charts with their dots or through computer voting)

   Why do you say that?

9. Who should be involved in making Mat-Su a healthier community?

10. If Mat-Su could set and achieve one goal over the next three years, moving toward a healthier Mat-Su, what would it be?

    Build list into OptionFinder and ask "I am going to ask you to pick up your keypads again and answer how important you think each of these is to focus on over the next 3

years to create a healthier Mat-Su, on a 5 point scale where 5=Very Important, 3=Somewhat Important, and 1=Not Important, you can rate any number between 1 and 5."

Focus Group Topic Guide 20-30 Minute Version

Introduction

FOR MSHF REP TO READ: Hello, my name is _____ and I work at the MSHF. We are here to gather information for a Community Health Needs Assessment. The MSHF has shared ownership and governance of the Mat-Su Regional Medical Center. In this role, we are considered a "non-profit hospital" and are required by the Affordable Care Act to conduct a community health needs assessment every 3 years.

The results of this needs assessment will help to guide the Foundation and the community in creating a healthier Mat-Su. We are holding several community meetings and focus groups across the borough in order to hear about the opportunities and barriers that residents face in trying to access care and make healthy choices in their lives.

I would like to introduce to you, Debbie Thompson and Jacqui Catrabone from Strategy Solutions who will be leading the focus groups today.

We want to talk about things that are related to a person's health and affect their ability to make healthy choices. One example of this is where they work and the income they earn. If a person doesn't have enough money to pay for insurance copays, deductibles, medication, or medical bills they will not get the necessary treatment they need.

Another example is the educational level of a person – higher education is associated with a longer life and a greater likelihood of obtaining or understanding basic health information and finding services needed to make appropriate health decisions.

Another factor is one's culture. In some cultures one is not supposed to look directly at a provider – however a provider may not know this and may think that the person is depressed. These are all factors that are related to where we live, learn, work, and play and they can really affect a person's health.

Some other factors are: (Point to this printed sheet that is hanging on the wall)

- where one lives – neighborhood, type of housing
- what type of job they have,
- a person's income and benefits
- if they have supportive family and/or friends in their lives,
- if they feel safe in their neighborhood,
- if they have transportation,

- their age,
- if they experience social acceptance or discrimination, and
- if they have access to nature, and
- if their home or neighborhood has environmental hazards

Research shows that communities with access to healthy foods, quality affordable housing, good schools, and safe places to play are healthier than those that don't. Health is largely influenced by the choices we make for ourselves and our families. AND our communities can be developed to increase people's opportunities to make those healthy choices.

Over the next hour or so we will be talking about your impressions of the overall health status of Mat-Su and the conditions that exist in Mat-Su that help people make healthy choices.

Factors that Affect Health

1. This question is for community groups: I just mentioned some factors that impact a person's health. What do you think about these factors – do you think that they affect the health of people living in Mat-Su? How?
    a. What other factors contribute to health or help Mat-Su residents make healthy decisions? (Add these factors to the list that is started above so everyone can see them. Correct them if they start veering away from social determinants)

Build list into OptionFinder and say: "I would like you to pick up your keypads. We are going to go through this list and rate how affected you or your family have been by each of these factors in the past year on a 5 point scale where 5=Very Serious Affect, 4=Serious Affect, 3=Somewhat of an Affect, 2=Small Affect, 1=No Affect. If you do not know how to rate a factor I am going to ask you to hit the star/asterisk key on your keypad."

OR

1. This question is only for professional groups When you think of the children and families you work with or serve which of these factors on the list stick out to you as being really important. (Substitute the population they work with and note which ones they mention)
    a. What other factors contribute to health or affect the people you work with in having the opportunity to make healthy decisions? (Add these factors to the list that is started above so everyone can see them. Correct them if they start veering away from social determinants)

Build list into OptionFinder and say: "I would like you to pick up your keypads. We are going to go through this list and rate how much of an affect you think each of these factors has had on the people you work with in the past year on a 5 point scale where 5=Very Serious Affect, 4=Serious Affect, 3=Somewhat of an Affect, 2=Small Affect, 1=No Affect. If you do not know how to rate a factor I am going to ask you to hit the star/asterisk key on your keypad."

(If they start mentioning barriers to access make separate running list of these)

Services and Supports that Help Address the "Factors"

2. Given this list of factors, what do you consider to be the services/supports that exist in Mat-Su that help children/families/adults with these factors and to make good decisions about their health?

3. What additional things do we need in Mat-Su to help people have the opportunity to lead a healthy life?

Health Status of Mat-Su Health Residents

4. Overall, how would you rate the health status of children and families you work with in Mat-Su? (show the graph) (Excellent, Very Good, Good, Fair, Poor) Note: If someone asks how we define community, ask, "How would you define it?" (flip chart vote/electronic vote)

5. What percentage of residents of Mat-Su have a minimum baseline of all the factors we mentioned (point to list) that allow them to make healthy decisions? (answers to choose from < 25%; 26-50%; 51-75%; >75%).(show answers on flip charts with their dots or through computer voting)

Vision of a Healthier Mat-Su

6. Who should be involved in making Mat-Su a healthier community?

7. If Mat-Su could set and achieve one goal over the next three years, moving toward a healthier Mat-Su, what would it be?

   Build list into OptionFinder and ask "I am going to ask you to pick up your keypads again and answer how important you think each of these is to focus on over the next 3 years to create a healthier Mat-Su, on a 5 point scale where 5=Very Important, 3=Somewhat Important, and 1=Not Important, you can rate any number between 1 and 5."

Appendix G: Focus Group Intercept Survey

Hello, my name is (Jacqui/Deb) and we are helping the MSHF gather information for a Community Health Needs Assessment. The MSHF has shared ownership and governance of the Mat-Su Regional Medical Center. In this role, they are considered a "non-profit hospital" and are required by the Affordable Care Act to conduct a community health needs assessment every 3 years. The results of this needs assessment will help to guide the Foundation and the community in creating a healthier Mat-Su.

I was hoping to ask you a few questions while you wait. Your input is anonymous. Would you be willing to chat with me for a few minutes?

1. I would like to take a moment to talk about things that are related to a person's health and affect their ability to make healthy choices. This includes things such as:

   - where a person lives – neighborhood, type of housing
   - what type of job they have
   - a person's income and benefits
   - if they have supportive family and/or friends in their lives
   - if they have access to nature
   - if they feel safe in their neighborhood
   - if they have transportation
   - their age
   - if they experience social acceptance or discrimination
   - if their home or neighborhood has environmental hazards

   What other factors contribute to health or help Mat-Su residents make healthy decisions?

2. Given this list of factors, what do you consider to be the services/supports that exist in Mat-Su that help children/families/adults with these factors and to make good decisions about their health?

3. What additional things do we <u>need</u> in Mat-Su to help people have the opportunity to lead a healthy life?

4. If Mat-Su could set and achieve one goal over the next three years, moving toward a healthier Mat-Su, what would it be?

We are meeting with several members of the community and would like the opportunity to look for differences of opinions based on demographic characteristics. Please answer the following:

5. Do you consider yourself:
    a. Female
    b. Male
    c. Other

6. What race/ethnicity do you consider yourself (circle all that apply)
    d. White/Caucasian
    e. Alaska Native/American Indian
    f. Hispanic
    g. Asian/Pacific Islander
    h. Russian
    i. African American
    j. Other _____

7. Please circle what age group you are in:
    a. Under 18
    b. 18-24
    c. 25-34
    d. 35-44
    e. 45-64
    f. 65+

8. What is the highest education level you have attained:

    a. Less than high school
    b. High school or GED
    c. Some college
    d. College grad
    e. Some graduate school
    f. Graduate degree

Appendix H: Focus Group Participant Survey

2016 Mat-Su Focus Group Health Survey

Participants:

- Sunshine Clinic Patients

This survey is being conducted by the MSHF. We want to know your opinion about what makes people healthy and whether people in Mat-Su are healthy. Please do not put your name on this survey – your answers are anonymous.

We are hoping you can take a few minutes to fill out this survey.

1. There are factors that can affect a person's health. These include:
   - where a person lives – neighborhood, type of housing
   - what type of job they have
   - a person's income and benefits
   - if they have supportive family and/or friends in their lives
   - if they have access to nature
   - if they feel safe in their neighborhood
   - if they have transportation
   - their age
   - if they experience social acceptance or discrimination
   - if their home or neighborhood is contaminated or unsafe

   What other factors contribute to health or help Mat-Su residents make health decisions?

2. What things do we have in Mat-Su that help people be healthy and make healthy choices in their lives?

3. How would you rate the health of children and families in Mat-Su?
   a. Excellent
   b. Very Good
   c. Good
   d. Fair
   e. Poor

4. What additional things do we <u>need</u> in Mat-Su to help people have the opportunity to lead a healthy life?

5. Please circle the answer that states how much you agree with the following statement: "Mat-Su is a healthy community."

    a. Strongly agree
    b. Agree
    c. Neither agree or disagree
    d. Disagree
    e. Strong disagree

6. If Mat-Su could set and achieve one goal over the next three years, moving toward a healthier Mat-Su, what would it be?

We would like to know a little bit about yourself:

7. Do you consider yourself:
    k. Female
    l. Male
    m. Other

8. What race/ethnicity do you consider yourself (circle all that apply)
    n. White/Caucasian
    o. Alaska Native/American Indian
    p. Hispanic
    q. Asian/Pacific Islander
    r. Russian
    s. African American
    t. Other _____-

9. Please circle what age group you are in:
    g. Under 18
    h. 18-24
    i. 25-34
    j. 35-44
    k. 45-64
    l. 65+

10. What is the highest education level you have attained:

g. Less than high school
h. High school or GED
i. Some college
j. College grad
k. Some graduate school
l. Graduate degree

2016 Mat-Su Focus Group Meeting Survey

Participants:

- MSHF Annual Meeting

We would like to find out a little about the people who participate in this focus group. Please don't put your name on this sheet. We will combine all the answers that are given by the group and put the results into a report – your responses are totally anonymous.

1. How would you rate your personal health? (please circle your answer)
    a. Excellent
    b. Good
    c. Fair
    d. Poor

2. Check from the following list the top three Social needs and challenges that you see with the children/families/adults/seniors that relate to them having optimal health and wellbeing?

    - ❑ Availability of resources to meet daily needs (e.g., safe housing and local food markets)
    - ❑ Access to educational, economic, and job opportunities
    - ❑ Access to health care services
    - ❑ Quality of education and job training
    - ❑ Availability of community-based resources in support of community living and opportunities for recreational and leisure-time activities
    - ❑ Transportation options
    - ❑ Public safety
    - ❑ Social support
    - ❑ Social norms and attitudes (e.g., discrimination, racism, and distrust of government)
    - ❑ Exposure to crime, violence, and social disorder (e.g., presence of trash and lack of cooperation in a community)
    - ❑ Socioeconomic conditions (e.g., concentrated poverty and the stressful conditions that accompany it)
    - ❑ Residential segregation
    - ❑ Language/Literacy
    - ❑ Access to mass media and emerging technologies (e.g., cell phones, the Internet, and social media)
    - ❑ Culture

3. Please rank the top five goals from the following list that you think Mat-Su should work on (#1 is the most important goals to work on, #2 the second most, etc.). Put a check in the appropriate box for each number – please only check 5 boxes total.

	#1	#2	#3	#4	#5
Mat-Su residents are injury-free					
Mat-Su residents are cancer-free					
Mat-Su residents are at a healthy weight					
Mat-Su residents have optimal cultural, mental, and spiritual health					
Mat-Su children and safe and well-cared for					
Mat-Su residents are able to find, access, and benefit from health care					
Mat-Su residents are able to find, access, and benefit from mental health care					
Mat-Su residents are drug-free and sober or drink responsibly					
Mat-Su residents have healthy relationships					
Mat-Su residents are tobacco free					
Mat-Su residents live in a violence-free community					

4. Is there a goal that is not included above that you would list in your top 5 goals for Mat-Su? If so, what is it?

   What number would you rank it?

5. What one change would you make to the Mat-Su to create a healthier Mat-Su and why?

6. Do you consider yourself:
   a. Female
   b. Male
   c. Other

7. What race/ethnicity do you consider yourself (circle all that apply)
   a. White/Caucasian
   b. Alaska Native/American Indian
   c. Hispanic
   d. Asian/Pacific Islander
   e. Russian
   f. African American
   g. Other _____-

8. Please circle what age group you are in:
    a. Under 18
    b. 18-24
    c. 25-34
    d. 35-44
    e. 45-64
    f. 65+

9. What is the highest education level you have attained:
    a. Less than high school
    b. High school or GED
    c. Some college
    d. College grad
    e. Some graduate school
    f. Graduate degree

2016 Mat-Su Focus Group Meeting Survey

Participants:

- Nutakasaviik Nurses
- LGBTQ

We would like to find out a little about the people who participate in this focus group. Please don't put your name on this sheet. We will combine all the answers that are given by the group and put the results into a report – your responses are totally anonymous.

1. How would you rate your personal health? (please circle your answer)
    a. Excellent
    b. Good
    c. Fair
    d. Poor

2. What are the key needs and challenges that you see with the children/families/adults/seniors that you work with that relate to them having optimal health and wellbeing?

3. Please rank the top five goals from the following list that you think Mat-Su should work on (#1 is the most important goals to work on, #2 the second most, etc.). Put a check in the appropriate box for each number.

	#1	#2	#3	#4	#5
Mat-Su residents are injury-free					
Mat-Su residents are cancer-free					
Mat-Su residents are at a healthy weight					
Mat-Su residents have optimal cultural, mental, and spiritual health					
Mat-Su children and safe and well-cared for					
Mat-Su residents are able to find, access, and benefit from health care					
Mat-Su residents are able to find, access, and benefit from mental health care					
Mat-Su residents are drug-free and sober or drink responsibly					
Mat-Su residents have healthy relationships					
Mat-Su residents are tobacco free					
Mat-Su residents live in a violence-free community					

4. Is there a goal that is not included above that you would list in your top 5 goals for Mat-Su? If so, what is it?

   What number would you rank it?

5. What one change would you make to the Mat-Su to create a healthier Mat-Su and why?

6. Do you consider yourself:
   a. Female
   b. Male
   c. Other

7. What race/ethnicity do you consider yourself (circle all that apply)
   a. White/Caucasian
   b. Alaska Native/American Indian
   c. Hispanic
   d. Asian/Pacific Islander
   e. Russian
   f. African American
   g. Other _____-

8. Please circle what age group you are in:
   a. Under 18
   b. 18-24
   c. 25-34
   d. 35-44
   e. 45-64
   f. 65+

9. What is the highest education level you have attained:
   a. Less than high school
   b. High school or GED
   c. Some college
   d. College grad
   e. Some graduate school
   f. Graduate degree

2016 Mat-Su Focus Group Meeting Survey

Participants:

- Schools

We would like to find out a little about the people who participate in this focus group. Please don't put your name on this sheet. We will combine all the answers that are given by the group and put the results into a report – your responses are totally anonymous.

1. How would you rate your personal health? (please circle your answer)
    a. Excellent
    b. Good
    c. Fair
    d. Poor

2. What are the key needs and challenges that you see with the children/families/adults/seniors that you work with that relate to them having optimal health and wellbeing?

3. Please rank the top five goals from the following list that you think Mat-Su should work on (#1 is the most important goals to work on, #2 the second most, etc.). Put a check in the appropriate box for each number.

	#1	#2	#3	#4	#5
Mat-Su residents are injury-free					
Mat-Su residents are cancer-free					
Mat-Su residents are at a healthy weight					
Mat-Su residents have optimal cultural, mental, and spiritual health					
Mat-Su children and safe and well-cared for					
Mat-Su residents are able to find, access, and benefit from health care					
Mat-Su residents are able to find, access, and benefit from mental health care					
Mat-Su residents are drug-free and sober or drink responsibly					
Mat-Su residents have healthy relationships					
Mat-Su residents are tobacco free					
Mat-Su residents live in a violence-free community					

4. Is there a goal that is not included above that you would list in your top 5 goals for Mat-Su? If so, what is it?

   What number would you rank it?

5. What one change would you make to the Mat-Su to create a healthier Mat-Su and why?

6. Do you consider yourself:
   a. Female
   b. Male
   c. Other

7. What race/ethnicity do you consider yourself (circle all that apply)
   a. White/Caucasian
   b. Alaska Native/American Indian
   c. Hispanic
   d. Asian/Pacific Islander
   e. Russian
   f. African American
   g. Other _____-

8. Please circle what age group you are in:
   a. Under 18
   b. 18-24
   c. 25-34
   d. 35-44
   e. 45-64
   f. 65+

9. What is the highest education level you have attained:
    a. Less than high school
    b. High school or GED
    c. Some college
    d. College grad
    e. Some graduate school
    f. Graduate degree

How did you hear about this meeting?

THANKS SO MUCH FOR ANSWERING THESE QUESTIONS AND ATTENDING THIS MEETING.

2016 Mat-Su Focus Group Meeting Survey

Participants:

- My House
- Public Health Nurses
- Mat-Su Health Services
- Mat-Su Planning
- Judges
- Social Workers
- High Utilizers Group
- The Gathering
- Chickaloon Elders Lunch
- CCS
- Alaska Family Services
- OCS
- Palmer Community Meeting
- Providers/Agency Meeting
- Senior Community Meeting
- CHNA Steering Committee
- Talkeetna Sunshine Clinic
- Talkeetna Community Meeting
- Wasilla Community Meeting
- Wasilla Sunrise Rotary
- Willow Community Meeting

We would like to find out a little about the people who participate in this focus group. Please don't put your name on this sheet. We will combine all the answers that are given by the group and put the results into a report – your responses are totally anonymous.

1. How would you rate your personal health? (please circle your answer)
    a. Excellent
    b. Good
    c. Fair
    d. Poor

2. What are the key needs and challenges that you see with the children/families/adults/seniors that you work with that relate to them having optimal health and wellbeing?

3. Please rank the top five goals from the following list that you think Mat-Su should work on (#1 is the most important goals to work on, #2 the second most, etc.). Put a check in the appropriate box for each number.

	#1	#2	#3	#4	#5
Mat-Su residents are injury-free					
Mat-Su residents are cancer-free					
Mat-Su residents are at a healthy weight					
Mat-Su residents have optimal cultural, mental, and spiritual health					
Mat-Su children and safe and well-cared for					
Mat-Su residents are able to find, access, and benefit from health care					
Mat-Su residents are able to find, access, and benefit from mental health care					
Mat-Su residents are drug-free and sober or drink responsibly					
Mat-Su residents have healthy relationships					
Mat-Su residents are tobacco free					
Mat-Su residents live in a violence-free community					

4. What one change would you make to the Mat-Su to create a healthier Mat-Su and why?

5. Do you consider yourself:
   a. Female
   b. Male
   c. Other

6. What race/ethnicity do you consider yourself (circle all that apply)
   a. White/Caucasian
   b. Alaska Native/American Indian
   c. Hispanic
   d. Asian/Pacific Islander
   e. Russian
   f. African American
   g. Other _____-

7. Please circle what age group you are in:
    a. Under 18
    b. 18-24
    c. 25-34
    d. 35-44
    e. 45-64
    f. 65+

8. What is the highest education level you have attained:
    a. Less than high school
    b. High school or GED
    c. Some college
    d. College grad
    e. Some graduate school
    f. Graduate degree

How did you hear about this meeting?

THANKS SO MUCH FOR ANSWERING THESE QUESTIONS AND ATTENDING THIS MEETING.

Appendix I: Stakeholder Interview Guide

I. Introduction

Hello, my name is _____ and I work for Strategy Solutions. We are helping the MSHF gather information for a Community Health Needs Assessment. The MSHF has shared ownership and governance of the Mat-Su Regional Medical Center. In this role, they are considered a "non-profit hospital" and are required by the Affordable Care Act to conduct a community health needs assessment every 3 years.

The results of this needs assessment will help to guide the Foundation and the community in creating a healthier Mat-Su.

We want to talk about things that are related to a person's health and affect their ability to make healthy choices. One example of this is where they work and the income they earn. If a person doesn't have enough money to pay for insurance copays, deductibles, medication, or medical bills they will not get the necessary treatment they need.

Another example is the educational level of a person – higher education is associated with a longer life and a greater likelihood of obtaining or understanding basic health information and finding services needed to make appropriate health decisions.

Another factor is one's culture. In some cultures one is not supposed to look directly at a provider – however a provider may not know this and may think that the person is depressed. These are all factors that are related to where we live, learn, work, and play and they can really affect a person's health.

Research shows that communities with access to healthy foods, quality affordable housing, good schools, and safe places to play are healthier than those that don't. Health is largely influenced by the choices we make for ourselves and our families. AND our communities can be developed to increase people's opportunities to make those healthy choices.

Factors that Affect Health

1. What factors can you think of that contribute to health or help Mat-Su residents make healthy decisions?

2. If applicable based on role in community: When you think of the children and families/seniors/etc..you work with or serve which of these factors on the list stick out to you as being really important?

Services and Supports that Help Address the "Factors"

3. Given this list of factors you just mentioned, what do you consider to be the services/supports that exist in Mat-Su that help children/families/adults with these factors?

4. What else do we have in Mat-Su that help people make good decisions about their health?

5. What additional things do we need in Mat-Su to help people have the opportunity to lead a healthy life?

Health Status of Mat-Su Health Residents

6. *Overall, how would you rate the health status of children and families you work with in Mat-Su? (Excellent, Very Good, Good, Fair, Poor? Why do you say that?*

7. What percentage of residents of Mat-Su have a minimum baseline of all the factors we mentioned (point to list) that allow them to make healthy decisions? (answers to choose from < 25%; 26-50%; 51-75%; >75%). Why do you say that?

8. What other strengths does Mat-Su have in terms of having it be a healthy place to live?

Vision of a Healthier Mat-Su

9. What do you think an ideal "healthy community" looks like? What are the characteristics, available services, etc. Think outside the box….

   Why do you say that?

10. Based on your definition, please rate your level of agreement with the following statement: Mat-Su is currently a "healthy community". Please rate your level of agreement on a 5 point scale where 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree.

    Why do you say that?

11. Who should be involved in making Mat-Su a healthier community?

12. If Mat-Su could set and achieve one goal over the next three years, moving toward a healthier Mat-Su, what would it be?

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Appendix J: Emergency Department High Utilizer Interview Guide

Mat-Su High Utilizer Calls

My name is_____and I work for Strategy Solutions. We are conducting a study to learn more about the health of people living in Mat-Su. We are happy you called. I have an initial question for you to ensure that you meet the criteria for our study.

1. How many times do you think you have been to the emergency department in the last year?

2. **Do NOT read - this is for the interviewer only:** Has this person been to the ER 5 or more times?

- ◯ Yes
- ◯ No

Mat-Su High Utilizer Calls

If they have been to the ER 5 or more times:

Thank you! You meet the criteria for our study. This interview will last about 10-20 minutes. I will ask you some questions about your health care needs. Please don't tell me your name - we will only put the information in our report along with information for other people. We will never link your name with the information you give us. If at any point during the interview you don't feel comfortable answering a question or you want to stop the interview, please feel free to tell me that and to stop. There is no penalty for stopping. We will give you a $25 gift card for calling us today.

3. Why did you visit the emergency room today?

4. Do you feel your needs were met at the ED today?

Mat-Su High Utilizer Calls

5. Thinking about what brought you to the ED today - when and how did this overall medical condition start in your life?

6. Do you have anyone in your life who helps you with this medical condition? - By that I mean who you can talk to about it or who may help you get or take your medication, or drive you to your appointments, etc.

Mat-Su High Utilizer Calls

7. Is there anything you can think of that could have prevented your visit today?

8. It sounds like you have had several visits to the ED this year. Why do you choose to go there versus another place like an urgent care center or doctor's office?

Mat-Su High Utilizer Calls

9. Do you have a medical provider (doctor, physician assistant, nurse practitioner) who you see regularly?

10. **Only ask if they indicated they have a provider:** What kind of provider is it?

Mat-Su High Utilizer Calls

11. Do you have a case manager?

12. **Only ask if they indicated they have a case manager:** Do you find your case manager helpful?

13. **Only ask if they indicated they have a case manager:** What else could your case manager do to help you?

Mat-Su High Utilizer Calls

14. If you were going to advise a friend on what are the key things they need to do to be healthy what would you tell them?

15. If you could change one thing about your life that could help you be healthier, what would that one thing be?

Mat-Su High Utilizer Calls

16. Have you ever been told that you have a substance abuse problem?

17. Do you believe you have a substance abuse p r o b l e m ?

Mat-Su High Utilizer Calls

We are talking with several people who visit the emergency department and would like the opportunity to look for differences of opinions based on demographic characteristics. Please answer the following:

18. How many support people do you have in your life right now? By support people I mean people who you can call for help - such as to give you a ride, or help you do something at home?

19. What community do you reside in?

20. Do you consider yourself:

- ◯ Female
- ◯ Male
- ◯ Other

21. What race/ethnicity do you consider yourself?

Mat-Su High Utilizer Calls

22. What age group are you in:

- ◯ Under18
- ◯ 18-24
- ◯ 25-34
- ◯ 35-44
- ◯ 45-64
- ◯ 65+

Mat-Su High Utilizer Calls

23. If you had to describe your childhood, would you say:

- ○ Received all the emotional support you needed.
- ○ Received some of the emotional support you needed.
- ○ Received a little of the emotional support you needed.
- ○ Did not receive the emotional support you needed.

Mat-Su High Utilizer Calls

24. Thank you so much for answering these questions. This information is so important for us to know in order to improve health care in Mat-Su. Are you calling from:

- ◯ Hospital
- ◯ Home

Mat-Su High Utilizer Calls

Thank you! The social worker or physician who gave you this flyerwill give you the $25 gift card. If you have any questions about this study, I can you give you the number of the person who is heading it up and you can call her.

If requested:

Melissa Kemberling
907-232-7036

Mat-Su High Utilizer Calls

25. Thank you! I would like to mail you your $25 gift card. Please give me your contact information so I can send this to you. Again, this information will only be used to send you the gift card and will not be connected with your responses.

Name

Address

City, State, Zip

Thank you! If you have any questions about this study, I can you give you the number of the person who is heading it up and you can call her.

If requested:

Melissa Kemberling
907-232-7036

Mat-Su High Utilizer Calls

Thank you for answering my question. You do not meet the criteria for this study so I do not have any further questions for you. I hope you feel better.

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Appendix K: Implementation Strategy Input from Steering Committee

Steering Committee Meeting
September 20, 2016
Implementation Strategy Breakout Session

The Steering Committee met for its final meeting on September 20, 2016 to review the results of the CHNA and validate the focus areas. During the meeting, the participants agreed that the identified focus areas reflected the key needs and issues facing the Mat-Su region. They did not offer any additional suggestions for focus areas.

The participants broke out into small discussion groups to talk about the implementation strategies that would most benefit the region. Below are the results of the implementation strategy breakout session activity/discussion that was conducted during the MSHF CHNA results meeting.

Education and Information

1. Doing more provider education and cultural awareness – Mat-Su is a diverse community with different needs so providers know about the needs and can provide practices and connecting with the resources in the community.
2. Providing more opportunity for education for the general public – every age group has access to education – there are a lot of services in the Mat-Su valley but people don't know what is out there, i.e., expanding Homeless Connect using radio shows and other media; kids have access to services but do they know they exist.
3. Universal provider meetings – someone can sit on 7-8 coalition meetings and would be nice for the coalition groups to talk to each other and have more targeted outreach and care and speak to each other so that everyone is on the same page.

Transportation: Without a vision for transportation – overall roadmap we won't be able to get to where we need to go; without borough funding/investment – ceiling

1. Using technology to connect drivers who have cars to those who don't drive or have a car – Mat-Suber
2. Talking about using exciting dispatch or centralized system with volunteers, i.e., airmen against drunk drivers – coin with a phone number - you pull out the coin and call and a volunteer would jump up and give you a ride – this could be community wide
3. Maximizing resources we have through coordination and collaboration; working more closing with collaborations; School buses driving within the borough almost empty how can we lobby that; senior vans driving around the valley – all could be maximized and built better; Sunshine transit works well for their region; making sure we don't have an identity problem, like MASCOT as it doesn't seem the borough has special public transportation for special people.

Comment made from the committee: A lot going on with the Transit Coalition. They have been forced into an agreement – all players in the valley and next year – phase 1 will literally meld MASCOT with Valley Movers. Implementing this might solve a lot of the problems and boards will be merging.

Housing

1. Support partnerships and collaborations that are out there already – don't reinvent the wheel
2. Seek out developers and find a way to incentivize of building low income and safe housing; find ways to encourage them to build for this population
3. Collaboration – have aging population and have young adult population and both can't afford their housing; Aging in place – if we can find ways to room share and house share and convince young or slightly older homeowners to prepare now for what you may need down the road. Rent out part of your house or have a child move in; Try to think of how and what new technologies that you can take advantage of – for $1,000 set home up so it would be easy to live if sudden loss of hearing – smart house adapts with you

INCOME

1. Healthy Employees and policies around this: Recognizing the role of the workplace; glad chamber is part of this process; there is a lot of work to recognize stressors in the workplace and employers being able to have better policies in place to recognize behavior health in the workplace and have the employees reemerge into the workplace after illness or behavioral health so there is another solution than to quit their job. Costly to lose employees so what can be done to keep the employee; educate themselves – workplace policies around retention
2. Diversity of economy to reduce leakage with commuter population – when large scale businesses move in, local businesses are out; how can we have businesses come into the Valley rather than having residents go out to other areas to work.
3. Issues around utilities and infrastructure development – without electricity and Internet hard to build a business – utilities aren't really at the table – power is at the center to quality of life and it is a big issue when looking at developers and the utilities.

FAMILY SUPPORT AND CONNECTION

1. Dedicated entity or person coordinating activities – have a group of visionaries creating events, i.e., Chickaloon focuses on celebrations and bringing people together to celebrate things and have traditions; have night courts and arts that people can do. Community schools and bringing that back. Activities could be around social equity. The consistency of doing these activities so community can come to depend on them and know when the activities take place. Make sure that everyone feels welcome.
2. Transportation so people can access the activities in the community
3. Focusing on families struggling with issues and have a group that can identify those people who need a casserole – avenue for volunteering

ACCESS TO SERVICES

1. With Medicaid expansion and the affordable care act – in theory, being able to pay for healthcare is easier but it does not mean that everyone knows how to get into the system or chooses not to get into the system, or they choose the insurance with a high deductible so they do not access health care. Lack of knowledge on access to healthcare and insurance. It would be helpful to have a community resource center – physical and virtual – one place for everyone to go for the information – community outreach of services.
2. Medicaid reform opportunities – the way that the FQHC receives funding from the government is if that service only takes place in their facilities. In Alaska, need a way for Medicaid expansion to realize that if we can go out into the community to help and not be in the FQHC building – that would help. Be able to have outreach workers go out into the community who would get paid even though they aren't in the FQHC building.
3. Identifying barriers in the system – a lot of collaboration and people to get through the system to create access