Mat-Su Senior Environmental Scan

Prepared for:

Mat-Su Health Foundation

December 2016

McDowell GROUP

Mat-Su Senior Environmental Scan

Prepared for:

Mat-Su Health Foundation

Prepared by:

Anchorage • Juneau

In association with

GE Healthcare Camden Group

and

Health Dimensions Group

December 2016

Executive Summary

Most healthcare professionals, lawmakers and policy experts agree that while the baby boomers may comprise one of America's greatest generations, they may represent one of our most significant challenges as they age and begin to access Medicare and Social Security. Less than 25 percent of the younger Boomer cohort is financially prepared for a long-retirement and yet their expectations of service and support are far greater than that of their parents or grandparents. In effect, policy makers and governments at all levels face a potential "gray tsunami" of need with little in terms of flood wall or tidal protection to abate its flow. Compared to broad national trends, the Mat-Su Borough represents a microcosm of extremes:

- In the next five years alone (2015-2020), the senior population in the borough will explode by nearly 41 percent — far outpacing national growth of a mere 18 percent by comparison.
- Service delivery and supports for seniors, while improving, remain generally fragmented; supportive services and offerings common to other markets (like long-term care and affordable housing) are highly limited or entirely non-existent in some areas of the Mat-Su.
- The sheer geography of the borough imposes an incredible burden on providers to reach seniors effectively; the Mat-Su is roughly geographically equivalent in size to West Virginia with only one-tenth the population.
- Funding streams to support seniors at greatest risk are themselves at risk, given economic constraints in Alaska and limited alternative revenue streams.

To better understand the market and senior service offerings, the Mat-Su Health Foundation (MSHF) engaged the McDowell Group in 2010 to complete an evaluation of senior service offerings and needs in the borough and recommend possible courses of action to respond to then current and likely future deficits. The subsequent report, "Regional Plan for Senior Services Delivery" released in 2011 identified a range of potential issues regarding services and support for seniors within the Mat-Su and suggested several key strategies to address challenges, strengthen current infrastructure, pursue new program development and explore potential innovations directed towards an improved model of senior care. In summary, the 2010-2011 report suggested four key steps:

- Step 1: Learn more about specific Mat-Su senior needs and desires.
- Step 2: Develop provider consensus about service areas and accomplish regulatory change.
- Step 3: Develop an Aging Disability and Resource Center (ADRC) to serve the Mat-Su.
- Step 4: Plan for expanded service offerings and new service development.

To the credit of the borough's provider base, MSHF, the state and other key stakeholders, many of the suggested steps and related strategies were both implemented and accomplished over the last five years:

- Development of an Aging and Disability Resource Center for the Mat-Su
- Increased coordination and dialog among Mat-Su providers, specifically senior centers

- Development of the Mat-Su Council on Aging focusing on issues such as housing, coordination of senior services, and advocacy
- Improved understanding of senior needs through continued outreach and community engagement, and potential areas for improvement
- Ongoing advocacy for potential development of additional senior services (such as skilled nursing facilities) in the borough
- Increased attention to senior health and wellness issues through efforts such as the Mat-Su Community Health Needs Assessment, Behavioral Health Environmental Scan, and grants supporting preventative care and wellness

While much has been accomplished, more work is needed to develop a more fully-realized model of senior care, including consideration of further service consolidation, cooperation, and expansion, and support for infrastructure development to realize the full care continuum.

The MSHF again engaged McDowell Group in 2015 to consider the work completed in response to its 2011 report; re-validate the projected need for senior services in the borough; seek input and perspectives from providers, seniors and other stakeholders; consider the economic impact of seniors on the borough; evaluate best practices of other models of senior care and service used in other markets; and formulate a forward-looking model to guide further development of senior services and supports in the Mat-Su.

The summary research, market evaluation, and assessment work evaluated the environment of senior care and services in the Mat-Su. Unless otherwise mentioned, seniors are defined as residents who are 65 years or older. The environmental scan considered a range of topics and subjects, including:

- Community Voices – Seniors, Providers and Stakeholders
- Socioeconomic Overview of the Senior Population
- Economic Contribution of Mat-Su Seniors
- Health Profile of Mat-Su Seniors
- Inventory of Existing Senior Services Infrastructure
- Demand Analysis for Senior Services
- Analysis of State and Other Senior Services Funding
- Review of Literature regarding "Best Approaches" to Senior Services
- State and Federal Policy Review

The full findings and results of each topic area are detailed in the body of the report and in the accompanying appendices.

Key Findings

Senior Population Challenges

- According to the Alaska Department of Labor and Workforce Development, the Mat-Su population is composed of 10,284 seniors (age 65+); seniors have been growing at an average annual rate of 7 percent since 2003, compared to 3 percent for the whole population.
- The senior population continues to expand in the borough at an exceptional rate – 41 percent for the age 65 and older population by 2020 (totaling 14,100 seniors), as compared to 18 percent for the U.S. The age 65+ and 75+ population cohorts will grow 114 percent and 202 percent by 2030, respectively.
- The average life expectancy among older Alaskans is increasing – from age 78.7 in 1990 to 82.4 by 2030. Longer lifespans point to greater long-term costs in both managing and support seniors.
- Female seniors outnumber male seniors (62 percent compared to 38 percent, respectively).
- There are an estimated 1,090 seniors age 75+ who live alone.
- Approximately 400 seniors have incomes below the poverty level.
- About 800 seniors have paid employment.
- Between 2010-2014, there were 94 seniors who were in the labor force and were responsible for their own grandchildren (under the age of 18). Another 141 seniors were raising their grandchildren, but were not in the labor force.
- The senior population growth in the Mat-Su leads to increased pressure on Medicaid, as the number of Medicaid seniors continues to increase (44 percent from 2006 to 2014).
- The number of seniors requiring care management services will triple in the next 15 years (1,100 to 3,275); the Mat-Su will need five times the current volume of assisted living service by 2030, and demand for memory-care services will grow from 149 current units to need for more than 1,500 by 2030.
- Barriers to seniors receiving appropriate care and services in the Mat-Su include:
    - Lack of accessible, convenient, and affordable transportation
    - Lack of primary care providers who accept Medicare
    - Lack of providers with expertise appropriate to seniors and geriatric patients
    - Lack of awareness about services available, difficulty in navigating services and completing paperwork to be eligible for services.

Profile of Senior Health

- Most seniors have health insurance. While only 4 percent reported having a hard time accessing primary care in 2013, many seniors experience inadequate access to providers who accept Medicare.
- Mat-Su Seniors report the following health risks behaviors overall: 11 percent smoke; 5 percent drink heavily, and 29 percent are obese. Mat-Su seniors reported the following chronic conditions: 67 percent had high blood pressure and 21 percent had diabetes.
- Falls are a major health threat to seniors. In 2013, a fall was diagnosed during 388 senior visits to the Mat-Su Regional Medical Center (MSRMC) Emergency Department (ED), representing 10 percent of all senior visits to the ED. Senior visits with a fall resulted in $1.4 million in estimated ED facility charges
- The average ED charge for a senior visit was $3,606, a total of $5,955 for each senior who used the ED that year. In all, visits by seniors accounted for an estimated $14.2 million in MSRMC ED facility charges.
- The top six primary diagnoses of seniors visiting the ED were: non-specific chest pain, chronic obstructive pulmonary disease (COPD), urinary tract infections (UTI), Cardia Dysrhythmias, other nervous system disorders, and Pneumonia.
- The top five primary diagnoses for those admitted included: Septicemia, Pneumonia, congestive heart failure (non-hypertensive), COPD, and Cardia Dysrhythmias. Pneumonia, congestive heart failure, COPD and UTIs are conditions for which good outpatient care can potentially prevent the need for hospitalization, or for which early intervention can prevent complications or more severe disease.
- Sixteen percent of senior ED patients had a behavioral health diagnosis during their visit. The five most common primary BH diagnoses made during an ED visit were: anxiety disorder, delirium, dementia, and amnestic and other cognitive disorders, alcohol-related disorder, schizophrenia/psychotic disorders, and suicide/self-inflicted injuries.
- Between 2010-2015, there were 102 suicides in Mat-Su, 14 of which were committed by seniors age 60 years and older. Senior males were six times more likely than females to commit suicide.
- Of the 99 seniors who visited the ED five or more times in 2013, 62 percent had a BH diagnosis.

Senior Care Funding

- In 2015, approximately $26.5 million was spent by the Alaska Department of Health and Social Services (DHSS) on Mat-Su seniors receiving Medicaid, General Relief or Senior Benefits support, or participating in programs paid for by community-based-support programs. The funding averaged $2,581 for each senior living in the Mat-Su. Yet, these same programs spent an estimated $3,837 for each Alaskan senior living elsewhere in Alaska.
- The state offers additional support to seniors through its Pioneer Homes (also administered by DHSS), as beneficiaries of the Alaska Mental Health Trust Authority, and when they access housing programs and services through the Alaska Housing and Finance Corporation.

- The estimated Medicare spending for Mat-Su seniors was $58.4 million in 2009. In 2012, the total reimbursements per Mat-Su Medicare patient during the last two years of life per decedent were $69,538.
- The number of Medicaid beneficiaries increased by 44 percent (at an annual average rate of 4.7 percent) between 2006 and 2014, from 732 to 1,054. Total Medicaid payments grew by 63 percent during the same time period.
- The top three Medicaid claims – comprising 83 percent of total Medicaid payments – in 2014 were Home and Community Based Services Waiver Claims, Personal Care Services, and Long Term Care.

Urgent Preventative Care Needs

- Mat-Su seniors fare poorly when it comes to key measure of preventative health care – Pneumonia and flu vaccinations in 2013 were 65 percent and 44 percent, respectively, compared to national goals of 90 percent. Personal care provider presence among Mat-Su seniors is one-quarter the national average, and rates of hypertension (a manageable chronic illness) exceed that of the national benchmark.
- Injury rates among seniors in the Mat-Su are higher than state averages and those experienced by seniors in nearby Anchorage. Of note were the number of falls, which accounted for 82 percent of all injuries. Fall risk for Mat-Su seniors is roughly nine times that of the under age 65 population in the Mat-Su. A total of 461 falls among Mat-Su seniors from 2009 through 2013 accounted for just over $26.2 million in hospital-related costs.

Urgent Infrastructure Needs

- Demand analysis and senior commentary underscores a current undersupply of affordable senior housing. Analysis points to demand for an additional 260 units at present, increasing to 620 additional units by 2020. Seniors and providers highlight this shortage via anecdotal comments and additionally emphasize that many seniors are presently residing in sub-standard housing.
- Mat-Su seniors requiring post-hospital transitional care or long-term custodial care must presently travel to Anchorage to receive such services, as these services do not exist in the Mat-Su. By 2025, demand for this service in the Mat-Su will exceed 160 beds and approach nearly 200 beds by 2030.

(See table next page.)

Table ES1. Consolidated Senior Service and Infrastructure Need Projections, Mat-Su Borough, 2010, 2015, 2020, 2025, and 2030 Estimates

	Current Supply Available (2015)	2010 Demand Estimates (*2011 Report*)	2015 Demand Estimates	2020 Demand Estimates	2025 Demand Estimates	2030 Demand Estimates
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.

Current Gaps in Senior Services

- A summary of current gaps in senior services and infrastructure is found in the table below. Without investment to expand these services and infrastructure, these gaps will continue to increase due to the high growth rates of seniors anticipated over time.

(See table next page.)

Table ES2. Current Senior Service and Infrastructure Gaps, Mat-Su Borough, 2015

	Current Supply Available (2015)	Current Demand Estimates	Current Gaps
Home and Community-Based Services			
Medicare-Certified Home Health Care (Episodes)	490	581	(91)
Geriatric Care Management (Candidates)	0	1,089	(1,089)
Hospice (Average Daily Census) (Currently offered in-home settings)	17	21	(3)
Adult Day Services (Daily Capacity)	78+ spaces	80	0
Infrastructure			
Nursing Home Beds (Bed Need)	0	89	(89)
Skilled Nursing Care (Average Daily Census)	0	12	(12)
Traditional Assisted Living (Candidates)	311 beds	428	(117)
Memory Care Assisted Living (Candidates)	149 beds	514	(365)
Housing			
Low-Income Apartments (Units) (Seniors 55+)	463 units	720	(257)

Opportunities for Senior Engagement and System Innovation

- Based on interviews and group discussion with Mat-Su seniors, they:
    - Strive for independence and seek ways to maintain it while aging.
    - Want funding to be used efficiently and practically to provide the resources they need.
    - Desire recognition by their providers and communities that they are unique individuals.
    - Want to be involved in planning and developing solutions to improve their system of care.
    - Appreciate the Senior Centers as places to socialize, turn to for support and enhance their quality of life.
- Given their population growth, seniors in the Mat-Su represent a key economic force. They not only contribute their incomes to the local economy, but their spending also creates additional jobs to support them.
- Senior volunteerism, while difficult to measure, also provides important service that benefits the community at large.
- The Aging and Disability Resource Center (ADRC), established because of action taken after the 2011 report, has enjoyed tremendous success and response, steadily increasing the number of individuals served since its inception. Continued expansion of the ADRC and evolution of its offerings represents a priority area for consideration.

- ED visits among seniors continue to increase, as seniors find it potentially challenging to access primary care physicians. There is need for not only increased physician coverage but also improved access to physicians, particularly for seniors covered by Medicare and Medicaid, which is often undesirable.

- Use of hospice services among seniors remains relatively flat in the Mat-Su, while increasing in other markets around the country. Diligent use of hospice and related palliative care services represents a key method to manage and address often unnecessary acute hospitalizations.

- The prevalence of chronic illness among seniors, as indicated via the analyses herein, point to need for an improved model of preventative care and health management. The advent of the Affordable Care Act (ACA) has fostered a range of models across America that should be closely examined and considered for deployment or evaluation in the Mat-Su.

Evolving an Approach to Senior Care

While the Mat-Su is similar in many ways to other rural senior care and service markets, the compounding issues of its geography and the infrastructure in which services have been historically delivered are decidedly different from any other market in the country. By way of example, a core number of services in the Mat-Su are provided by senior centers. In the Lower 48, senior centers are primarily social in nature with extremely limited services or supports. In the Mat-Su, senior centers function as a nexus to which housing, non-medical supports, care coordination, transportation, in-home services, and socialization connect. Further compounding Alaska's delivery supports system is the role of person-directed personal care attendant programs and private care coordination services. Medicaid funding in Alaska for seniors is highly weighted in favor of these in-home supports, which comprise a minority of services in most other markets.

Given these significant differences, many of the ideal models of senior care or senior continuum services in America do not easily apply in Alaska. The bulk of senior related care and service in the U.S. is delivered via real-estate based solutions – nursing homes, assisted living, retirement communities and other forms of housing. The evolution underway in American senior care is largely focused on in-home supports and non-institutional models of care. Forward-looking healthcare organizations are emphasizing services and payment in this space.

From one perspective, Alaska's reliance on home-based delivery is ahead of the national trend, but leading modes of thinking suggest balancing the offerings of both in-home and real estate-based solutions. The limited supply of real-estate based supports (such as skilled nursing facilities, low-income senior housing, etc.) represents a very real gap in the Mat-Su. In this regard, Alaska's approach is potentially unbalanced.

Focus on Four Key Pillars of System Design

An ideal approach to balancing senior services in the Mat-Su should consider best practices from other examples, a historical (and very relevant) preference for in-home services and supports with needed bricks-and-mortar resources that are all aligned with the state's historical (and potentially evolving) funding model, the interests of the seniors themselves, and current gaps in the existing continuum.

In addressing gaps in the Mat-Su, the focus of future efforts should be to support seniors through their aging process, regardless of age or income status or where they currently reside. Addressing system gaps and needs are best considered using four key pillars of focus:

1. **Assessment** encompasses services, programs or processes to evaluate a senior's current status (medical, social, physical, or behavioral) and deploy preventative solutions or courses of action. An example of assessment involves health status evaluations or preventative wellness checkups conducted by a primary care physician. It may also include identification of personal service needs, regular checks on cholesterol or blood glucose, or home safety evaluation. Forward-looking healthcare organizations are exploring standardization of assessment tools and processes to better capture and identify senior health issues.

2. **Intervention** involves efforts or systems to change or fix an emergent or immediate problem that may be either high frequency or high risk. Intervention services may be deployed to address repeat utilization of Emergency Department services or correct a physical impediment or risk in a living environment that results in frequent falls. It may also involve short-term case management efforts, urgent medical care, or education of a senior or caregiver.

3. **Management** addresses functions or programs to ensure continued health or improvement, foster independence, or maintain functional status. This domain may include programs or systems addressing chronic illnesses, long-term housing or custodial care, in-home supports for both medical and social needs, transportation or care coordination.

4. **Awareness** involves systems and processes to increase senior and family understanding of programs and services, improve understanding of access points within the system and promote broader community engagement in supporting seniors. Examples of awareness encompass communication and public relations plans, education programming, support and advisory groups, provider collaborations, and evolved practices for information and referral.

These are not and should not be considered mutually exclusive or silos. The needs of seniors are rarely singular, inviting common and very natural interrelationships and connectivity. For example, an assessment effort or intervention step may likely lead to a management solution. Increased awareness will likely lead to more assessment and so forth.

Recommended Policy Changes

Senior care, services and supports in the U.S. are both governed and informed by a range of policies at state, national, and infrequently, local levels. The summary findings of this report imply seven key policy initiatives for consideration:

1. Pursue participation for the Mat-Su as a key demonstration or pilot region for any Medicaid expansion effort that may benefit or impact seniors, especially the proposed primary care improvement initiative and accountable care organizations pilot.

2. Seek and support changes in Alaska's Medicaid-funded home and community-based elder care services and programs to include increased oversight and certification of providers, key quality measures and related, data and performance improvement analysis initiatives that correlate Medicaid beneficiary spending and related outcomes with broader measures of population health – reduced ED visits, hospital admission rates and primary-care engagement.
3. Seek technical expertise and/or consultative services to identify federal funding authority(s) and evidence-based best practices and policy that may assist in delivering resources and services to individuals with Alzheimer's Disease and Related Dementias (ADRD) who currently do not meet level of care.
4. Support state and federal policy initiatives to restore Section 202 housing funding (or a similar program) to foster development of affordable housing the Mat-Su. Alternatively, seek special legislation to fund development of low-income housing for Mat-Su seniors.
5. Require the development of a permanent funding stream to support long-term operation of ADRCs across Alaska.
6. Support expansion of a new Older Americans Act that revises the current funding methodology and increases available Title III dollars for nutrition and transportation programs.
7. Continue to work with the Alaska Commission on Aging for changes to the Funding Formula of the Alaska State Plan for Senior Services, incorporating appropriate definitions of "urban" and "rural" that mesh with the Mat-Su Borough's geographic and demographic realities, and revisiting annual population estimates to more accurately capture changes in Mat-Su's senior population.

Recommended Strategies for System Design

The various findings regarding the nature of senior health in the Mat-Su, the range of senior services presently available, and the rapidly evolving need for wider and more services should point to a key realization: there is no simple or easy solution. Addressing the challenges and opportunities identified herein invite considerable work that can be neither managed nor accomplished by one or two organizations. Senior health and services will require a cooperative effort. Summary tactical suggestions in addressing senior needs by Mat-Su providers and stakeholders are suggested below. Prioritization of these recommendations should happen through consultation and in deliberation with seniors, service providers, policy decision-makers, funders, and organizations such as the Mat-Su Council on Aging.

1. Assessment

A. Develop (or select) and deploy a standardized model of senior assessment to evaluate multi-dimension need (i.e., physical, social, psychological, etc.) that stratifies the population by severity by health status. The assessment results should direct the senior, caregiver or providers towards specific resources or solutions available in the Mat-Su that are aligned with the senior's needs.
B. Create an on-line health awareness/evaluation tool that allows seniors or caregivers to complete self-assessments or evaluations for specific challenges or diseases and directs participants accordingly towards resources or assistance.

2. Intervention

A. Establish a borough-wide education program for EMS and First Responders to increase awareness about senior health/risk issues, identify at-risk seniors and connect seniors to services. A similar training approach was recently incorporated into First Responder responses to address crisis behavioral health situations.
B. Develop a borough-specific program to address falls and fall prevention for seniors at greatest risk (i.e., living alone, living in sub-standard environment, rural, etc.). The program should encompass both community education and indicators of individual risk.
C. Deploy a "circuit-rider" program that provides clinical evaluation and social services assistance (such as ADRC services) to rural seniors living outside the Palmer-Wasilla population core. Such a program would support consistent and regular visits at designated location (perhaps senior centers) in each community.
D. Secure a permanent funding mechanism for the Mat-Su ADRC and further develop ADRC offerings to include short-term case management services, increased education and counseling services, and an expanded web portal for on-line tools and services.

3. Management

A. Deploy a model of chronic disease management for at-risk or identified seniors that integrates an appropriate clinic- or physician-based model. Such a program might be developed within or evolved from recent Medicaid expansion legislation, which proposes to explore enhanced primary care. Alternatively, an independent or group physician practice might engage directly with a care manager to support management of such patients via the physician case management payment per diem.
B. Seek technical expertise and/or consultative services to identify evidence-based best practices for developing a holistic, integrated approach to caring for individuals with ADRD.
C. Seek development of a skilled-nursing facility within the borough that offers both long-term custodial care and short-term, post-hospital transitional care. An ideal development scenario would engage a private developer or operator to construct and operate such a facility.
D. Determine an appropriate path or partner to develop additional affordable senior housing in the Mat-Su. Given current limitations around funding affordable housing, a designated authority or organization within the Mat-Su should explore some form of relationship with a national leader in affordable housing development (i.e., Volunteers of America or National Church Residences).
E. Develop a plan to improve and expand existing public transit access and opportunities for Mat-Su seniors while continuing to encourage deeper coordination with and between existing human service fleets, rides and riders and the public system.
F. While increased coordination and cooperation between the senior centers for grants and services has occurred since 2011, there are still opportunities for improvement with increased efficiency, access, and leverage of services. Some of these improvements may include consolidation of services or consideration of establishing service catchment areas to prevent overlap of services offered by senior centers in the Mat-Su Borough.

4. Awareness

A. Develop a borough-wide communications and public awareness campaign regarding the importance of healthy senior aging, the availability of services, and key access points for such services. A large-scale plan should encompass a range of potential outlets, emphasizing print and direct mail communication, given limited internet access for many seniors. Other key vehicles should include public signage and billboards, public access television, and radio. The approach must be long-term and continuous as seniors access information at different times based on their interest and need. It is also appropriate to include seniors in the testing or review of information to ensure the messaging is well understood and approachable.
B. Establish a calendared screening and health awareness initiative that focuses on diabetes awareness (glucose monitoring), cholesterol (level screening/tests), hypertension (blood pressure clinics), fall prevention, and pulmonary-related illness or risk. Such a program could be ideally integrated with the circuit-rider program indicated above and/or formally incorporated into the Senior Circle program offered by MSRMC.
C. Revise or expand the borough's current Dial 211 telephone system (or similar programs) to include senior and aging issues or appropriate redirects to the ADRC.

In Conclusion

While elder services and aging supports across the nation demand expansion and adaptation to address the looming age wave, the Mat-Su presents a more pressing and urgent environment. To its credit and the innovation of many early service providers and organizations, there are some highly-functional senior programs offered in the Mat-Su, but there is room for expanded offerings and an urgent need to foster greater collaboration and systems coordination.

As provider organizations, payors and healthcare professionals across the United States build towards integrated delivery and service models, so must the Mat-Su pursue a similar course. The thinking around linear and longitudinal models of care are being rapidly displaced by person-centric systems care. The nature by which customers access and receive both care and service is undergoing tremendous change. Mat-Su stakeholders who support, service and guide older Alaskans must pay special heed to these changes as they seek to build a more integrated model of senior care in the borough.

The senior services environmental scan highlights the urgent need to address the individual needs of Mat-Su seniors and prepare senior services and other community programs for the looming "gray tsunami." The Mat-Su's geography, limitations around resources, and existing infrastructure gaps offer unique challenges that will demand an innovative and collaborative response. Improvement of the senior care system must foster constructive relationships and support networks among seniors, their families, and their providers. Mat-Su seniors, through their own voices, have outlined many of the key challenges and urgent needs. It now depends on borough residents, families, providers, elected leaders, and stakeholders to forge a path towards an integrated solution.

Table of Contents

List of Tables

List of Figures

Definitions

Following are definitions of key terms used in this document.

Behavioral Health (BH) – Using Agency for Healthcare Research and Quality (AHRQ) Clinical Classification Software (CCS) definitions, a visit is considered BH-related if any of the associated diagnoses are within one of 14 CCS groups related to mental health or alcohol/substance abuse (see table below). In the context of this analysis,

- **Mental Health** is defined as one of 12 CCS groups, including all the BH diagnostic groups, except the alcohol and substance-related disorders.
- **Substance Abuse:** Two CCS diagnostic groups are specific to alcohol and substance abuse: Alcohol-related disorders and Substance-related disorders.

Table 1. Clinical Classification Software Groups for Behavioral Health

Code	Description
Mental Health CCS Groups	
0650	Adjustment disorders
0651	Anxiety disorders
0652	Attention-deficit, conduct, and disruptive behavior disorders
0653	Delirium, dementia, and amnestic and other cognitive disorders
0654	Developmental disorders
0655	Disorders usually diagnosed in infancy, childhood, or adolescence
0656	Impulse control disorders, NEC
0657	Mood disorders
0658	Personality disorders
0659	Schizophrenia and other psychotic disorders
0662	Suicide and intentional self-inflicted injury
0670	Miscellaneous disorders
Substance Abuse CCS Groups	
0660	Alcohol-related disorders
0661	Substance-related disorders

BH Patient – A BH patient is an individual who had at least one visit during 2013 associated with a BH diagnosis (see "Behavioral Health," above).

BH Visit – A visit is considered a BH visit if it involves a BH diagnosis (see "Behavioral Health," above).

BRFSS Health Indicators – Below (*see table next page*) are definitions of BRFSS health indicators.

Table 2. Behavioral Risk Factor Surveillance System (BRFSS) Health Indicators Definitions

Indicator Title	Definition
Medical insurance	The percentage of adults aged 65+ who have any kind of health care coverage, including health insurance, prepaid plans such as HMOS, and government plans such as Medicare, Native Health Service or Indian Health Service.
General health	The percentage of adults aged 65+ who describe their general health as excellent, very good, good, fair, or poor.
High blood pressure	The percentage of adults aged 65+ who have ever been told by a doctor, nurse, or other health professional that they have high blood pressure.
Pneumonia vaccine (2012)	The percentage of adults aged 65+ who have ever had a pneumonia vaccination.
Flu vaccine	The percentage of adults aged 65+ who have been immunized in the past 12 months for influenza by either a seasonal flu shot or a seasonal flu vaccine that was sprayed in your nose.
Obesity	The percentage of adults aged 65+ whose Body Mass Index (BMI) is between 30.0 and 99.8. BMI is calculated using the standard formula (kg/m^2).
Diabetes	The percentage of adults aged 65+ who were ever told by a doctor, nurse, or other health professional that they have diabetes.
Smoking	Current smoking includes adults who reported smoking at least 100 cigarettes during their lifetime and currently smoke some days or every day.
Heavy drinking	The percentage of adults aged 65+ who drank heavily during the past 30 days. This includes adult men having more than two drinks per day and adult women having more than one drink per day.
Doctor cost	The percentage of adults aged 65+ who experienced a time in the past 12 months when they needed to see a doctor but could not because of cost concerns.
No Usual primary care giver	The percentage of adults aged 65+ who do not have a personal doctor or health care provider.
Physical and mental health days	Among adults aged 65+, the average number of days in the past 30 days when the person's physical and mental health was not good including days from physical illness, injury, stress, depression, and problems with emotions.
Physical health days	Among adults aged 65+, the average number of days in the past 30 days when the person's physical health was not good including days from physical illness and injury.
Mental health days	Among adults aged 65+, the average number of days in the past 30 days when the person's mental health was not good including days from stress, depression, and problems with emotions.

Chronic Condition – A chronic condition is an on-going health issue usually occurring 12 months or longer and either places limits on independent living or requires ongoing medical intervention.

Comorbidity – In this report, comorbidity refers to the presence of two or more chronic conditions, typically where the interaction between the two conditions affects the course of the diseases, treatment, and/or long-term outcomes of the patient.

Emergency Department (ED) Facility Charges Estimates – ED facility charges refer to all the estimated charges associated with an ED visit prior to the patient being admitted or transferred. This includes charges for services from other hospital departments, such as diagnostic, imaging, and pharmacy, when provided during this time period. ED charges do not include charges or costs for physician services provided in the emergency room. Further, the amount paid may be less than the hospital charge amount due to Medicare and Medicaid reimbursement rates, private insurance, contractual allowances, charity care, and other reductions.

Falls – Falls are coded as an external cause of injury code. They are never the primary diagnosis, only the subsequent diagnosis, and are therefore always associated with a different primary diagnosis.

High-Utilizer – A high-utilizer is defined as a patient with five or more ED visits during 2013.

Injury Severity Score – Created by the Abbreviated Injury Scale Committee of the Association for the Advancement of Automotive Medicine, the Injury Severity Score (ISS) rates the severity of injuries on a number scale between 0 and 75. This system scores nine different regions of the body according to injury severity in each, and then synthesizes those scores into a single score, the ISS, which conveys the degree of injury to the overall body. The ISS score correlates with mortality, morbidity, and hospitalization time.

Insurance Type – Insurance type refers to the primary insurance of the patient. Insurance coverage is grouped into Commercial/Private insurance, Medicare, Medicaid, Self-Pay, Other, and Unknown. "Self-Pay" includes patients who either paid directly, were uninsured, received charity care, or whose billing was written off as bad debt. "Other" includes Tricare, Veterans Health Administration, and Workers' Compensation. For patients with multiple visits and more than one primary insurer, the majority of visits determined the insurance type. In addition to patients with an insurance descriptor of "Unknown," the "Unknown" category includes patients who had an equal number of visits with different insurers.

Length of Stay – Length of Stay (LOS) is the duration of time a patient spends in the ED. In most cases, LOS is reported only for patients discharged or transferred from the ED and not for patients admitted to the hospital.

Medicare Claim Type Definitions –

- ***HCBS Waiver Claims:*** These claims are part of the 1915 (c) Home & Community-Based Waiver program. HCBS waivers provide long term care in home and community settings, and are intended to allow people who would otherwise be in an institutional setting, such as a nursing home, to stay in the community. In Alaska, the 1915 (c) waiver program provides such services as adult day services, care coordination, meals, nurse oversight and care management, and transportation for seniors or people of all ages with physical, developmental, or mental disabilities.
- ***Personal Care Services:*** The Personal Care Assistance program support seniors and individuals with disabilities in carrying out activities of daily living.
- ***Long Term Care:*** Services provided by skilled nursing facilities and intermediate care facilities.
- ***Part B Crossover:*** For qualifying seniors, Medicaid covers costs that are not covered by Medicare. Crossover refers to the instances in which Medicaid is used in conjunction with Medicare to cover costs.
- ***Durable Medical Equipment:*** Fees for medical equipment necessary for treatment and prescribed by a provider. Examples of durable medical equipment include crutches, hospital beds, canes, commode chairs, and wheel chairs.
- ***Inpatient:*** Payments made to hospitals for stays lasting at least overnight.
- ***Dental:*** Payments to dentists and health centers providing dental services.
- ***Professional:*** Payments for professional services by providers.
- ***Part B UB Crossover:*** For qualifying seniors, Medicaid covers costs that are not covered by Medicare. Crossover refers to the instances in which Medicaid is used in conjunction with Medicare to cover costs.
- ***Pharmacy Claims:*** Payments to pharmacies or other drug dispensers.
- ***Mental Health:*** Payments to behavioral health providers.

- ***Transportation Services:*** Payments associated with travel: hotels and transport services such as taxis and ambulances.
- ***Outpatient:*** Payments to hospitals for outpatient visits, such as the emergency department visits or day surgeries.
- ***Part A Crossover:*** For qualifying seniors, Medicaid covers costs that are not covered by Medicare. Crossover refers to the instances in which Medicaid is used in conjunction with Medicare to cover costs.
- ***FQHC RHC Tribal Clinics:*** Payments to Federally Qualified Health Centers and Rural Health Clinics.
- ***Independent Lab and X-ray Services:*** Payments for laboratory and imaging services.
- ***Home Health:*** Payments to Home Health agencies.
- ***Targeted Case Management School Based Services:*** Payments for case management services within educational settings.
- ***Hospice:*** Payments to organizations providing care to terminally ill patients.

Patient – A patient is an individual who visited the ED at least once during the period analyzed (CY 2013).

Patient Age – The MSRMC ED dataset included unique identifiers allowing individual patients to be tracked throughout the calendar year 2013. The patient's age in years was included in the visit summary. In this report, any patient age 65+ on their most recent visit is included in this dataset.

Primary Diagnosis – A ED physician assigns a primary diagnosis to be the main reason for the ED visit.

Seniors – The analysis defines seniors as age 65+. However, the report also includes patients age 55+ as a comparison group. Where available, data is presented for the following ages (as of 2013): age 55+, 65+, 55-64, 65-84, and 85+. Throughout this report, the terms "seniors 65+" and "seniors" are used interchangeably. Both refer to everyone age 65 or older. Where the report refers to a subset of seniors by age, the age group is specified.

Subsequent Diagnosis – A patient may be diagnosed with multiple conditions in addition to the primary diagnosis. The MSRMC ED/UC dataset included 13 diagnostic codes besides the Primary Diagnosis. These codes include concurrent diagnoses and some procedure codes – such as screening tools – that also apply during the visit.

Trauma Injury – Trauma injuries are designated by the CCS categories 225-240, These categories include the following injuries: trauma-related joint disorders and dislocations; fracture of neck of femur; spinal cord injury; skull and face fractures; fracture of upper limb; fracture of lower limb; other fractures; sprains and strains; intracranial injury; crushing injury or internal injury; open wounds of head, neck, and trunk; open wounds of extremities; complications of device, implant or graft, complications of surgical procedures or medical care; contusion superficial injury; and burns. Unlike reporting of other individual diagnoses in this report, multiple diagnoses comprise the grouping of trauma injuries. They are grouped for their similarities: injuries caused by external physical forces.

MSRMC ED/MSR UC Visit – A visit is the encounter summarized in the MSRMC ED/MSR UC dataset. Every visit begins in the ED/UC and ends when the patient is discharged home, admitted to MSRMC or transferred to another facility.

Abbreviations

ACA	Affordable Care Act
ACS	American Community Survey
ADOLWD	Alaska Department of Labor and Workforce Development
ADPP	Adults with Physical and Development Disability
ADRD	Alzheimer's Disease and Related Dementias
ADS	Average Daily Census
AHRQ	Agency for Healthcare Quality and Research
ALI	Alaskans Living Independently
ALOS	Average Length of Stay
AMI	Area Median Income
ATR	Alaska Trauma Registry
BEA	Bureau of Economic Analysis
BH	Behavioral Health
BRFSS	Behavioral Risk Factor Surveillance System
CCMC	Children with Complex Medical Conditions
CCS	Clinical Classification Software
CDP	Census Designated Place
CGA	Comprehensive Geriatric Assessment
COPD	Chronic Obstructive Pulmonary Disease and Bronchiectasis
CMMI	Center for Medicare and Medicaid Innovation
CMS	Centers for Medicare and Medicaid Services
CY	Calendar year
DCCED	Alaska Department of Commerce, Community, and Economic Development
DHSS	Alaska Department of Health and Social Services
ED	Emergency Department
ERS	Economic Research Service, U.S. Department of Agriculture

FFS	Fee for Service
FPL	Federal Poverty Level
FQHC RHC	Federally Qualified Health Centers and Rural Health Clinics
FY	Fiscal year
GEDI WISE	Geriatric Emergency Department Innovations throughout Workforce, Informatics, and Structural Enhancements
GOAL	Greater Opportunities for Affordable Living
GNL	GEDI Nursing Liaison
HCBS	Home and Community-based Services
IDD	Intellectual & Developmental Disabilities
ISS	Injury Severity Score
LOS	Length of Stay
MASST	Mature Alaskans Seeking Skills Training
MH	Mental health
MSHF	Mat-Su Health Foundation
MSRMC ED	Mat-Su Regional Medical Center Emergency Department
MSR UC	Mat-Su Regional Urgent Care
NICHE	Nurses Improving Care for Healthsystem Elders
OAA	Older Americans Act
PACE	Program for All-inclusive Care for the Elderly
PCA	Personal Care Attendant/Assistance
PFD	Permanent Fund Dividend
PY	Person-years
SMI	Serious Mental Illness
SNF	Skilled Nursing Facility
SUD	Substance Use Disorder
UTI	Urinary Tract Infection
VA	U.S. Department of Veterans Affairs

"I'm really sick and tired of people thinking we're all the same."

-- Wasilla Senior

Introduction

To better understand the needs of seniors in the Mat-Su Borough and the services available to them, the Mat-Su Health Foundation (MSHF) contracted in 2010 with McDowell Group and its subcontractor, Health Dimensions Group (HDG), to complete an evaluation of the Mat-Su senior services sector and to recommend possible courses of action to respond any current or projected deficits. The resulting report, *Regional Plan for Senior Services Delivery* was released in 2011. It identified several key strategies to address challenges, strengthen current infrastructure, pursue new program development, and explore potential innovations directed towards an improved model of senior care. The report suggested four key steps:

Step 1: Learn more about specific Mat-Su senior needs and desires

Step 2: Develop provider consensus about service areas and accomplish regulatory change to support reform

Step 3: Develop an Aging Disability and Resource Center (ADRC) to serve the Mat-Su

Step 4: Plan for expanded service offerings and new service development

Many of the suggested steps and strategies were implemented during the past five years through efforts led by the MSHF, Alaska Commission on Aging, Department of Health and Social Services (DHSS), and other key stakeholders, particularly the senior centers in the Mat-Su.

Nevertheless, a more fully-realized model of senior care requires additional work, and in 2015 the MSHF again engaged McDowell Group, with its subcontractors HDG and GE Healthcare Camden Group, to consider what had been accomplished so far; update projections of the quantity of senior services that will be needed in the Mat-Su; seek additional input and perspectives from providers, seniors and other stakeholders; consider the economic impact of seniors to the borough; evaluate best practices of models of senior care and service in use in other markets; and formulate a forward-looking model to guide further development of senior services and supports in the Mat-Su.

The summary research, market evaluation, and assessment work evaluated the environment of senior care and services in the Mat-Su. Unless otherwise mentioned, seniors are defined as residents who are 65 years or older. The environmental scan considered a range of topics and subjects, including:

- Community Voices – Seniors, Providers and Stakeholders
- Socioeconomic Overview of the Senior Population
- Economic Contribution of Mat-Su Seniors
- Health Profile of Mat-Su Seniors
- Inventory of Existing Senior Services Infrastructure
- Demand Analysis for Senior Services
- Analysis of State and Other Senior Services Funding
- Review of Literature regarding "Best Approaches" to Senior Services
- State and Federal Policy Review

Methodology

Several methods were used to prepare this environmental scan, as described below.

Socioeconomic Data

Because socioeconomic characteristics are strongly associated with health outcomes, this report includes a demographic profile of the Matanuska Susitna Borough compiled using data from Alaska Department of Labor and Workforce Development (ADOLWD); Alaska Department of Commerce, Community, and Economic Development (DCCED); U.S. Census Bureau; American Community Survey (ACS); Bureau of Economic Analysis (BEA); and Economic Research Service (ERS) USDA. Demographic data from The Neilsen Company and Claritas were also reviewed.

Health Profile

Secondary data were gathered to provide insight into the health issues impacting the senior population and the Mat-Su system of senior care. The profile included a summary of Behavioral Risks Factor Surveillance Survey (BRFSS) indicators collected in the Mat-Su Data Repository, data analyses (assisted by statistician, Dr. Peter Holck) on the Alaska Trauma Registry (ATR) records of injury hospitalizations, and a summary of Medicaid utilization data provided by the State of Alaska by special request, and finally an analysis of Medicare utilization data for Mat-Su residents.

EMERGENCY DEPARTMENT AND URGENT CARE DATA

A separate analysis was conducted by McDowell Group for the Mat-Su Health Foundation in October 2015, entitled *An Analysis of Senior Use of the Mat-Su Regional Medical Center Emergency Department and the Mat-Su Regional Urgent Care*. Mat-Su Regional Medical Center (MSRMC) agreed to provide McDowell Group with a limited data set from the Emergency Department/Urgent Care (ED/UC) medical record. This data did not disclose patient names but included random, unique identifier numbers to facilitate analysis of 2013 ED/UC usage at the individual patient level. Records included:

- Date and time of admission and discharge
- Age at date of visit
- Gender
- Geographic location
- Discharge status
- Diagnosis codes (including chief complaint, screenings, "E" codes and "V" codes)
- Primary Insurer (Private, Medicaid, Medicare, self-pay, etc.)
- Patient Balance

Although the last record, patient balances (patient total charges), are not necessarily actual amounts paid, they are a useful proxy for the costs associated with an ED visit. In both the ED and UC data, physician charges are excluded.

NATIONAL COMPARISONS

MSRMC data was compared with national data from the Agency for Healthcare Research and Quality (AHRQ). *http://www.hcup-us.ahrq.gov/nedsoverview.jsp* is a link to the National Emergency Department Sample (NEDS), which provides more background on the NEDS data elements.

Literature Review

The study team reviewed literature on evidence-based models for senior care associated with areas of geographic size and rural conditions similar to the Mat-Su Borough. A bibliography of the literature reviewed is available in Appendix A.

Economic Contribution of Mat-Su Seniors

This report uses information from McDowell Group's *Issues Affecting the Economic Well-Being of Alaska Seniors,* Mat-Su Borough, State Assessors Office, U.S. Census, and employment data obtained by special request from the Alaska Department of Labor and Workforce Development, as well as other sources of national data to discuss the economic impacts of Mat-Su seniors on the Mat-Su Borough.

Community Voices

From October 2015 through January 2016, a total of 49 Mat-Su seniors either participated in one of three discussion groups held at the Mat-Su Senior Services (Palmer), Upper Susitna Seniors (Talkeetna), and Wasilla Area Seniors, Inc. (Wasilla) or were interviewed individually by phone. Participants received a gift card valued at $25 as a token of appreciation for their time. All interviews and discussion groups were recorded and transcribed; however, no individual sources are identified in the report.

Provider Voices

Interviews with 15 service providers, including administrators of senior centers, social workers, first responders, hospitalists, emergency department physicians, assisted living facilities administrators, care coordinators, and state agencies (such as the Division of Senior and Disability Services) were conducted by phone and in person. The purpose of the interviews was to capture opinions about the level of care available, gaps in services, funding and policy barriers, and suggested areas for improvement. A list of providers interviewed is found in Appendix B.

Analysis of State Funding

State funding data for individual programs offered in the Mat-Su was obtained from the Division of Senior and Disability Services, Alaska Mental Health Trust Authority, Division of Behavioral Health, and Medicaid. Funding was calculated on a per capita basis. Data was also collected on federal Medicare funding and areas of support from Tribal health organizations operating in the Mat-Su Borough.

Senior Services Demand Analysis

Demand assessments were conducted for the following services: Medicare-certified home health care, long-term nursing home beds, skilled nursing care, geriatric care management demand, low-income senior housing, traditional assisted living demand, Alzheimer's/Dementia (Memory Care) assisted living, hospice, adult day services, Program for All-inclusive Care for the Elderly (PACE), and Primary Care physicians.

Inventory of Senior Services and Facilities

For convenience, this report contains an inventory of existing senior services infrastructure excerpted from *Wasilla Area Seniors, Inc. (WASI) Continuing Care Feasibility Study,* prepared by Agnew::Beck and Northern Economics (June 2015). Additional provider details based on a provider survey conducted by Agnew::Beck in the fall of 2014 are found in Appendix C.

Data Limitations

ALASKA TRAUMA REGISTRY

The Alaska Trauma Registry (ATR) database compiles details of high severity trauma injury or incidences of poisoning that are severe enough to lead to death, admission to a hospital, or acceptance by an acute care facility. Data include the following areas of patient residence: Mat-Su Borough, Municipality of Anchorage, Other Alaska, and All Alaska. Any record assigned to a region involves a resident of that region, regardless of where the injury was sustained or treatment was received. "Other Alaska" refers to anywhere in the state outside of the Mat-Su Borough and Anchorage. Patient data were grouped by two age categories: non-seniors less than age 65 (<65), and seniors age 65 and older (65+).

Due to low annual numbers, data were compiled into the most recent five-year period (2009 to 2013). It was assumed that rapid population change in the Mat-Su Borough has made data older than 2009 of limited use in this analysis.

The analysis presents the number of events, either injuries or fatalities, per 100,000 person-years-at-risk. Rate per 100,000 person-years-at-risk differs from the more common rate per 100,000 population; the former aggregates five years of data (2009 to 2013) and the latter is an annual indicator. The rate per 100,000 person-years-at-risk is simply the rate per 100,000 population averaged over the five years of the analysis.

The following table presents the populations used to calculate rates per 100,000 person-years-at-risk.

Table 3. Population Estimates, 2009-2013

	2009	2010	2011	2012	2013
Mat-Su					
<65	79,442	81,926	84,206	85,525	87,108
65+	6,632	7,069	7,616	8,284	8,966
Anchorage					
<65	269,130	270,687	273,531	273,912	274,964
65+	20,100	21,139	22,636	24,664	26,170
Other Alaska					
<65	297,149	302,680	306,826	308,601	306,564
65+	25,375	26,730	28,609	30,841	32,627
All Alaska					
<65	645,721	655,293	664,563	668,038	668,636
65+	52,107	54,938	58,861	63,789	67,763

Source: Alaska Department of Labor Population Estimates.

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

The Behavioral Risk Factor Surveillance System (BRFSS) collects a range of health indicators among adults through telephone surveys. The data presented in this report does not include "Don't know," "Refused," or "Missing" responses. The charts display the confidence intervals for the Alaska data. The full citations are:

- **Alaska Data:** Alaska Department of Health and Social Services Division of Public Health. Alaska Behavioral Risk Factor Surveillance System Data. Juneau, Alaska. Analyzed by the Mat-Su Health Foundation, 2015. Centers for Disease Control and Prevention (CDC).
- **National Data:** Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2015.

Chapter 1: Community Voices

Three discussion groups with a total of 32 senior participants were hosted at Mat-Su Senior Services (Palmer), Upper Susitna Seniors (Talkeetna), and Wasilla Area Seniors, Inc. (Wasilla) senior centers. Additionally, MSHF recruited 17 seniors through word-of-mouth and posters to participate in a phone interview conducted by McDowell Group. Participants were asked about the system of senior services in the Mat-Su. Seniors answered questions about the services they use, how they access those services, gaps in available services, and ideas for service improvement.

The study team also conducted approximately 15 interviews (in person and by phone) with senior-service providers about the barriers they face serving seniors and about how the system of care could be improved. Interviews were conducted with physicians, senior center administrators, social workers, care coordinators, first responders, and other senior service providers. A list of providers interviewed is found in Appendix B.

Below are summarized trends of the discussion group and executive interview research with seniors and providers. Common themes were noted from both seniors and providers.

Senior Voices

Senior men and women described their experiences aging in the Mat-Su, during discussion groups and executive interviews. Some had lived in Alaska for all of their lives; others moved to Alaska only recently. Many are in good health, while others either manage their own health issues or depend on help from family members or Personal Care Assistants (PCAs). Many seniors are themselves caregivers for others, including elderly parents, spouses, children, or grandchildren. Some seniors work, while others rely on social security and other retirement income. Most seniors interviewed earn between $25,000 and $45,000 annually. Some described deep connections to community through family, church and/or volunteering, while others spent much of their time alone.

Key Themes

- **Navigating the system of care is not easy for seniors –** Many seniors told of their struggles to find safe, affordable housing; obtain nutritious meals or a primary care doctor willing to take Medicare; receive care; or use public transportation to leave their homes. They also expressed feeling overwhelmed by the paperwork they need to complete to prove eligibility for some services.
- **Seniors do not always find providers to be helpful in understanding their needs and providing appropriate assistance –** There appeared to be a disconnect between providers thinking that finding information is simple and seniors experiencing the opposite.
- **Lack of information about services, or arguably worse, misinformation, affects service choices by seniors –** Many seniors were not aware of or were confused about what services are available or how to access them. Many presumed they would not be eligible for services.

- **Seniors strive for independence –** Most seniors shared stories that display a high tolerance for discomfort and challenge in their day-to-day lives, as well as a commitment to seek help only when they really need it. They emphasize and cherish their independence, seek ways to maintain it while aging, and are aware that it may well diminish.
- **Seniors do not have high expectations for their care but hope for resource-efficient and helpful solutions –** The cost of care has made seniors resourceful and many say their experiences have caused them to have low expectations. Seniors want funding to be used efficiently and practically to provide the resources they need.
- **Seniors desire recognition, by their providers and communities, as unique individuals – T**heir experiences overall suggest a system of care ill-equipped to respond to varying levels of individual needs. One size does not fit all.
- **There is more opportunity to include seniors in developing solutions to improve their system of care–** The experiences of seniors allude to a system of care that is not built for or with the aging. Seniors stories describe a system unaware of emergent realities of seniors' lives, a system that has largely forgotten them. Their stories indicate the necessity of a more flexible, adaptive and integrated system built around the realities of aging.
- **Senior centers were a bright spot for all** – Seniors appreciated senior centers as places to socialize and turn to for support, and places that enhance their quality of life.

Awareness of and Access to Senior Services

Most seniors are aware that senior services exist, but do not use them or know where to find them until confronted by a major health challenge. Of the services available in the Mat-Su, seniors interviewed said they know about or have taken advantage of the following: home weatherization and safety services, the Aging and Disability Resource Center (ADRC), the Sunshine Clinic, Alzheimer's Resources of Alaska, and the Meals on Wheels program.

> *"I had a heart attack, and so after that, I decided, you know, I just can't sit at home and do nothing. So I came down and signed up for membership at the Senior Center and I said, 'do you have any volunteer opportunities?' Well, of course they did, so the next morning, I was sitting at the receptionist desk, and I've been here ever since. After my heart attack, this was the very best therapy that I could have had."*
>
> *– Palmer Senior*

In contrast, all seniors interviewed know of, and most rely upon, their local senior centers. In addition to providing services, activities, and meals, these centers are the places where seniors and their families go for information or guidance. Seniors are truly grateful the centers exist.

Most seniors said they are currently independent but anticipate using senior services in the future, should they need support, and they wait to research what is available until they have a pressing need. Several seniors commented that greater awareness of available services would be helpful for their family caregivers. One 69-year-old senior reflected, "It's probably too late to do a search for services when you're desperate for them. So it's probably something that I should put on my 'to do' list, but I never have."

> *"I stepped into the Center, and I instantly have at least 300 new friends. Everybody was so nice, and they still are; they're my second family."*
>
> *– Palmer Senior*

Seniors stated they use a variety of strategies to find services: reaching out to their senior centers, reading the newspaper, looking for fliers at the grocery store, searching bulletin boards, consulting the ADRC or Alzheimer's Resources, searching online, asking their insurance company or primary care physician, calling providers, and seeking advice from their community. Not all seniors have the skills to use the internet to learn about events and services. Most seniors use local newspapers, either in print or online, to learn about local events.

Despite acknowledging several avenues for obtaining service information, seniors expressed confusion about, and uneven awareness of, senior services. Many seniors are unclear about their eligibility for services and benefits. There is a common perception that proving eligibility is difficult, and consequently some seniors do not bother trying. Mistaking Medicaid for Medicare programs, or vice versa, was common in conversation. Many seniors operate under misinformation about services, while some seniors are simply unaware of existing services to support them as they age. Seniors also say they are used to challenges trying to find what they need; they anticipate difficulty because they routinely experience difficulty.

> *"Well, I'll tell you, I have, frankly, zero confidence in the health system because so many times in the past couple of years I've met people and they say 'You just need to call this number or that number and they'll help you," and then I call this number or that number and they say, 'Well, I'm sorry. We don't do that. You really need to talk to so and so,' and then they give me another number and I talk to so and so, and so and so doesn't know anything about it and by that time, I usually give up. I cannot tell you how many times that has happened."*
>
> *– Houston Senior*

Many seniors said it could be challenging to obtain important services, such as acquiring a prescribed bed for an aging mother or getting a taxi to take grandchildren to school. They said finding solutions takes perseverance and resourcefulness, and their answers suggest a high tolerance for personal challenge and discomfort.

> *"There's a lot of things I'm not aware of. I realized that when I was looking for housing, but…I know that there are things out there for me, but I don't know how to get them."*
>
> *– Wasilla Senior*

There appears to be a disconnect between providers thinking that finding information is simple and seniors experiencing the opposite. Senior needs – transportation, housing, care – fall within a system that is hard to navigate. A combination of misinformation, lack of awareness and complexity results in many seniors who assume, by default, that they are ineligible or the service they need does not exist. Many seniors described calling number after number in search of a service before giving up.

Seniors said there are several gaps or barriers in available services, including the following:

- Limited transportation options, especially after 5:00 pm and on the weekends
- Sometimes unreliable or cost-prohibitive public transportation
- Difficulty finding doctors and accessing needed care

- A shortage of affordable, safe housing for seniors
- Limited access to adult daycare, respite and transitional care
- Desire for more socialization activities and volunteer opportunities
- Finding or negotiating affordable services

Finally, seniors said the services they need are unevenly spread throughout the Mat-Su; the farther a senior is from Palmer or Wasilla, the more limited his or her service options.

The experiences of seniors suggest a system of care that is not built for, or in consultation with, the aging. Seniors stories describe a system unaware of emergent realities of seniors' lives, a system that has largely forgotten them. Or, more bluntly in the words of one 79-year-old senior: "It's just – our system stinks, really." Their stories indicate need for a more flexible, adaptive and integrated system built around the realities of aging. One size does not fit all.

Access to Affordable and Reliable Transportation

> *"Everyone's stereotyped. Seniors have to go to assorted medical appointments and shopping, and then they come right back home; that's it. But part of the joy is going to the fair, to the Farmer's Market, the special exhibits at Menard center, the other stuff around town."*
>
> *– Palmer Senior*

Seniors indicated several challenges accessing transportation. Even with senior discounts, transportation can be expensive. Senior discounts do not always help, for example, if a senior is responsible for getting a grandchild to school when the car does not start. Public transportation is sometimes unreliable, which makes it difficult to arrive at appointments on time or mean indeterminate waiting time out in the elements. Drivers are not always attuned to the needs of seniors or willing, for example, to help seniors out of their homes to the car.

Senior-specific transportation options are relied upon and appreciated, but often only provide transport to a few locations and during limited hours. Several seniors describe the transportation system itself as complicated and confusing. Seniors often give up when trying to figure out how to use vans, buses and taxis in combination to reach a destination. Complexity, cost and reliability force seniors stay at home, drive when perhaps they should not, or become more dependent on others.

Access to Affordable Housing

Aging populations require a menu of housing options to address their varying needs: independent living with safety features to prevent slips and falls; weatherization services to make existing homes safe for seniors; transitional housing for seniors recovering from injury or illness; communal living centers with a range of health care support; and adult daycare or respite care for daytime support. Seniors say many of these options are lacking or prohibitively expensive in the Mat-Su Borough.

> *"There's no place that we can move to that we can afford to move to…so we have cashed in our 401ks and tried to adjust – redo the bathrooms and all that kind of stuff. We've spent a tremendous amount of money making it so we can live here. Finally, we got to the point where there was no more money."*
>
> *– Palmer Senior*

Limited options and high cost force seniors to make difficult decisions, often sacrificing comfort and sometimes even safety. Some seniors opt to live in low-income housing rather than senior housing due to the high cost of senior living facilities, but low-income housing is often not designed for seniors and is, therefore, less safe for them to occupy. Some seniors fall into a middle ground, earning too much money to qualify for reduced housing costs but earning too little to afford market prices. Even seniors who own their homes can sometimes not afford to make those homes safe.

> *"So, I've had to find a caregiver, and I just get on the Internet and start calling and calling. Most of them won't take Medicare, but eventually, I find one that takes Medicare and then hope they don't move. I've had three of them move since I've lived here, so that's what I've done every time is just keep looking until I find one that says, 'yes, we'll take Medicare.'"*
>
> *- Palmer Senior*

Even when cost is not a barrier, seniors often face choices between less-than-ideal options. For example, one elderly couple has struggled to find joint housing for their own aging parents, since the parents have different health needs but want to live together. The senior children must choose between sending their parents to separate facilities or providing care at home when they, themselves, are also in increasing need of care. Seniors struggle to find appropriate housing, but as one senior observed: "If we can't stay healthy as seniors, we don't need housing, we need a cemetery."

Access to Medical Care

The most common complaint about medical care among seniors was a dearth of providers who accept Medicare. Almost all seniors reported being turned away repeatedly. In addition to struggling to find providers, seniors shared frustrations with the paperwork process required by Medicare. Some seniors showed awareness of system-level issues – such as the paperwork burden and lack of refunded services that make Medicare-patients challenging and less profitable for providers – hindering their ability to find a doctor.

> *"In fact, two of my friends who are older than me, the minute they turned 65, their doctors out here dropped them."*
>
> *– Palmer Senior*

> *"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*

Seniors who have doctors report challenges ranging from getting an appointment on short notice to traveling to an appointment on public transportation to opening heavy doors of the clinic to high cost. "Simple" tasks, such as getting a routine eye exam, can be very challenging for seniors. One senior said she would need to arrange for a hotel after an eye exam, because she could not drive home after her eyes were dilated and did not have someone to drive her.

Distance and isolation exacerbate the other trials obtaining medical care. Sometimes seniors, particularly those in rural areas, avoid routine preventative procedures or wellness appointments because of the logistical complexity or cost associated with an appointment. A few seniors said they do not know whether to go to the emergency room, when they cannot get in to see a doctor. Some seniors also asked for more information about symptoms of illnesses that affect seniors, so that they could make more informed decisions about when to seek care.

Seniors described a lack of geriatric expertise in the Mat-Su to address complex cases. A few seniors said there is a shortage of integrative care that emphasizes quality of life.

Access to Quality In-Home Care

Some seniors are less than satisfied with the Personal Care Assistant (PCA) system, citing lack of quality performance monitoring, inconsistency of care, PCAs who do not provide adequate care or do not perform tasks they were paid or asked to do and even theft of personal property.

> *"I know a person right at the moment, she has not had a bath in three weeks because every time it's bath day, the PCA calls in sick because she doesn't want to give her a bath…I think a lot of seniors are in this situation, they don't know their rights or they're afraid if they complain, that they're going to lose their Personal Care Assistant (PCA) and they don't want to lose their PCA."*
>
> *– Palmer Senior*

Behavioral Health Issues

Mat-Su seniors displayed a mixed response to questions about substance abuse and behavioral health challenges and often seemed surprised to be asked about the issue. With a few exceptions, seniors said they had little experience with either issue. Seniors tended to believe others of their generation view mental health issues as a personal problem resulting from lifestyle choices. Most seniors, however, say they, themselves, do not feel this way and would help another senior with mental health or substance abuse problems by contacting their families or by trying to contact some sort of counseling services.

> *"You know, a lot of people are born depressed, that's all they know…They don't want help, most of the time. At our age, if that's the way they're happy, there's no way that they're going to change that."*
>
> *– Wasilla Senior*

Seniors and Independence

Based on their discussion comments and interview responses, seniors want to be seen and heard. They emphasize and cherish their independence, seek ways to maintain it while aging, and are aware that it may well diminish. They do not want to be a burden on their families or society and want a system that supports their independence. They want money for senior services to be spent efficiently and practically. Seniors want to be involved in their community and in their care, helping to find solutions and the answers to their own questions.

> *"I don't think we, as seniors, should walk around with our hands out expecting dough from the government or the state. I think we are still able to roll up our sleeves and help ourselves and I think we should do all of that we possibly could helping ourselves. And that's about all I've got to say."*
>
> *– Palmer Senior*

Provider Voices

Interviews were held with a range of health and service providers across the Mat-Su to garner both individual and organizational perspectives about both the range of current services provided, gaps in the current offerings and deficits or dysfunction in the present system. Not surprisingly, there was considerable consensus among providers about challenges and opportunities for improvement or change, and many of these themes echoed the senior voices.

Key Themes

The current transportation infrastructure needs to be strengthened and expanded. While most providers agreed that there needed to be more transportation for seniors, many also recognized the challenges inherent in the geography. Of interest, however, was expressed concern by some for improved transportation coordination and "less competition" among provider organizations. Some interviewees cited past attempts by one organization to create more service that was effectively blocked by another, fearing impact to their existing service. Others pointed out that, while there is "probably enough transportation during the day and from Monday through Friday", after-hours service and weekend offerings were highly limited.

Access to primary care, especially for Medicare-covered services, remains a challenge for many seniors. Many providers cited the limited number of physicians in the Mat-Su who are willing to accept a new Medicare patient, given the reimbursement challenge posed for primary care physicians. While there are some physicians and clinics who will serve the population, they are often full and access, while eventual, is long delayed. A few individuals indicated that the issue has improved, given the advent of organizations like Solstice Clinic, but showed concern that "saturation" will inevitably overwhelm the organization.

The Mat-Su needs more physicians with expertise appropriate to senior and geriatric patients. Healthcare providers generally agreed that as the population in the Mat-Su ages and more seniors elect to remain in the area, the need for physicians more appropriate to senior care increases. Providers pointed to an over-abundance of family practice physicians but a lack of internal medicine physicians and specific internists with geriatric expertise. One provider cited historical challenges in attracting these kinds of physicians but also openly wondered if a collective recruitment effort might prove more effective.

The Mat-Su needs more hospice and palliative care services. Both services represent an important component of a comprehensive care model that creates options for seniors who should no longer use acute or emergency care. Providers in the Mat-Su pointed to often unnecessary use of the emergency room and resulting acute hospital admissions for patients who would be ideally served and managed in either hospice or palliative settings. Other providers commented on the burden that advanced illness and terminal patients can create on friends and family, who are attempting to support a senior and could benefit from hospice or palliative care.

Many providers see substance abuse among seniors as an epidemic problem. While most providers commented about alcoholism as a common issue, healthcare providers in particular cited it as "epidemic" issue, along with prescription drug abuse, particularly for prescription pain killers. In many instances, seniors themselves are "unknown pawns" (sometimes by ill-intended caregivers) in schemes to have pain medications filled by multiple pharmacies (to be used/sold by caregivers rather than by the senior), given the absence of a

pharmacy registry in Alaska. Additionally, the lack of patient education efforts and limited primary care and coordinated care oversight leads to overuse of these medications (and others) by seniors, ultimately driving addiction.

The Mat-Su needs both more and improved assisted living services and supports. Many provider organizations commented on the "quality" of current assisted living offerings in the borough, citing services provided in private homes and questioned if senior needs were being adequately or appropriately met. Providers express concern about limited inspection of these settings and the need for greater oversight.

The Mat-Su needs its own skilled nursing facility to support both short-term transitional/post-hospital care and long-term custodial care. Nearly every provider organization cited the lack of a skilled nursing facility as a fundamental need. For healthcare providers, the "nursing home gap" creates acute discharge planning issues that can extend hospital lengths of stay and contribute to both hospital returns and emergency department visits. Currently, home health agencies lack capacity to manage all discharges appropriately. Thus, patients must travel to Anchorage for services, which creates burdens for patients and family members alike, and "disrupts the local providers" who fear that a patient sent to Anchorage is a "lost patient."

The Mat-Su needs more affordable housing for seniors. Providers across the spectrum universally agreed that the borough suffers from a lack of quality, affordable housing for seniors. Many providers cited first-hand experience in senior homes and residences, commenting on poor quality environments, spaces that "should probably be condemned" and questions about "how much people are paying for these pits." Organizations currently offerings housing services (i.e., the senior centers) pointed to both their long waiting lists on one hand and the significant barriers to development on the other.

Seniors clearly crave better information about services and access to supports. For providers who support and manage seniors daily, most pointed to a general lack of knowledge among "new" seniors about the range of services available to them. Representatives from the Aging and Disability Resource Center (ADRC) cited the increasing volume of information and referral they complete and the "happiness" communicated by seniors to discover that there is "someone who can help."

Current funding streams are generally insufficient to support an increasing volume of seniors. Nearly everyone posed some version of the rhetorical question, "who's going to pay for it?" Community-based providers cited challenges with limited Older Americans Act funding, but additionally stressed that "consolidation" of efforts to secure funding might potentially result in even less funding. With respect to Medicaid, providers and stakeholders conceded that funding is greatly challenged statewide, and efforts to expand Medicaid, while important, may not be sustainable over the long-term.

The personal care attendant program demands improved oversight. Providers across the borough expressed both appreciation and great concern for Alaska's personal care attendant program. Most agree that the ability for elders to receive assistance in their own home is essential; the absence of structured monitoring and quality evaluation of care attendant services is a significant challenge. Many individuals cited specific concerns about the quality and quantity of services that seniors were receiving. Others openly expressed their opinions about potential fraud and instances of potential elder abuse.

Chapter 2: Socioeconomic Overview of Senior Population

Summary

This section of the report provides a cross section of population, demographic, housing characteristics, employment and Medicaid qualification for seniors living in the Mat-Su. Highlights of the socioeconomic overview include:

- The average rate of population growth for seniors in the Mat-Su since 2003 has been 7.3 percent per year. Mat-Su's 10,284 seniors now represent 10 percent of the borough population (up from 6.5 percent in 2003).
- The population of Mat-Su seniors (age 65+) is expected to grow by 41.3 percent between 2015 and 2020 (to an estimated total of 14,100 by 2020). Over this same period, the U.S. senior population is expected to grow by only 17.7 percent.
- Female seniors outnumber male seniors in the Mat-Su (62 percent compared to 38 percent).
- The Knik-Fairview census area has the most seniors (1,406).
- More seniors move to the Mat-Su than move out. The opposite is true for Alaska as a whole.
- Median household incomes in the Mat-Su Borough are lower than statewide, but greater than the national averages.
- Homeownership declines with age; 83 percent of Mat-Su seniors age 65-74 own their homes compared to 79 percent of seniors age 75-84 and 54 percent of seniors age 85+.
- Approximately 800 seniors were employed at some time during 2013. They represent 3.4 percent of all Mat-Su workers.
- In 2015, 1,099 Mat-Su seniors (11 percent), had household incomes below the federal poverty level and were Medicaid eligible. By 2020, that number is expected to grow to 1,543.

Senior Demographic Profile

Population Growth Age 65+

The proportion of seniors in the Mat-Su Borough has grown from 6.5 percent in 2003 to 10.3 percent in 2015. On average, the annual rate of change between 2003 and 2015 was 7.3 percent.

(See table next page.)

Table 4. Population Age 65+, Mat-Su Borough, 2003-2015

Year	Population 65+ Years	Percent of Total Population	Annual Rate of Change
2003	4,409	6.5%	
2004	4,721	6.6%	7.1%
2005	5,090	6.8%	7.8%
2006	5,439	7.0%	6.9%
2007	5,805	7.2%	6.7%
2008	6,234	7.4%	7.4%
2009	6,632	7.7%	6.4%
2010	7,069	7.9%	6.6%
2011	7,610	8.3%	7.7%
2012	8,275	8.8%	8.7%
2013	8,963	9.3%	8.3%
2014	9,649	9.8%	7.7%
2015	10,284	10.3%	6.6%
Annual average rate of change 2003-2015			**7.3%**

Source: ADOLWD.

Geographic Distribution of Population Age 65+

The following table shows the population distribution of seniors age 65+ throughout the Mat-Su Borough by community or census district. The largest senior count can be found in Knik-Fairview (1,406 seniors), Wasilla (1,046 seniors), and Lakes (989 seniors) areas.

ADOLWD population data by age are available for communities or Census Designated Places with populations of 1,000 or more. For populations under 1,000, the American Community Survey estimates population by age; however, given the small survey samples, these data have large margins of error and should be considered with caution.

(See table next page.)

Table 5. Selected Mat-Su Borough Communities with 1,000+ Population, 2015 Population Estimates

Community	Seniors 65+	Total Population	% of Total Population	% of Seniors All Mat-Su Borough Seniors (65+)
Big Lake CDP	536	3,629	1%	6%
Buffalo Soapstone CDP	n/a	907		
Butte CDP	454	3,498	<1%	5%
Chase CDP	n/a	37		
Chickaloon CDP	n/a	252		
Eureka Roadhouse CDP	n/a	42		
Farm Loop CDP	134	1,144	<1%	1%
Fishhook CDP	453	5,500	<1%	5%
Gateway CDP	481	6,903	<1%	5%
Glacier View CDP	n/a	243		
Houston city	242	2,096	<1%	3%
Knik-Fairview CDP	1,406	17,617	1%	15%
Knik River CDP	n/a	732		
Lake Louise CDP	n/a	38		
Lakes CDP	989	9,000	1%	10%
Lazy Mountain CDP	236	1,578	<1%	2%
Meadow Lakes CDP	813	8,381	1%	8%
Palmer city	727	6,135	1%	8%
Petersville CDP	n/a	2		
Point MacKenzie CDP	74	1,920	<1%	1%
Skwentna CDP	n/a	36		
Susitna CDP	n/a	16		
Susitna North CDP	240	1,427	<1%	2%
Sutton-Alpine CDP	121	1,419	<1%	1%
Talkeetna CDP	n/a	859		
Tanaina CDP	659	9,073	1%	7%
Trapper Creek CDP	n/a	475		
Wasilla city	1,046	8,468	1%	11%
Willow CDP	417	2,000	<1%	4%
Balance	1,256	6,751		
Total	**10,284**	**100,178**	**10%**	**100%**

n/a indicates not available for communities or CDPs with fewer than 1,000 people.
Source: ADOLWD.

Table 6. CDPs with Less than 1,000 Residents Located in the Mat-Su Borough Population, 2010-2014 Five-Year Estimates

Community	2010-2014 Five-Year Estimates					
	Count Seniors 65+	Margin of Error (±)	Total Population	Margin of Error (±)	Percent of Total Population Seniors 65+	Percent Margin of Error (±)
Mat-Su Borough	**8,190**	**79**	**93,843**	**n/a**	**8.7%**	**0.1%**
Buffalo Soapstone CDP	87	38	878	152	9.9%	4.5%
Chase CDP	0	9	22	26	0.0%	49.6%
Chickaloon CDP	52	23	234	73	22.2%	9.4%
Glacier View CDP	42	29	278	121	15.1%	9.3%
Knik River CDP	67	28	690	105	9.7%	4.4%
Lake Louise CDP	18	18	42	49	42.9%	25.6%
Petersville CDP	0	9	0	9	-	n/a
Skwentna CDP	12	13	47	32	25.5%	29.4%
Susitna CDP	0	9	0	9	-	n/a
Talkeetna CDP	77	43	508	144	15.2%	9.9%
Trapper Creek CDP	72	51	448	210	16.1%	7.2%

Source: 2010-2014 ACS Five-Year Estimates.

Population Migration

According to ADOLWD and Permanent Fund Dividend Applications, slightly more seniors migrated into the Mat-Su (average of 414 seniors annually between 2009 and 2014) than out-migrated (389 annually). For all of Alaska, the opposite is true (1,537 seniors migrated into Alaska and 2,256 left the state during that time period).

Table 7. PFD-Based Migration, by Age, Mat-Su Borough and Alaska, 2009-2014 Average

Age	Alaska		Mat-Su Borough	
	In-Migration	Out-Migration	In-Migration	Out-Migration
0-49	34,299	32,858	6,792	5,639
50-64	5,066	6,388	1,131	1,053
65-69	624	1,028	176	161
70-74	362	573	97	97
75-79	231	303	59	47
80-84	155	202	41	39
85-89	106	96	28	28
90+	59	54	13	17
65+	1,537	2,256	414	389

Notes: This is an August 2015 special tabulation based on Permanent Fund Dividend (PFD) applications with adjustments for births, deaths, and total migration. These data will not exactly match other population and migration statistics from ADOLWD. For PFD eligibility, applicants must meet several criteria, including residence in Alaska for the previous calendar year, or birth in Alaska in the previous calendar year. There is no adjustment in this tabulation for timing of PFD eligibility. "2009 to 2014 Average Annual" is an average of five periods of data: 2009 to 2010, 2010 to 2011, 2011 to 2012, 2012 to 2013, and 2013 to 2014.
Source: ADOLWD.

Population Growth

The total population of the Mat-Su Borough grew by 10.2 percent from 2010 to 2015 and will grow by another 7.9 percent through 2020. The largest growth between 2015 and 2020 will be the senior population.[1]

The growth of the Alaska senior population age 65+ is almost double that in the U.S. as a whole, but even greater in Mat-Su. The cohort of Mat-Su seniors 75+ years, who use services at an accelerated rate and are the target population for most senior housing providers, is projected to increase at nearly four times the national rate. Seniors age 85+ are the highest users of services. Growth in this age cohort for Mat-Su is four times the national rate.

Table 8. Overall Population of Mat-Su Borough

Age Cohort	2010 Actual	2015 Estimate	Percent Change 2010–2015	2020 Projection	Percent Change 2015–2020
0–4 Years	6,900	7,090	2.8%	7,573	6.8%
5–9 Years	7,082	7,309	3.2%	7,324	0.2%
10–14 Years	7,189	7,569	5.3%	7,594	0.3%
15–17 Years	4,548	4,633	1.9%	4,951	6.9%
18–20 Years	3,469	4,159	19.9%	4,555	9.5%
21–24 Years	3,977	5,388	35.5%	6,326	17.4%
25–34 Years	11,587	12,435	7.3%	12,985	4.4%
35–44 Years	12,180	12,422	2.0%	12,813	3.1%
45–54 Years	14,346	13,840	-3.5%	13,133	-5.1%
55–64 Years	10,648	13,229	24.2%	14,394	8.8%
65–74 Years	4,625	6,892	49.0%	9,787	42.0%
75–84 Years	1,918	2,430	26.7%	3,502	44.1%
85+ Years	526	672	27.8%	834	24.1%
Total	**88,995**	**98,068**	**10.2%**	**105,771**	**7.9%**
65+ Years	7,069	9,994	41.4%	14,123	41.3%
75+ Years	2,444	3,102	26.9%	4,336	39.8%
85+ Years	526	672	27.8%	834	24.1%

Source: The Nielsen Company.

[1] The demographics for Mat-Su Borough were analyzed for years 2015, 2020, 2025, and 2030. The source of data for 2015 and 2020 is The Nielsen Company, which produces current-year estimates and five-year projections. The source of the longer-term demographics for 2025 and 2030 is ADOLWD.

It is estimated there will be 14,100 seniors living in the Mat-Su by 2020, a projected growth rate of 41.4 percent for the five years between 2015 and 2020.

Table 9. Growth of Mat-Su Borough compared to Alaska and United States

Age Cohort	Mat-Su Borough Percent Change 2015–2020	Alaska Percent Change 2015–2020	United States Percent Change 2015–2020
0–4 Years	6.8%	0.1%	1.0%
5–9 Years	0.2%	2.8%	-0.4%
10–14 Years	0.3%	3.4%	-0.2%
15–17 Years	6.9%	4.0%	3.1%
18–20 Years	9.5%	1.1%	2.5%
21–24 Years	17.4%	-3.3%	1.7%
25–34 Years	4.4%	0.0%	0.7%
35–44 Years	3.1%	7.4%	1.9%
45–54 Years	-5.1%	-7.2%	-4.1%
55–64 Years	8.8%	5.8%	6.3%
65–74 Years	42.0%	37.4%	22.7%
75–84 Years	44.1%	35.2%	12.9%
85+ Years	24.1%	15.2%	5.8%
Total	**7.9%**	**4.7%**	**3.5%**
65+ Years	41.3%	35.1%	17.7%
75+ Years	39.8%	30.4%	10.7%
85+ Years	24.1%	15.2%	5.8%

Source: The Nielsen Company.

Population Projections to 2030

The Mat-Su Borough population is projected to increase by 40 percent from 2015 to 2030. Once again, the largest growth will be in the senior population. The number of seniors (age 65+) will double from 2015 to 2030, while the number of seniors age 75+ will increase by a factor of more than four (202 percent). Seniors age 85+, who are the highest users of services, are projected to increase by 188 percent.

As the need for senior services more than doubles over the next 15 years, the workforce to care for the elderly will not keep up. Projected growth in younger cohorts of Mat-Su residents is significantly less than that of the senior cohorts.

Similarly, as seniors come to represent a larger and larger portion of the population, more and more seniors will fall into the category of "older seniors," who use more services. In 2015, the majority (69 percent) of seniors are between the ages of 65 and 74. By 2030, 44 percent of seniors will be age 75+, suggesting a much higher percentage of seniors will be utilizing services than in 2015.

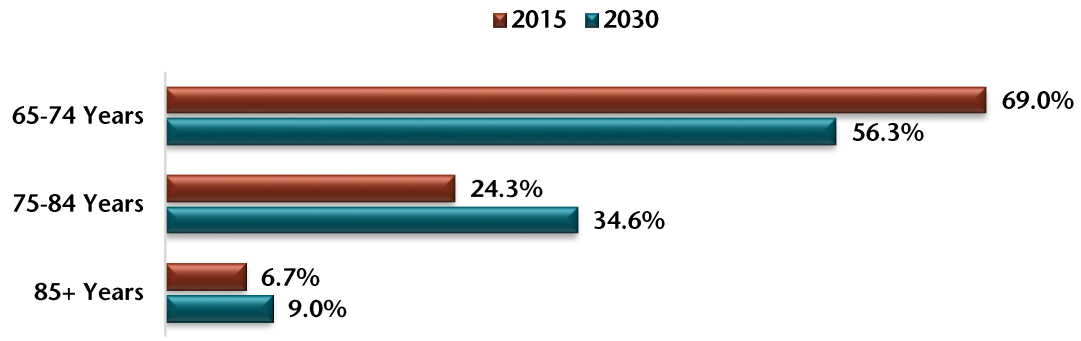
(See table next page.)

Table 10. Long-Term Overall Population of Mat-Su Borough, 2015, 2020, 2025 and 2030

Age Cohort	2015 Estimate	2020 Projection	2025 Projection	2030 Projection	Percent Change 2015–2030	Percent Change 2015–2030
0–4 Years	7,090	7,573	9,717	10,659	3,569	50.3%
5–9 Years	7,309	7,324	9,753	10,791	3,482	47.6%
10–14 Years	7,569	7,594	9,647	10,755	3,186	42.1%
15–24 Years	14,180	15,832	16,445	17,661	3,481	24.5%
25–34 Years	12,435	12,985	16,751	18,368	5,933	47.7%
35–44 Years	12,422	12,813	16,803	18,618	6,196	49.9%
45–54 Years	13,840	13,133	14,556	16,418	2,578	18.6%
55–64 Years	13,229	14,394	13,184	12,980	-249	-1.9%
65–74 Years	6,892	9,787	11,680	12,070	5,178	75.1%
75–84 Years	2,430	3,502	5,403	7,418	4,988	205.3%
85+ Years	672	834	1,351	1,933	1,261	187.6%
Total	**98,068**	**105,771**	**125,290**	**137,671**	**39,603**	**40.4%**
65+ Years	9,994	14,123	18,434	21,421	11,427	114.3%
75+ Years	3,102	4,336	6,754	9,351	6,249	201.5%
85+ Years	672	834	1,351	1,933	1,261	187.6%

Source: The Nielsen Company and Alaska Department of Labor and Workforce Development

Figure 1. Long-term Age Distribution of Mat-Su Borough Seniors, Age Cohorts, 2015 and 2030



Source: The Nielsen Company and Alaska Department of Labor and Workforce Development

Gender

Males account for a larger percentage of seniors in the Mat-Su Borough than in Alaska as a whole, which in turn is higher than the United States, but females still account for the majority of seniors in all three geographies. Nationally, in 2020, males will account for a larger percentage of seniors in the age cohorts 75 to 84 and 85+ than in 2015; however, females will still account for the majority of seniors.

Table 11. Gender, Senior Population Estimates and Projections, Mat-Su Borough, 2010, 2015 and 2020

Age Cohort	2010 Actual	2015 Estimate	Percent Change 2010–2015	2020 Projection	Percent Change 2015–2020
Females					
65–74 Years	2,176	3,313	52.3%	4,815	45.3%
75–84 Years	991	1,241	25.2%	1,768	42.5%
85+ Years	336	416	23.8%	496	19.2%
Males					
65–74 Years	2,449	3,579	46.1%	4,972	38.9%
75–84 Years	927	1,189	28.3%	1,734	45.8%
85+ Years	190	256	34.7%	338	32.0%
Total					
65–74 Years	4,625	6,892	49.0%	9,787	42.0%
75–84 Years	1,918	2,430	26.7%	3,502	44.1%
85+ Years	526	672	27.8%	834	24.1%

Source: The Nielsen Company.

Table 12. Gender, Senior Population Projections, Mat-Su Borough, Alaska, and U.S., 2015 and 2020

	2015			2020		
Gender	Mat-Su Borough	Alaska	United States	Mat-Su Borough	Alaska	United States
65-74 Age Cohort						
Female	48.1%	48.6%	53.3%	49.2%	49.6%	53.3%
Male	51.9%	51.4%	46.7%	50.8%	50.4%	46.7%
75-84 Age Cohort						
Female	51.1%	53.1%	57.2%	50.5%	52.6%	56.8%
Male	48.9%	46.9%	42.8%	49.5%	47.4%	43.2%
Total						
Female	61.9%	63.4%	66.3%	59.5%	61.9%	65.8%
Male	38.1%	36.6%	33.7%	40.5%	38.1%	34.2%

Source: The Nielsen Company.

Life Expectancy

In 2010, Alaska females had a life expectancy of 80.5 years up from 79.7 years in 2000. By 2020, Alaska females are expected to live on average 81.7 years. The life expectancy of Alaska males is shorter than females. In 2010, Alaska males had a life expectancy of 76.1 years, also up from 2000 levels (74.9 years). By 2020, Alaska males, on average, are expected to live 78.3 years. This pattern is similar to trends seen nationally. Access to medical care is one of the reasons for these longer life expectancies.

Table 13. Average Life Expectancy, Age, Males and Females, Alaska and U.S., 10-year increments (1970-2040)

Years	Alaska		United States	
	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: ADOLWD.

Race/Ethnicity

"White Alone" is the racial/ethnic category that accounts for the largest proportion of seniors, 90.5 percent in 2015 declining slightly to 88.4 percent in 2020. American Indian and Alaska Native Alone is the second largest group, accounting for 3.7 percent of all seniors in 2015 and projected to increase to 4.3 percent in 2020. Based on Alaska Department of Labor and Workforce Development data, it is estimated there were 571 American Indian or Alaska Native alone or in combination with other races in 2015.

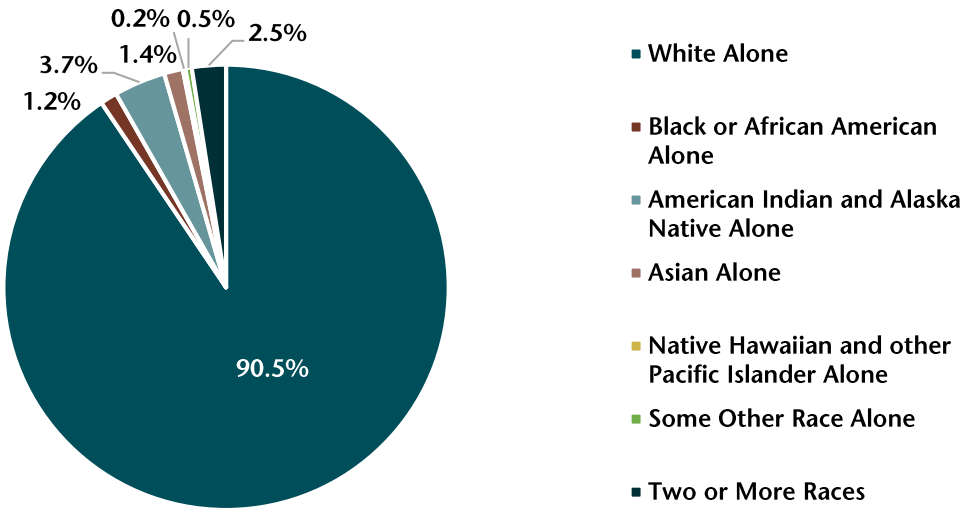
Seniors identifying themselves as Hispanic or Latino account for 1.6 percent of seniors in 2015 and increasing to 2.2 percent in 2020.

Table 14. Race/Ethnicity, Mat-Su Borough Senior Population (Age 65+), 2015 and 2020

Race/Ethnicity Category	2015 Estimate	2020 Projection	Change 2015–2020	Percent Change 2015–2020
White Alone	9,049	12,490	3,441	38.0%
Black or African American Alone	123	237	114	92.7%
American Indian and Alaska Native Alone	374	612	238	63.6%
American Indian and Alaska Native Alone or in combination with other races*	571	734	163	28.5%
Asian Alone	136	234	98	72.1%
Native Hawaiian and other Pacific Islander Alone	19	42	23	121.1%
Some Other Race Alone	46	84	38	82.6%
Two or More Races	247	424	177	71.7%
Total	**9,994**	**14,123**	**4,129**	**41.3%**
Hispanic or Latino	163	309	146	89.6%

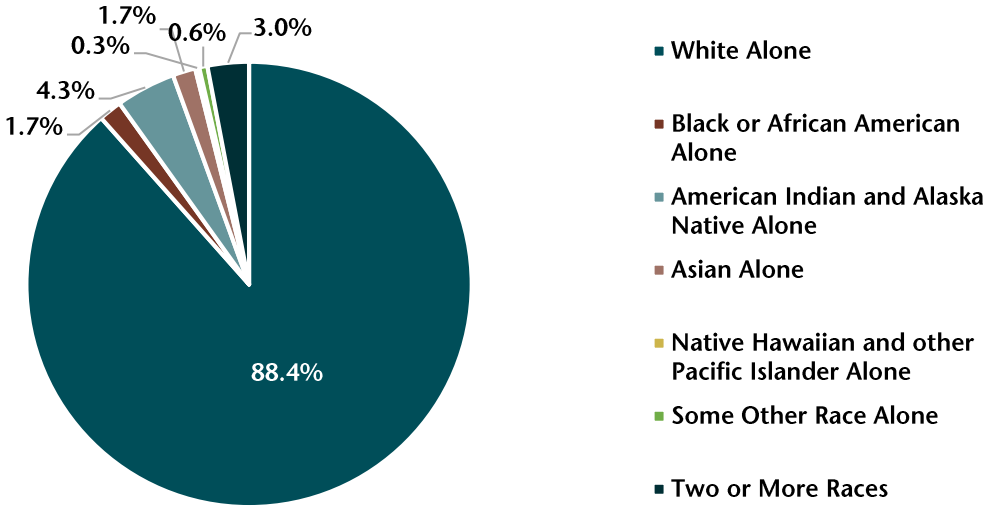
Note: Based on July 2014 estimates for the Mat-Su Borough from Alaska Department of Labor and Workforce Development (DOLWD). Estimates for 2015 and 2020 based on applying DOLWD statewide growth rates for American Indian/Alaska Native alone or in combination.
Source: The Nielsen Company.

Figure 2. Race/Ethnicity Distribution, Mat-Su Borough Seniors Age 65+, 2015



Source: The Nielsen Company.

Figure 3. Race/Ethnicity Distribution, Mat-Su Borough Seniors Age 65+, 2020



Source: The Nielsen Company.

Households and Household Income

The number of households is often used to project the need for housing, particularly independent and congregate housing, assisted living, and memory care assisted living. Typically, if one spouse needs assistance and moves into senior housing, both spouses will move together rather than living in separate residences. Growth in senior households from 2015 to 2020 is projected to be substantial. Adult children, ages 45–54 and 55–64, often assist in paying for and coordinating senior services, particularly housing. The number of households with head of household age 45–54 is projected to decrease by 6.2 percent from 2015 to 2020, while head of households age 55–64 will increase by 7.4 percent. Heads of household age 75+, the age at which seniors typically begin to move into senior housing, will increase 38.0 percent.

Table 15. Senior Households

Age of Head of Household	2000 Actual	2015 Estimate	Percent Change 2000–2015	2020 Projection	Percent Change 2015–2020
45–54 Years	5,538	7,766	40.2%	7,282	-6.2%
55–64 Years	2,640	7,791	195.1%	8,370	7.4%
65–74 Years	1,456	4,379	200.8%	6,134	40.1%
75–84 Years	613	1,602	161.3%	2,269	41.6%
85+ Years	151	412	172.8%	510	23.8%
65+ Years	2,220	6,393	188.0%	8,913	39.4%
75+ Years	764	2,014	163.6%	2,779	38.0%
85+ Years	151	412	172.8%	510	23.8%

Source: The Nielsen Company.

Table 16. Median Household Incomes

Age of Head of Household	2000 Actual	2015 Estimate	Percent Change 2000–2015	2020 Projection	Percent Change 2015–2020
45–54 Years	$61,006	$82,634	35.5%	$92,714	12.2%
55–64 Years	$54,535	$72,463	32.9%	$81,379	12.3%
65–74 Years	$39,054	$53,977	38.2%	$59,283	9.8%
75–84 Years	$34,824	$32,592	-6.4%	$34,633	6.3%
85+ Years	$28,056	$26,875	-4.2%	$28,537	6.2%
65+ Years	$61,006	$82,634	35.5%	$92,714	12.2%
75+ Years	$54,535	$72,463	32.9%	$81,379	12.3%
85+ Years	$39,054	$53,977	38.2%	$59,283	9.8%

Source: The Nielsen Company.

Median household incomes for both seniors and adult children are projected to increase by at least 6.2 percent through 2020. From 2000 to 2015, median household incomes for seniors age 75+ declined, but are now projected to increase through 2020. Median household income in the Mat-Su Borough is lower than Alaska, but greater than the national average. As previously noted, the senior population in Mat-Su Borough is increasing at a greater rate than Alaska and, with lower median household incomes, a higher percentage of seniors will need assistance in paying for services.

Table 17. Median Household Incomes

Age of Head of Household	Mat-Su Borough	Alaska	United States
45–54 Years	$82,634	$90,386	$70,116
55–64 Years	$72,463	$81,457	$62,078
65–74 Years	$53,977	$62,653	$47,422
75–84 Years	$32,592	$39,357	$31,688
85+ Years	$26,875	$29,738	$24,532

Source: The Nielsen Company.

Home Ownership

Homeownership typically declines with age as seniors begin to move into senior housing. The percentage of younger seniors who are homeowners is higher in the Mat-Su Borough than in Alaska and the United States. The percentage of homeowners among heads of household age 85+ is lower than both Alaska and United States. Higher percentages of homeownership could indicate a shortage of assisted living or other senior care housing options in the Mat-Su Borough.

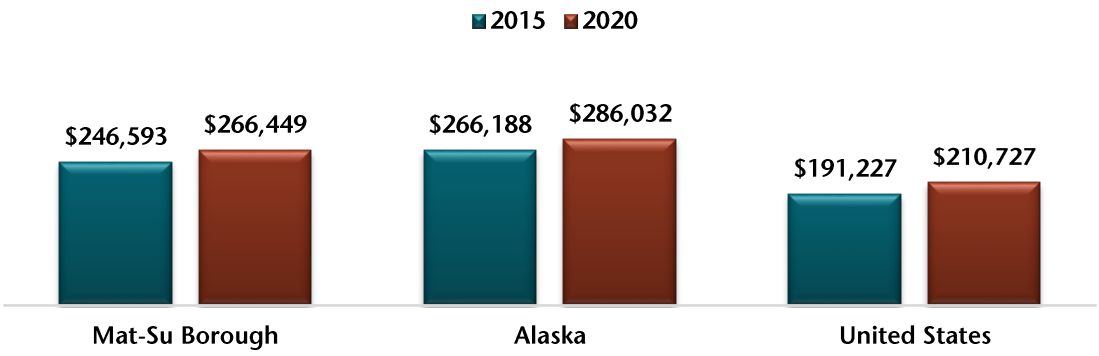
Table 18. Homeownership

Age of Head of Household	Mat-Su Borough	Alaska	United States
55–64 Years	84.6%	76.7%	76.9%
65–74 Years	83.4%	79.2%	80.0%
75–84 Years	78.5%	75.4%	77.5%
85+ Years	53.9%	60.9%	64.2%

Source: The Nielsen Company.

Assets realized from the sale of a home are often used to assist in paying for senior housing. The median housing value in Mat-Su Borough is lower than Alaska, but higher than nationally. Median housing value for Mat-Su is projected to increase by 8.1 percent from 2015 to 2020, which is greater than Alaska (7.5 percent), but less than the national projected increase (10.2 percent).

Figure 4. Housing Value



Source: The Nielsen Company.

PROPERTY TAX IMPACTS

The Mat-Su Borough recognizes seniors may have financial difficulties living with fixed incomes. Property tax exemptions help many seniors to afford living in their homes longer. In the October 2014 election, Mat-Su voters expanded the property tax exemptions for seniors. The change increased the Senior Citizens and Disabled Veterans Property Tax Exemption to $218,000 of the assessed value of the applicant's home from $170,000. The minimum required by Alaska law is $150,000. The exemption is for seniors age 65+ and widows or widowers age 60+ who are married to someone who qualifies for the exemption, as well as veterans. In Tax Year 2014, 5,441 applicants (both seniors and/or veterans) for property tax exemptions were approved exempting $740 million in assessed value or the equivalent of $10 million in property tax waived (average of $1,834 per applicant).

Table 19. Senior Citizen and Disabled Veteran Property Tax Exemption Program Summary, FY2015/Tax Year 2014

Municipality	Number of Applicants Approved	Total Assessed Value Exempt	% Value Inc./Dec. From Last Year	Total Tax Amount Exempt	% Tax Inc./Dec. From Last Year	Average Value Per Applicant	Average Tax Per Applicant
Municipality of Anchorage	13,955	$2,027,151,044	4.01%	29,772,970	0.41%	$145,263	$2,133
Bristol Bay Borough	32	$3,628,950	0.72%	47,176	0.72%	$113,405	$1,474
Fairbanks North Star Borough	4,867	$628,574,531	5.71%	10,205,808	7.12%	$129,150	$2,097
Haines Borough	240	$32,040,500	14.29%	311,759	15.37%	$133,502	$1,299
City & Borough of Juneau	1,744	247,807,900	11.99%	2,666,413	13.08%	$142,092	$1,529
Kenai Peninsula Borough	4,171	549,366,800	6.03%	5,010,352	6.96%	$131,711	$1,201
Ketchikan Gateway Borough	897	120,277,800	9.33%	1,174,079	8.49%	$134,089	$1,309
Kodiak Island Borough	549	74,275,878	5.25%	967,938	4.88%	$135,293	$1,763
Matanuska-Susitna Borough	**5,441**	**720,051,556**	**12.54%**	**9,978,295**	**9.72%**	**$132,338**	**$1,834**
North Slope Borough	113	12,336,800	7.19%	228,231	7.19%	$109,175	$2,020
Petersburg Borough	256	33,506,386	16.43%	352,926	10.09%	$130,884	$1,379
City & Borough of Sitka	501	69,326,732	-3.30%	415,960	-3.30%	$138,377	$830
Municipality of Skagway	64	8,876,358	2.66%	50,606	4.27%	$138,693	$791
City & Borough of Wrangell	205	23,381,801	-5.45%	298,117	-4.34%	$114,058	$1,454
City & Borough of Yakutat	47	4,514,774	-0.38%	36,118	-20.30%	$96,059	$768
Cordova	108	14,983,700	8.43%	176,432	39.83%	$138,738	$1,634
Craig	48	5,386,260	2.81%	32,318	2.81%	$112,214	$673
Dillingham	79	9,552,800	3.52%	124,186	3.52%	$120,922	$1,572
Nenana	30	1,780,033	2.87%	21,361	2.87%	$59,334	$712
Nome	104	13,180,861	-0.12%	158,170	8.96%	$126,739	$1,521
Pelican	9	991,200	36.12%	6,938	36.12%	$110,133	$771
Unalaska	22	2,966,075	50.46%	31,144	50.46%	$134,822	$1,416
Valdez	160	18,289,261	4.08%	365,785	4.08%	$114,308	$2,286
Whittier	14	588,100	-23.69%	4,705	-23.69%	$42,007	$336
Total	**33,656**	**$4,622,836,100**	**6.29%**	**$62,437,787**	**4.35%**	**$137,355**	**$1,855**

Source: Alaska Taxable 2014, Alaska Department of Commerce, Community, and Economic Development.

Employment

According to ADOLWD, approximately 800 Mat-Su seniors, or 3.2 percent of all Mat-Su workers, were employed at some time during 2013. Mat-Su senior workers make up about 7 percent of all working seniors in Alaska.

Table 20. Alaska Resident Workers Age 65+, Mat-Su Borough and Alaska, 2003-2013

	Statewide		Mat-Su Borough	
Year	Number of Workers Age 65+	Percent of Total Workers Age 65+	Number of Workers Age 65+	Percent of Total Workers Age 65+
2003	5,167	1.7	320	1.7
2004	5,546	1.8	351	1.7
2005	5,939	1.9	360	1.7
2006	6,455	2.0	412	1.9
2007	7,054	2.2	468	2.1
2008	7,765	2.4	528	2.3
2009	8,350	2.6	559	2.4
2010	9,116	2.8	598	2.5
2011	9,646	2.9	665	2.7
2012	11,079	3.3	756	3.1
2013	11,884	3.6	800	3.2

Notes: Numbers reflect only Alaska resident workers for whom valid age data is available. Residency is calculated by matching workers reported by Alaska employers with the two most recent Permanent Fund Dividend files (2013 and 2014). Workers shown include all workers employed at any time during the year with that employer. If a worker applied for a Permanent Fund Dividend in 2013 or 2014 they are considered residents for purposes of this report.
Source: ADOLWD.

Medicaid Qualification

The State of Alaska Department of Health and Social Services Division of Public Assistance reports the Adult Public Assistance household qualifying levels for payment assistance. Three different household incomes could qualify for assistance:

- Federal Poverty Level (FPL) Guidelines for Alaska ($14,720 annual income limit)
- Assisted Living Home ($16,344 annual income limit)
- Nursing Home Special Long-Term Care ($26,388 annual income limit)

The FPL Guidelines is an income-based eligibility, while the Assisted Living Home and Nursing Home Special Long-Term Care (which includes home-and community-based waiver) are a combination of financial and disability qualifications.

The FPL, issued by the U.S. Department of Health and Human Services, are poverty guidelines that are used for the administrative purpose of simplifying the determination of financial eligibility for certain programs (in this case, for Medicaid eligibility). The FPL is not to be confused with poverty thresholds issued by the Census Bureau for the statistical purpose of calculating the number of people in poverty.

(See table next page.)

Table 21. Mat-Su Senior Population Below Federal Poverty Level (FPL) Guidelines, 2015 and 2020

Age Cohort	Seniors	Percentage of Households Below Federal Poverty Level	Seniors Below Federal Poverty Level
2015			
65–74 Years	6,892	8.76%	604
75–84 Years	2,430	14.64%	356
85+ Years	672	20.72%	139
Total 65+ Years	**9,994**		**1,099**
2020			
65–74 Years	9,787	8.76%	857
75–84 Years	3,502	14.64%	513
85+ Years	834	20.72%	173
Total 65+ Years	**14,123**		**1,543**

Source: The Nielsen Company and *http://dpaweb.hss.state.ak.us/POLICY/PDF/2015_Medicaid_standards.pdf.*

In 2015, 11.0 percent of seniors have household incomes below the FPL accounting for 1,099 seniors. By 2020, the number of seniors below FPL is projected to be 1,543.

Chapter 3: Economic Contribution of Mat-Su Seniors

Summary

Seniors who choose to remain in the Mat-Su have a sizeable economic impact on the Mat-Su Borough. This is primarily because much of their income comes from outside the state (for example, Social Security and Medicare payments flow into Alaska and re-circulate through the economy). In addition, seniors tend to spend money on local services. The median income for a senior Mat-Su household was $46,935 (2010-2015 Five Year Estimate). In 2013, approximately 800 seniors were employed (3 percent of all Mat-Su workers), but the proportion of seniors who work is increasing. Between 2003 and 2013, the number of seniors working in the Mat-Su increased by an average of 9.6 percent per year, while the population of seniors increased by 7.4 percent. Seniors also engage in important volunteer and caregiving work valued at approximately $9.8 million in 2014. While unpaid, this work has economic benefits to Alaska. This section discusses the various sources of senior economic impact, including household income, housing expenditures, consumption of goods and services, employment, and uncompensated work.

Components of Economic Contribution

Household Income

The average household income for seniors in the Mat-Su Borough during the period from 2010 to 2014 was $54,904 (+/-$6,087) and the median household income was $46,935 (+/-$3,131).

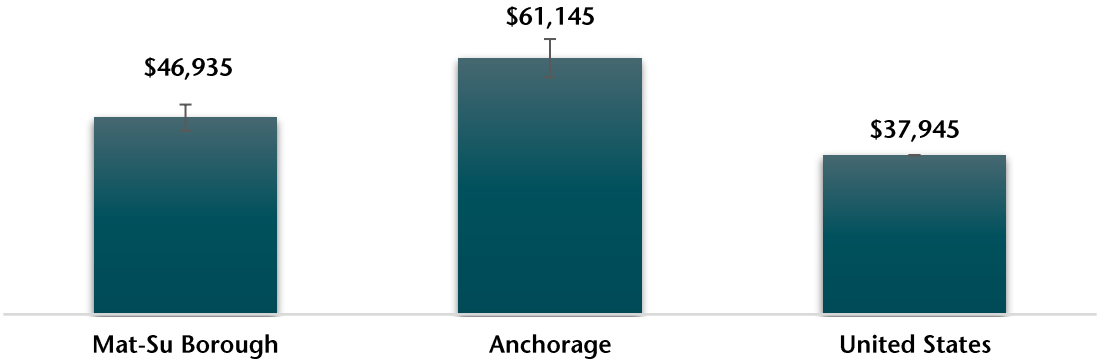
Table 22. Household Income in the Past 12 Months of Householder 65+ Years, by Income Category, and Median Household Income, Mat-Su Borough, 2010-2014 Five-Year Estimates

	Count	Margin of Error	Percent
Householder 65+ years	**4,552**	**+/-196**	
Less than $10,000	166	+/-54	2.8%
$10,000 to $14,999	319	+/-82	5.4%
$15,000 to $19,999	321	+/-75	5.4%
$20,000 to $24,999	371	+/-91	6.3%
$25,000 to $29,999	238	+/-76	4.0%
$30,000 to $34,999	279	+/-72	4.7%
$35,000 to $39,999	275	+/-66	4.6%
$40,000 to $44,999	194	+/-66	3.3%
$45,000 to $49,999	234	+/-71	3.9%
$50,000 to $59,999	352	+/-74	5.9%
$60,000 to $74,999	441	+/-133	7.4%
$75,000 to $99,999	561	+/-103	9.5%
$100,000 to $124,999	253	+/-66	4.3%
$125,000 to $149,999	267	+/-73	4.5%
$150,000 to $199,999	173	+/-58	2.9%
$200,000 or more	108	+/-42	1.8%
Median household income in the past 12 months	**$46,935**	**+/-$3,131**	

Note: 2014 inflation-adjusted dollars.
Source: American Community Survey, 2010-2014 Five-Year Estimates.

Median household income for Mat-Su seniors is 23 percent lower than for Anchorage seniors ($46,935 vs. $61,145, respectively).

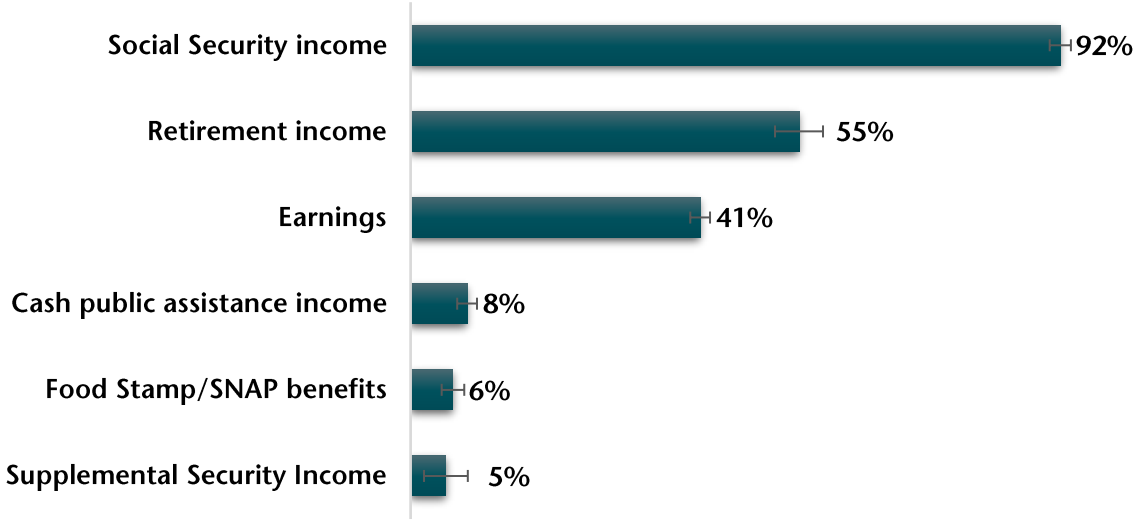
Figure 5. Matanuska-Susitna Borough, Municipality of Anchorage, and U.S. Median Household Income By Age of Householder for Population 65+ Years, 2010-2014 Five-Year Estimates



Source: American Community Survey, 2010-2014 Five-Year Estimates.

Most senior households receive some support from social security (92 percent) and just over half (55 percent) have other retirement income. Eight percent receive income from public assistance, 6 percent receive SNAP (food stamps), and 5 percent receive supplemental security. Forty-one percent of Mat-Su households with a senior also receive a portion of their household income from a wage and salary work (most of which presumably is contributed by other household members under age 65).

Figure 6. Matanuska-Susitna Borough Population 65+ Years Income in the Past 12 Months (2014 Inflation-Adjusted Dollars) by Type, 2010-2014 Five-Year Estimates



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.

The primary component of senior household income is retirement income. The average retirement income is $29,000 (+/-$2,500). The next largest source of household income is social security income (averaging $17,400 (+/-$775)) for each Mat-Su householder age 65+.

Table 23. Matanuska-Susitna Borough Population 65+ Years Income in the Past 12 Months (2014 Inflation-Adjusted Dollars) by Type, 2010-2014 Five-Year Estimates

	Count	Margin of Error
Householder 65+ years	**4,552**	**+/-196**
Average total earnings	$54,904	+/-$6,087
Average Social Security income	$17,428	+/-$775
Average Supplemental Security Income	$7,760	+/-$1,724
Average cash public assistance income	$3,418	+/-$454
Average retirement income	$28,986	+/-$2,496

Note: The individual income categories do not sum to the average total earnings due to survey margin of error calculations.
Source: American Community Survey, 2010-2014 Five-Year Estimates.

The Census Bureau (through the American Community Survey (ACS)) applies thresholds to a family's income to statistically determine its poverty status. This is the most statistically accurate measure of poverty. (*This poverty status differs from the FPL guidelines used to administratively determine if a senior is eligible for Medicaid.*) According to the ACS (2010-2014 Five-Year Estimates), 4 percent of Mat-Su senior householders age 65-74 and 6 percent of householders age 75+ live below the poverty threshold.

Table 24. Matanuska-Susitna Borough Household Income in the Past 12 Months (2014 Inflation-Adjusted Dollars) of Householder 65+ Years at or Below Poverty Thresholds, 2010-2014 Five-Year Estimates

Householders	Count
Income in the past 12 months below poverty threshold	
65 to 74 years	237
75 years and over	166
Income in the past 12 months at or above poverty threshold	
65 to 74 years	5,272
75 years and over	2,455

Source: American Community Survey, 2010-2014 Five-Year Estimates.

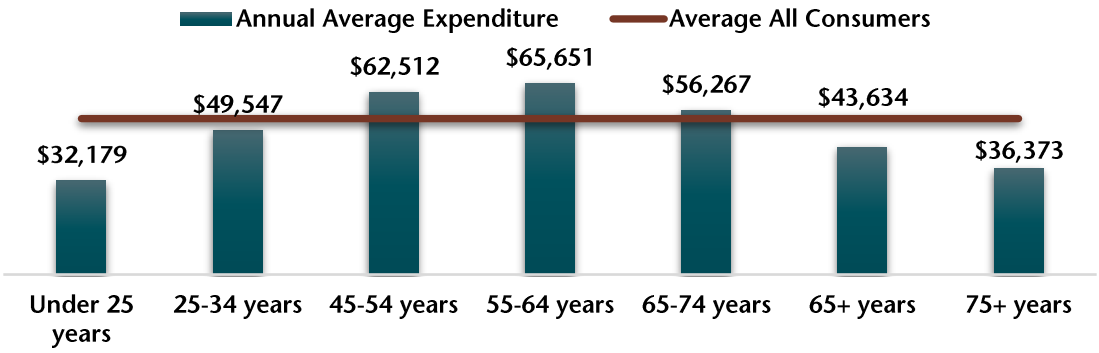
PERMANENT FUND DIVIDEND PAYMENTS

Presuming almost all seniors age 65 were eligible for the 2014 Permanent Fund Dividend (PFD) of $1,884, those dividends amounted to approximately $18.1 million when they were paid in 2015. The PFD was large enough in 2015 to play an important financial role for many senior households (about 4 percent of household income, assuming one PFD eligible senior in a household with a median household income of $46,935).

Consumers of Goods and Services

Seniors wages may be relatively low, but their spending is still roughly equal to that of younger householders. In addition to wages, older adults spend retirement savings and income from Social Security. In the U.S., seniors age 75+ spend 13 percent more than individuals under age 25, but 54 percent less than consumers ages 65-74. The average annual expenditures for all ages was $53,495 per household.

Figure 7. Average U.S. Annual Expenditures by Household, by Age Group, 2013-2014



Source: Consumer Expenditure Survey, U.S. Bureau of Labor Statistics, September 2015.

U.S. seniors spent an average of about 34 percent of their annual expenditures on housing, 16 percent on transportation, 13 percent on health care and 13 percent on food.

Table 25.Average Spending, Age 65+, Western U.S., by Selected Spending Categories, 2013-2014

Year	Annual Average Expenditures	% of Total Annual Average Expenditures
Food	$5,463	12.5%
Housing	$14,779	33.8%
Shelter	$8,005	18.3%
Utilities, Fuels, and Public Services	$3,726	8.5%
Transportation	$6,942	15.9%
Healthcare	$5,849	13.4%
Health insurance	$3,951	9.1%
Medical services	$954	2.2%
Drugs	$721	1.7%
Medical Supplies	$223	0.5%

Note: Based on an annual average expenditure of $43,634 (2014).
Source: Consumer Expenditure Survey, U.S. Bureau of Labor Statistics, September 2015.

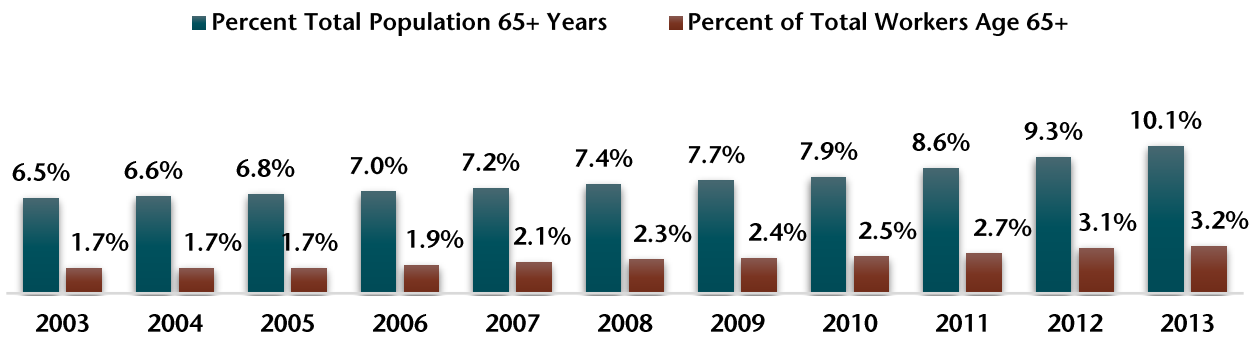
Housing

According to the ACS (2010-2014 Five-Year Estimates), approximately 83 percent of Mat-Su seniors age 65+ own their homes. The estimated median value of these owner-occupied homes is $203,700 (+/-$9,176). The remaining 17 percent of Mat-Su seniors pay a monthly median gross rent of $831. Approximately 20 percent of Mat-Su seniors live alone.

Employment

The older population is not simply growing in number, but in economic contribution as well. As mentioned earlier, seniors are working longer, with their share of the workforce more than doubling since 2003 (from 1.7 percent to 3.2 percent in 2013). Over this same time period, the actual number of age 65+ workers has more than doubled (2.5 times) from 320 workers to 800 workers.

Figure 8. Percent of Total Population Age 65+, and Percent of Resident Workers Age 65+, Mat-Su Borough, 2003-2013



Source: ADOLWD.

Over the past decade, the average number of seniors working in the Mat-Su Borough has grown at an average annual rate 9.6 percent; the average growth rate of seniors is 7.4 percent (see *Population Growth Age 65+* section under the *Socioeconomic Overview* chapter). The higher growth rate for working seniors suggests more seniors are continuing to work past the typical age of retirement (65 years).

Table 26. Alaska Resident Workers Age 65+, Mat-Su Borough, 2003-2013

Year	Number of Workers	Annual Rate of Change
2003	320	
2004	351	9.7%
2005	360	2.6%
2006	412	14.4%
2007	468	13.6%
2008	528	12.8%
2009	559	5.9%
2010	598	7.0%
2011	665	11.2%
2012	756	13.7%
2013	800	5.8%
Annual avg. rate of change 2003-2013		**9.6%**

Source: ADOLWD.

Volunteerism

According to the Bureau of Labor Statistics, 23.6 percent of the U.S. population 65+ volunteered through or for an organization.[2] There is no recent specific data on the Alaska senior volunteer effort. But in 2000, McDowell Group published a study, *Issues Affecting the Economic Well-being of Alaska Seniors.* In that study, a survey of seniors showed about 40 percent of Alaskans over the age of 60 volunteered regularly.

Also, per the Bureau of Labor Statistics, the median annual hours volunteered by seniors 65+ was 93 hours in 2014. These figures suggest approximately 40 percent of Mat-Su seniors (3,850) volunteer 96 hours per year. Using an estimated 2014 hourly wage value for volunteer work in Alaska of $26.59[3], Mat-Su senior volunteers were responsible for approximately $9.8 million per year in personnel services, the equivalent of 178 full-time jobs. These impacts can be felt in local churches, nonprofit organizations, service organizations, schools, community projects, and elsewhere.

Caregiving Grandparents

According to ACS (2010-2014 Five-Year Estimates), there were 1,661 grandparents living with their own grandchildren under age 18 in the Mat-Su Borough. Of these grandparents, 94 were age 60+, were in the labor force and were responsible for their own grandchildren under age 18. Another 141 grandparents cared for their grandchildren, but were not in the labor force.

[2] http://www.bls.gov/news.release/volun.nr0.htm (Accessed November 16, 2015).
[3] http://independentsector.org/volunteer_time

Chapter 4: Mat-Su Senior Health Profile

Summary

This section presents data on the recent health status and health care service utilization of Mat-Su seniors. Additional detailed data (i.e., Medicaid, Medicare, BRFSS, MSRMC Emergency Room, Alaska Trauma Registry) can be found in Appendices D and E.

Mat-Su Senior Health Status

- More than eight out of ten report their health as good, very good, or excellent.
- 67 percent have high blood pressure.
- 65 percent obtained the pneumonia vaccine.
- 44 percent obtained the flu vaccine.
- 29 percent reported weights within an obese range.
- 21 percent had diabetes.
- 11 percent smoked.
- 5 percent drank heavily.
- Averaged about 6 days per month where they experienced poor health due to physical or mental health issues; an average of 4.6 poor physical health days and 1.3 poor mental health days.
- Sustained 561 trauma injuries between 2009 and 2013, at a rate about 3.7 times higher than non-seniors.
- Women sustained a greater number of trauma injuries than men, and had a higher rate of injury.
- Falls caused 461 trauma injuries and accounted for over 80 percent of all trauma injuries.
- 17 trauma injuries resulted in death; falls caused 13 of these fatalities.
- 68 percent of trauma injuries occurred within a senior's own private homes.
- Alcohol and drugs contribute to 3 percent of trauma injuries.
- 97 percent carry medical insurance.
- 4 percent had trouble accessing health care services due to costs or did not have a primary care provider (3 percent).

Mat-Su Senior Health Care Utilization

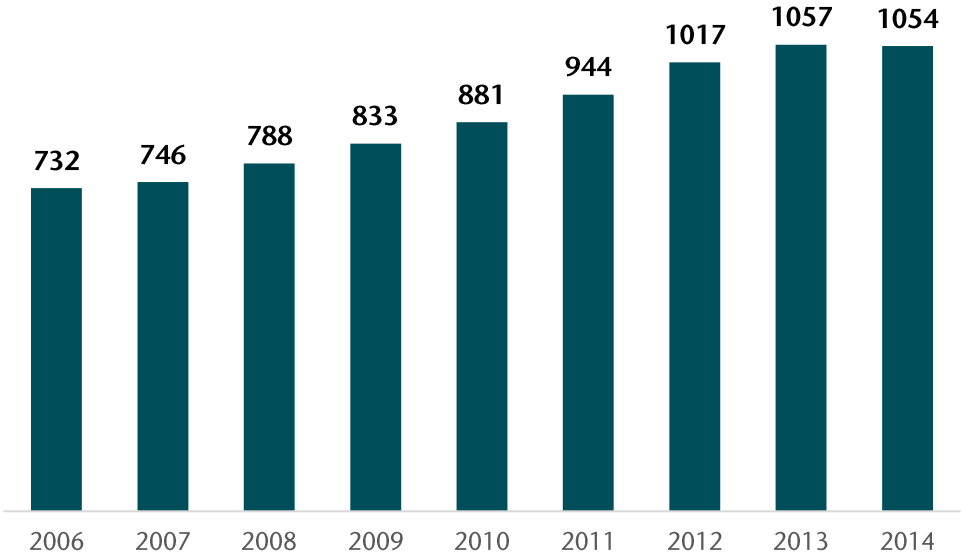
- The number of Medicaid beneficiaries increased by 44 percent (at an annual average rate of 4.7 percent) between 2006 and 2014, from 732 to 1,054. Total Medicaid payments grew by 63 percent during the same time period.
- The top three Medicaid claims – comprising 83 percent of total Medicaid payments – in 2014 were HCBS Waiver Claims, Personal Care Services, and Long Term Care.
- Annual average hospital facility charges for all trauma injuries exceeded $6.5 million; fall injuries resulted in annual average hospital facility charges of over $5 million.
- A total of 2,376 seniors (14 percent of all MSRMC ED patients) made 3,924 visits to the MSRMC ED, an average of 1.7 visits each in 2013.
- In 2013, the average length of ED stay was 3 hours, 5 minutes; median length was 2 hours, 41 minutes.
- In 2013, the average ED charge per visit was $3,606; the average charge per patient was $5,955.
- Visits by seniors accounted for an estimated $14.2 million in ED facility charges in 2013.

Health Status Data

Medicaid Data Profile

The number of Mat-Su senior Medicaid beneficiaries increased by 44 percent between 2006 and 2014, from 732 to 1,054. The number of beneficiaries increased at an annual average rate of 4.7 percent.

Figure 9. Number of Mat-Su Senior Medicaid Beneficiaries, 2006-2014



Source: Alaska DHSS Division of Public Assistance.

Medicaid and State Behavioral Health Services

In the State's Fiscal Year (FY) 2013, 230 Mat-Su seniors received behavioral health services from Alaska Medicaid and Behavioral Health Funds compared to 137 seniors in FY2009, an increase of 68 percent. These seniors represented 4 percent of the total number of Mat-Su persons served in each year. As a percent of the Mat-Su senior population in 2009 and 2013, the total number of seniors served accounts for 2.0 percent and 2.6 percent of the total senior population, respectively.[4]

Table 27. Matanuska-Susitna Borough Total Number of Served with Support from Alaska Medicaid and Behavioral Health Funds by Age, State of Alaska Fiscal Year 2009 & 2013

Age Group	Number Served FY2009	% of Total in FY2009	Number Served in FY2013	% of Total in FY2013	Percent Change Between 2009 & 2013 Number Served
<18	536	16	1,915	33	257
18-20	247	7	368	6	49
21-64	2,391	72	3,246	56	36
65+	137	4	230	4	68
Total	3,311	100	5,759	100	74

Source: Alaska Behavioral Health System Assessment Regional Data Report 2009-2013, Matanuska-Susitna Borough Region.

[4] Using the Alaska Department of Labor and Workforce Development, July 2013 Population Estimate of 8,961 Mat-Su Seniors.

Among the 230 seniors served for behavioral health, 56 percent (129 seniors) received services for treatment of Serious Mental Illness (SMI), 27 percent (61 seniors) for other Mental Health (MH) services, 23 percent (54 seniors) needed treatment for illicit drug or alcohol use in the past year (SUD), 2 percent received services for co-occurring MH and SUD, and 1 percent received services for co-occurring SMI and SUD.

Table 28. Matanuska-Susitna Borough Total Number of Seniors (65+) Served with Support from Alaska Medicaid and Behavioral Health Funds by Diagnosis, State Fiscal Year 2013

Diagnosis	Number Served	% of Total
Serious Mental Illness (SMI)	129	56
Other Mental Health (MH)	61	27
Needed Treatment for Illicit Drug or Alcohol Use in Past Year (SUD)	54	23
Co-Occurring MH and SUD	4	2
Co-Occurring SMI and SUD	3	1
Total	230	100

Source: Alaska Behavioral Health System Assessment Regional Data Report 2009-2013, Matanuska-Susitna Borough Region.

Medicare Data Profile

The table below summarizes Medicare utilization data for beneficiaries living in the Mat-Su Borough, Alaska, and the U.S. For example, in 2012, 61 percent of Mat-Su seniors used imaging services, 40 percent used the Part B drugs program, 50 percent had a physician's procedure, and 15 percent were readmitted into acute hospital care. In every indicator presented below, Mat-Su senior utilization falls below national utilization of Medicare services.

(See table next page.)

Table 29. Summary Table of Medicare Beneficiary Indicators, Mat-Su Borough, Alaska, and United States, 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: Chronic Conditions Warehouse (CCS) (Centers for Medicare & Medicaid Services (CMS)), Medicare Administrative Data (MAD) (Centers for Medicare & Medicaid Services (CMS)), Health Indicators Warehouse (HIW) (www.healthindicators.gov).

The table below (*next page*) indicates which indicators are higher (↑), lower (↓), or about the same (↔) in the Mat-Su, compared to Alaska and the U.S. A calculation was also made to show the rate of difference or rate ratio (anything above 1.0 is higher, everything below 1.0 is lower) between the Mat-Su and Alaska and U.S. to highlight how the Mat-Su Medicare beneficiary utilization differs.

Table 30. Summary Table of Medicare Beneficiary Indicators, Mat-Su Borough, Alaska, and United States, 2012

Indicator	Mat-Su Compared to Alaska	Mat-Su Compared to U.S.	% Difference or Rate Ratio between Mat-Su and Alaska	% Difference or Rate Ratio between Mat-Su and U.S.
Imaging Medicare utilization (percent)	↑	↓	4.1%	-7.1%
Part B drugs Medicare utilization (percent)	↑	↓	3.9%	-11.4%
Physician procedures Medicare utilization (percent)	↑	↓	3.8%	-11.3%
Acute hospital readmissions (percent)	↑	↓	0.1%	-3.4%
Hospice Medicare days (per 1,000 beneficiaries)	↑	↓	1.6	0.4
Hospice Medicare admissions (per 1,000 beneficiaries)	↑	↓	1.5	0.5
Long term care hospital Medicare admissions (per 1,000 beneficiaries)	↑	↓	1.5	0.8
Inpatient rehabilitation facility Medicare admissions (per 1,000 bene.)	↑	↓	1.3	0.4
Durable medical equipment Medicare service events (per 1,000 beneficiaries)	↑	↓	1.3	0.8
Home health Medicare visits (per 1,000 beneficiaries)	↑	↓	1.2	0.3
Inpatient rehabilitation facility Medicare days (per 1,000 beneficiaries)	↑	↓	1.2	0.4
Test Medicare service events (per 1,000 beneficiaries)	↑	↓	1.2	0.7
Physician procedures Medicare service events (per 1,000 beneficiaries)	↑	↓	1.2	0.8
Physician evaluation and management Medicare service events (per 1,000 beneficiaries)	↑	↓	1.1	0.7
Imaging Medicare service events (per 1,000 beneficiaries)	↑	↓	1.1	0.8
Home health Medicare episodes (per 1,000 beneficiaries)	↔	↓	1.0	0.3
Long term care hospital Medicare days (per 1,000 beneficiaries)	↔	↓	1.0	0.7
Hospital inpatient Medicare admissions (per 1,000 beneficiaries)	↔	↓	1.0	0.7
FQHC and Rural Health Clinic visits (per 1,000 beneficiaries)	↔	↓	1.0	0.8
Emergency department visit rate (per 1,000 beneficiaries)	↔	↓	1.0	0.8
Hospital inpatient Medicare days (per 1,000 beneficiaries)	↓	↓	0.9	0.6
Skilled nursing facility Medicare days (per 1,000 beneficiaries)	↓	↓	0.7	0.1
Skilled nursing facility Medicare admissions (per 1,000 beneficiaries)	↓	↓	0.7	0.2
Ambulatory surgical center Medicare service events (per 1,000 bene.)	↓	↓	0.7	0.5
Dialysis Medicare visits (per 1,000 beneficiaries)	↓	↓	0.7	0.5
Hospital outpatient Medicare visits (per 1,000 beneficiaries)	↓	↓	0.7	0.7

Source: Chronic Conditions Warehouse (CCS) (Centers for Medicare & Medicaid Services (CMS)), Medicare Administrative Data (MAD) (Centers for Medicare & Medicaid Services (CMS)), Health Indicators Warehouse (HIW) (www.healthindicators.gov).

Below is a table that summarizes the annual average rate of change (2008-2013) for a number of indicators associated with trends in Medicare spending in the Mat-Su. Comparisons with Alaska and U.S. data are included for context. Compared to Alaska, Mat-Su Senior use is growing faster for FQHC and Rural Health Clinic visits (7.4 percent vs. 3.3 percent), Hospice admissions (4.6 percent vs. 2.1 percent), and home health visits (1.3 percent vs. -4.0 percent). In other cases, Mat-Su utilization runs counter to Alaska as a whole. For example, long term care hospital days decreased 9.9 percent for Mat-Su seniors vs. growth of 2.1 percent for Alaska seniors.

Table 31. Summary Table, Annual Average Rate of Change Comparison, Mat-Su Borough, Alaska, and United States, Percent, 2008-2012

Indicator	Mat-Su %	Alaska %	U.S. %
FQHC and Rural Health Clinic visits (per 1,000 beneficiaries)	7.4	3.3	2.1
Hospice Medicare admissions (per 1,000 beneficiaries)	4.6	2.1	1.5
Part B drugs Medicare utilization (percent)	2.3	2.8	0.0
Home health Medicare visits (per 1,000 beneficiaries)	1.3	-4.0	-1.8
Inpatient rehabilitation facility Medicare days (per 1,000 beneficiaries)	1.1	-2.1	-0.7
Home health Medicare episodes (per 1,000 beneficiaries)	0.7	-2.4	1.2
Inpatient rehabilitation facility Medicare admissions (per 1,000 beneficiaries)	0.0	-5.6	0.0
Test Medicare service events (per 1,000 beneficiaries)	-0.4	-0.7	-0.5
Physician procedures Medicare service events (per 1,000 beneficiaries)	-1.1	0.0	1.0
Physician evaluation and management Medicare service events (per 1,000 beneficiaries)	-1.2	0.1	0.1
Hospice Medicare days (per 1,000 beneficiaries)	-1.6	1.1	2.3
Hospital outpatient Medicare visits (per 1,000 beneficiaries)	-1.6	-0.1	1.7
Acute hospital readmissions (percent)	-1.7	0.2	-0.7
Imaging Medicare service events (per 1,000 beneficiaries)	-1.8	-1.0	-0.6
Durable medical equipment Medicare service events (per 1,000 beneficiaries)	-1.8	-3.6	-0.9
Emergency department visit rate (per 1,000 beneficiaries)	-1.9	-0.2	1.4
Ambulatory surgical center Medicare service events (per 1,000 beneficiaries)	-2.8	-2.6	-2.2
Skilled nursing facility Medicare days (per 1,000 beneficiaries)	-3.3	-4.8	-1.1
Skilled nursing facility Medicare admissions (per 1,000 beneficiaries)	-4.4	-4.1	-1.4
Hospital inpatient Medicare admissions (per 1,000 beneficiaries)	-5.3	-3.0	-2.5
Hospital inpatient Medicare days (per 1,000 beneficiaries)	-5.6	-3.9	-3.2
Long term care hospital Medicare admissions (per 1,000 beneficiaries)	-5.6	-7.8	0.0
Dialysis Medicare visits (per 1,000 beneficiaries)	-6.5	0.5	2.0
Long term care hospital Medicare days (per 1,000 beneficiaries)	-9.9	2.1	0.0

Source: Chronic Conditions Warehouse (CCS) (Centers for Medicare & Medicaid Services (CMS)), Medicare Administrative Data (MAD), CMS, Health Indicators Warehouse (HIW) (www.healthindicators.gov).

This table shows whether trends are increasing – ↑; decreasing -- ↓, or not changing -- ↔ in the Mat-Su, Alaska, and the U.S. over time.

Table 32. Summary Table, Annual Average Rate of Change Comparison, Mat-Su Borough, Alaska, and United States, Percent, 2008-2012

Indicator	Mat-Su	Alaska	U.S.
FQHC and Rural Health Clinic visits (per 1,000 beneficiaries)	↑	↑	↑
Hospice Medicare admissions (per 1,000 beneficiaries)	↑	↑	↑
Part B drugs Medicare utilization (percent)	↑	↑	↔
Home health Medicare episodes (per 1,000 beneficiaries)	↑	↓	↑
Home health Medicare visits (per 1,000 beneficiaries)	↑	↓	↓
Inpatient rehabilitation facility Medicare days (per 1,000 beneficiaries)	↑	↓	↓
Inpatient rehabilitation facility Medicare admissions (per 1,000 beneficiaries)	↔	↓	↔
Dialysis Medicare visits (per 1,000 beneficiaries)	↓	↑	↑
Hospice Medicare days (per 1,000 beneficiaries)	↓	↑	↑
Physician evaluation and management Medicare service events (per 1,000 beneficiaries)	↓	↑	↑
Physician procedures Medicare service events (per 1,000 beneficiaries)	↓	↔	↑
Long term care hospital Medicare days (per 1,000 beneficiaries)	↓	↑	↔
Acute hospital readmissions (percent)	↓	↑	↓
Emergency department visit rate (per 1,000 beneficiaries)	↓	↓	↑
Hospital outpatient Medicare visits (per 1,000 beneficiaries)	↓	↓	↑
Long term care hospital Medicare admissions (per 1,000 beneficiaries)	↓	↓	↔
Imaging Medicare service events (per 1,000 beneficiaries)	↓	↓	↓
Ambulatory surgical center Medicare service events (per 1,000 beneficiaries)	↓	↓	↓
Durable medical equipment Medicare service events (per 1,000 beneficiaries)	↓	↓	↓
Hospital inpatient Medicare admissions (per 1,000 beneficiaries)	↓	↓	↓
Hospital inpatient Medicare days (per 1,000 beneficiaries)	↓	↓	↓
Skilled nursing facility Medicare admissions (per 1,000 beneficiaries)	↓	↓	↓
Skilled nursing facility Medicare days (per 1,000 beneficiaries)	↓	↓	↓
Test Medicare service events (per 1,000 beneficiaries)	↓	↓	↓

Source: Chronic Conditions Warehouse (CCS) (Centers for Medicare & Medicaid Services (CMS)), Medicare Administrative Data (MAD), CMS, Health Indicators Warehouse (HIW) (www.healthindicators.gov).

Behavioral Risks Factor Surveillance Survey Data Profile

According to BRFSS data, a Mat-Su senior is likely to carry medical insurance; consider their health as excellent, very good or good; have high blood pressure; access a usual primary care provider; have received the pneumonia vaccine, experience nearly a week a month of poor physical and/or mental health days; experience about one day a month of poor mental health; rarely have trouble accessing health care services due to cost barriers. A Mat-Su senior is less likely to have received the flu vaccine; be obese; have diabetes, smoke; or drink heavily. The table summarizes health indicators for the Mat-Su, Alaska, and the U.S., as well as provides comparison to Healthy People 2020 goals (a comprehensive set of 10-year national goals and objectives for improving the health of all Americans).

Table 33. Health Indicators and Healthy People 2020 Goals, by Percent and Days
Seniors 65+, Mat-Su, Alaska, and United States, 2013

Indicator	Mat-Su	Alaska	U.S.	Healthy People Goal
By Percentage				
Medical insurance	96.5	97.8	98.7	Not Applicable
General health	83.2	52.4	Not Available	Not Applicable
High blood pressure	67.3	62.2	61.2	Not Applicable
Pneumonia vaccine (2012)	65.0	62.5	68.8	90.0
Flu vaccine	44.1	52.4	62.8	90.0
Obesity	28.6	30.5	26.7	Not Applicable
Diabetes	21.3	17.0	Not Available	Not Applicable
Smoking	10.7	9.9	8.7	Not Applicable
Heavy drinking	4.9	6.6	4.0	Not Applicable
Doctor cost	3.7	6.5	Not Available	Not Applicable
Usual primary care giver	2.7	10.5	Not Available	Not Applicable
By Days				
Physical and mental health	6.0	7.4	Not Available	Not Applicable
Physical health	4.6	5.5	Not Available	Not Applicable
Mental health	1.3	2.2	Not Available	Not Applicable

Note: More detailed data for each indicator (including 95 percent confidence intervals) are available in Appendix D.
Source: BRFSS.

Comparisons

On a whole, Mat-Su seniors' health indicators did not differ greatly from the percentages reported in Alaska and the U.S. – with a few exceptions. In 2013, Mat-Su seniors reported a lower percentage of not having a primary care provider (2.7 percent) compared to seniors statewide (10.5 percent) ($p<.05$). In 2013, Mat-Su seniors reported a higher percentage of having excellent, very good, or good health care (83.2 percent) compared to Alaska's seniors (52.4 percent) ($p<.05$).

When compared nationally, Mat-Su seniors reported a higher percentage of high blood pressure (67.3 percent) compared to 61.2 percent ($p<.05$) in 2013. Mat-Su seniors obtained the flu vaccination at lower rates than the nation - 44.1 percent and 62.8 percent, respectively ($p<.05$) in 2013.

When compared with the nationwide Healthy People Goal of 90.0 percent for the pneumonia and flu vaccination in 2013, Mat-Su seniors reported percentages well below the goal - 65.0 percent and 44.1 percent respectively.

When assessing the trends among Mat-Su seniors, these indicators have not changed statistically over time except for having access to a usual primary care provider. In 2011, 9.2 percent of Mat-Su seniors reported not having a usual primary care provider. This decreased to 2.7 percent in 2013 ($p<.05$). However, caution should be used in assessing this change because of a smaller Mat-Su sample size in 2013.

Table 34. Comparison Symbol Legend

Symbol	Comparison	Trend
√	Indicates there is a statistical difference between the Mat-Su and the area compared, and the Mat-Su percent is better than the comparison percent.	Indicates there is a statistical difference between 2013 and the oldest year of data available, and the trend shows positive improvement for the indicator.
↔	Indicates there is not a statistical difference between the comparisons.	Indicates there is not a statistical difference in the data over time.
X	Indicates a statistical difference between the Mat-Su and the area compared, and the Mat-Su percent is worse than the comparison percent.	Indicates there is a statistical difference between 2013 and the oldest year of data available, and the trend shows a negative direction for the indicator.
-	Indicates the data are not available for this comparison.	Indicates the data for this indicator are not comparable over time.

Table 35. Comparisons Sorted by Mat-Su's Strengths, Weaknesses, and No Difference by Selected Health Indicators

Indicator	Mat-Su Seniors Compared to Alaska Seniors	Mat-Su Seniors Compared to U.S. Seniors	Mat-Su Senior Trend	Mat-Su Seniors Compared to Healthy People Goal
No usual primary care giver	√	-	√	-
General health	√	-	↔	-
High blood pressure	↔	X	-	-
Flu vaccine	↔	X	↔	X
Pneumonia vaccine (2012)	↔	↔	↔	X
Medical insurance	↔	↔	↔	-
Obesity	↔	↔	↔	-
Diabetes	↔	-	↔	-
Smoking	↔	↔	↔	-
Heavy drinking	↔	↔	↔	-
Doctor cost	↔	-	↔	-
Physical and mental health days	↔	-	↔	-
Physical health days	↔	-	↔	-
Mental health days	↔	-	↔	-

Source: BRFSS.

Alaska Trauma Registry

This section analyzes Alaska Trauma Registry (ATR) data covering senior Mat-Su Borough residents between the years of 2009 and 2013, and profiles injuries incurred by Mat-Su Borough seniors (age 65+) with respect to patient gender, whether the injury was intentional or unintentional, injury severity, where the injury occurred, hospital charges, and whether alcohol or drug use was a factor.

The analysis also identifies falls and fatal injuries and their causes and locations. For comparison purposes, statistics are presented for senior residents of the Mat-Su and Alaska. More detailed data by Mat-Su, Anchorage, Rest of Alaska, and statewide, as well as data for non-seniors and seniors can be found in Appendix D.

Characteristics of Senior Trauma Injuries

Number of Injuries and Rate of Injuries per 100,000 Person-years at Risk

The Alaska Trauma Registry shows 561 injuries for Mat-Su seniors between 2009 and 2013, compared to 1,637 for non-seniors. Injuries to seniors occurred at a rate of 1,455 injuries per 100,000 person-years at risk, about 3.7 times higher than for non-seniors (391 injuries per 100,000 person-years at risk). Mat-Su seniors also sustained injuries at slightly higher rates than seniors statewide. Senior injury rates far exceeded those for non-seniors.

Table 36. Injury Counts and Rates, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of Injuries		Rate per 100,000 PY* at Risk
Mat-Su		**% of Total**	
<65	1,637	74%	391
65+	**561**	**26%**	**1,455**
All Ages	2,198	100%	481
All Alaska		**% of Total**	
<65	14,575	78%	441
65+	**4,142**	**22%**	**1,392**
All Ages	18,717	100%	520

* PY indicates Person-years
Source: Alaska Trauma Registry.

GENDER

Female seniors sustained more injuries than male seniors, and at a higher rate, both in Mat-Su and statewide. Mat-Su female seniors had 325 injures at a rate of 1,699 injuries per 100,000 person-years at risk, while Mat-Su male seniors had 236 injures at a rate of 1,214 injuries. The rate of injury for Mat-Su male seniors was higher than the Alaska average, while the rate for Mat-Su female seniors was about the same as the Alaska average.

Table 37. Injury Counts and Rates, by Gender, Seniors 65+, Alaska and Mat-Su, 2009-2013

	Number of All Injuries		Rate per 100,000 PY* at Risk
Mat-Su		**% of Total**	
Male	236	42%	1,214
Female	325	58%	1,699
Total	561	100%	1,455
All Alaska		**% of Total**	
Male	1,576	38%	1,079
Female	2,566	62%	1,694
Total	4,152	100%	1,392

* PY indicates Person-Years
Source: Alaska Trauma Registry.

INJURY INTENT

Between 2009 and 2013, 99 percent (553) of the 561 Mat-Su senior injuries were unintentional. Statewide, unintentional injuries represented a similarly high proportion (98 percent) of the injuries to seniors. The proportion of unintentional injuries was lower (86 percent) for non-seniors.

Table 38. Unintentional Injuries, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of Unintentional Injuries		Number of All Injuries	% of all Injuries that are Unintentional
Mat-Su		**% of Total**		
<65	1,411	72%	1,637	86%
65+	**553**	**28%**	**561**	**99%**
All Ages	1,964	100%	2,198	89%
All Alaska		**% of Total**		
<65	11,207	73%	14,575	77%
65+	**4,056**	**27%**	**4,142**	**98%**
All Ages	15,263	100%	18,717	82%

Source: Alaska Trauma Registry.

INJURY SEVERITY

The Injury Severity Score (ISS) rates the severity of injuries on a number scale between 0 (lowest) and 75 (highest) and correlates positively with mortality, morbidity, and hospitalization time.[5] Non-seniors have a higher proportion of less severe injuries (ISS score between 0-5) compared to seniors. As the ISS increases, the number of non-senior injuries declines significantly. In contrast, the proportion of senior injuries does not decline until the severity score exceeds 10.

Table 39. Injury Percent by Injury Severity Score, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	0-5 (lowest)	6-10	11-20	21-35	36-75 (highest)
Mat-Su					
<65	62%	21%	12%	4%	0%
65+	**48%**	**37%**	**11%**	**3%**	**0%**
All Alaska					
<65	69%	18%	9%	3%	0%
65+	**44%**	**45%**	**9%**	**2%**	**0%**

Note: Due to rounding, some rows may not total 100 percent.
Source: Alaska Trauma Registry.

Literature demonstrates that injuries with an ISS greater than 15 predict a 10 percent mortality rate. These injuries have subsequently been classified as "major traumas."[6] Of the 561 injuries sustained by Mat-Su seniors during the period, 66 (or 12 percent) were major traumas. This percent was the same for Mat-Su non-seniors. Statewide, 8 percent of senior injuries were classified as major traumas, compared to 9 percent for non-seniors.

Table 40. Number of Major Traumas, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of Major Traumas		Number of All Injuries	% Injuries that are Major Traumas
Mat-Su		**% of Total**		
<65	191	74%	1,637	12%
65+	**66**	**26%**	**561**	**12%**
All Ages	257	100%	2,198	12%
All Alaska		**% of Total**		
<65	1,320	79%	14,575	9%
65+	**342**	**21%**	**4,142**	**8%**
All Ages	1,662	100%	18,717	9%

Source: Alaska Trauma Registry.

[5] Palmer C. Major Trauma and the Injury Severity Score - Where Should We Set the Bar? Annual Proceedings / Association for the Advancement of Automotive Medicine. 2007;51:13-29.
[6] Boyd CR, Tolson MA, Copes WS. Evaluating trauma care: the TRISS method. *J Trauma*. 1987;27:370–378.

Injury Location

Senior injuries were more likely to occur within seniors' own homes than in residential institutions or elsewhere. A total of 68 percent of Mat-Su senior injuries occurred in seniors' private homes, 9 percent in a residential institution, and 20 percent elsewhere in the community, with the location not specified for 4 percent of injuries. Statewide proportions show a similar pattern: 63 percent of injuries occurred in seniors' private homes, 8 percent in residential institutions, and 24 percent elsewhere in the community, with the location not specified for 5 percent of injuries. Compared to senior injuries, a smaller proportion of non-senior injuries occurred at home or in a residential institution.

Table 41. Injuries by Injury Location, By Percent, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Home (%)	Residential Institutions (%)	Unspecified (%)	Other (%)	Number of All Injuries
Mat-Su					
<65	42%	1%	12%	46%	1,637
65+	**68%**	**9%**	**4%**	**20%**	**561**
All Alaska					
<65	33%	1%	17%	49%	14,575
65+	**63%**	**8%**	**5%**	**24%**	**4,142**

Note: Due to rounding, some rows may not total 100 percent.
Source: Alaska Trauma Registry.

Injury Hospital Charges

Between 2009 and 2013, hospital charges for trauma injuries to Mat-Su seniors were about $6.5 million annually and more than $32.5 million in total. Median hospital charges per senior injury were $39,137. Median injury charges for seniors exceeded those for non-seniors by more than $12,000. Total charges for seniors typically were higher than charges for non-seniors regardless of the reason for the type of injury. Median hospital charges per injury for Mat-Su seniors was similar to the median charges for seniors statewide.

Table 42. Estimated Hospital Charges, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of All Injuries		Total Charges ($) (All 2009-2013)		Average Annual Total Charges ($)	Median Hospital Charges per Injury ($)
Mat-Su		**% of Total**		**% of Total**		
<65	1,637	74%	$78,686,749	71%	$15,737,350	$26,887
65+	**561**	**26%**	**$32,646,410**	**29%**	**$6,529,282**	**$39,137**
All Ages	2,198	100%	$111,472,659	100%	$22,294,532	$29,256
All Alaska		**% of Total**		**% of Total**		
<65	14,575	78%	$534,247,707	73%	$106,849,541	$25,105
65+	**4,142**	**22%**	**$195,680,465**	**27%**	**$39,136,093**	**$40,111**
All Ages I	18,717	100%	$731,645,695	100%	$146,329,139	$27,911

Note: The total charges for all ages are estimated for the total population; they are not the sum of the <age 65 and 65+ age groups.
Source: Alaska Trauma Registry.

ALCOHOL-RELATED INJURIES

Injuries were considered alcohol-related if a blood or breathalyzer test was positive for alcohol or if a physician indicated alcohol use in the written-notes section of the trauma entry. Alcohol played a minor role in senior injuries and was much more prevalent in non-senior injuries. There were 16 documented alcohol-related injuries to Mat-Su seniors, 3 percent of all injuries to Mat-Su seniors. Statewide, there were 250 documented alcohol-related injuries to seniors, 6 percent of all injuries to seniors.

Table 43. Alcohol Injury Counts, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of Alcohol-Related Injuries		Number of All Injuries	% of All Injuries Alcohol-Related
Mat-Su		**% of Total**		
<65	273	94%	1,637	17%
65+	**16**	**6%**	**561**	**3**
All Ages	289	100%	2,198	13
All Alaska		**% of Total**		
<65	4,046	94%	14,575	28
65+	**250**	**6%**	**4,142**	**6**
All Ages	4,296	100%	18,717	23

Source: Alaska Trauma Registry.

DRUG-RELATED INJURIES

Injuries were considered drug-related if lab tests were positive for drugs or if a physician indicated drug use in the written-notes section of the trauma entry. Like alcohol, drugs played a minor role in senior injuries and were more prevalent in non-senior injuries. There were 20 documented drug-related injuries to Mat-Su seniors, 4 percent of all injuries to Mat-Su seniors.

Table 44. Drug Injury Counts, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of Drug-Related Injuries		Number of All Injuries	% of All Injuries Drug-Related
Mat-Su		**% of Total**		
<65	263	93%	1,637	16%
65+	**20**	**7%**	**561**	**4**
All Ages	283	100%	2,198	13
All Alaska		**% of Total**		
<65	2,530	97%	14,575	17
65+	**80**	**3%**	**4,142**	**2**
All Ages	2,610	100%	18,717	14

Source: Alaska Trauma Registry.

ALCOHOL AND/OR DRUG-RELATED INJURIES

Some injuries were related not just to alcohol or drugs, but to both. To avoid double counting these injuries, injuries that were related to alcohol, drugs, or both were summed. There were 34 injuries to Mat-Su seniors related to alcohol, drugs, or both, representing 6 percent of all injuries to Mat-Su seniors. Only 2 injuries to Mat-Su seniors involved both alcohol and drugs; the rest of the injuries were related to just alcohol or just drugs.

Table 45. Alcohol and/or Drug Injury Counts, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of Alcohol and/or Drug-Related Injuries		Number of All Injuries	% of All Injuries Alcohol and/or Drug-Related
Mat-Su		**% of Total**		
<65	422	93%	1,637	26%
65+	**34**	**7**	**561**	**6**
All Ages	456	100	2,198	21
All Alaska				
<65	5,245	94	14,575	36
65+	**311**	**6**	**4,142**	**8**
All Ages	5,556	100	18,717	30

Source: Alaska Trauma Registry.

CAUSE OF INJURY

Only two categories of injury caused 10 or more injuries to Mat-Su seniors: falls and motor vehicle traffic accidents. Injuries are categorized as vehicle traffic injuries whether the injured person was struck by a vehicle or an occupant in the vehicle.

Table 46. Injuries by Injury Cause, Mat-Su Seniors 65+, 2009-2013

	Number of Injuries	% of All Injuries
Falls	461	82%
Motor Vehicle Traffic	31	6%
Other*	69	12%
Total	**561**	**100%**

* indicates other causes in which fewer than nine injuries occurred in any other category of injury.
Source: Alaska Trauma Registry.

Falls

Falls caused most of the trauma injuries to seniors – 82 percent of injuries to Mat-Su seniors both in Mat-Su (461 injuries) and statewide (3,402). The rate per 100,000 person-years at risk is more than nine times higher for Mat-Su seniors than it is for younger Mat-Su residents (1,195 compared to 130).

Table 47. Injuries Caused by Falls, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of Fall Injuries	Number of All Injuries	% of All Injuries Fall-Related	Rate per 100,000 PY* at Risk
Mat-Su				
<65	542	1,637	33%	130
65+	**461**	**561**	**82%**	**1,195**
All Ages	1,003	2,198	46%	220
All Alaska				
<65	4,703	14,575	32%	142
65+	**3,405**	**4,142**	**82%**	**1,145**
All Ages	8,108	18,717	43%	**225**

* PY indicates Person-Years
Source: Alaska Trauma Registry.

Fall Location

The majority (74 percent) of Mat-Su senior falls occurred within the senior's home, followed by 10 percent of falls occurring in public buildings, and 7 percent in residential institutions. Location of the remaining falls (10 percent) was either unspecified or scattered across a variety of categories.

Table 48. Location of Fall Occurrence, by Percent, Seniors 65+, Alaska and Mat-Su, 2009-2013

	Home	Public Building	Residential Institution	Unspecified or Other
Percent				
Mat-Su	74%	10%	7%	10%
All Alaska	**69%**	**9%**	**8%**	**14%**
Number				
Mat-Su	341	44	30	46
All Alaska	**2,344**	**299**	**288**	**474**

Note: Due to rounding, some rows may not total 100 percent.
Source: Alaska Trauma Registry.

Fall Hospital Charges

A total 461 fall injuries to Mat-Su seniors during the period resulted in an estimated $26.3 million in hospital charges, or average annual charges of $5.4 million. Median charges of fall injuries to Mat-Su seniors were $41,279. Across the state, senior fall injuries resulted in an estimated $166.5 million in hospital charges, average annual charges of $33.3 million, and median charges of $34,043 per fall injury.

Table 49. Estimated Hospital Charges Due to Fall injuries, Seniors 65+, Alaska and Mat-Su, 2009-2013

	Number of Fall Injuries	Total Charges	Average Annual Total Charges	Median Hospital Charges per Fall
Mat-Su	461	$26,219,227	$5,243,845	$41,279
All Alaska	**3,405**	**163,847,965**	**32,769,593**	**34,043**

Source: Alaska Trauma Registry.

Motor Vehicle Traffic Accidents

Motor vehicle traffic accidents caused 31 injuries to Mat-Su seniors (6 percent) and 175 injuries to seniors statewide (4 percent). While the overall number of injuries due to motor vehicle traffic was higher for Mat-Su residents under age 65, the rate per 100,000 person-years at risk was 1.6 times higher for seniors.

Table 50. Injuries Caused by Motor Vehicle Traffic, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of Motor Vehicle Traffic Injuries		% All Injuries Motor Vehicle-Related	Rate per 100,000 PY* at Risk
Mat-Su				
<65	203	1,637	12%	49
65+	**31**	**561**	**6%**	**80**
All Ages	234	2,198	11%	51
All Alaska				
<65	1,181	14,575	8%	36
65+	**175**	**4,142**	**4%**	**59**
All Ages	1,356	18,717	7%	38

* PY indicates Person-Years
Source: Alaska Trauma Registry.

Characteristics of Senior Fatalities

Seniors died from trauma injuries at a much higher rate than non-seniors. Between 2009 and 2013, 17 Mat-Su seniors died from a trauma injury at a rate of 22 fatalities per 100,000 person-years at risk; whereas 31 Mat-Su non-seniors died at a rate of 3 fatalities per 100,000 person-years at risk. The rate for Mat-Su seniors exceeded that of Mat-Su non-seniors by a factor of almost ten.

The injury fatality rate for Mat-Su seniors was lower than, but similar to, the statewide rate of 24 fatalities per 100,000 person-years at risk.

Table 51. Senior Counts and Rates for Fatalities from Injury, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of Fatalities from Injury	Rate per 100,000 PY* at Risk
Mat-Su		
<65	31	3
65+	**17**	**22**
All Ages	48	4
All Alaska		
<65	284	3
65+	**177**	**24**
All Ages	461	4

* PY indicates Person-Years
Source: Alaska Trauma Registry.

FATAL INJURY LOCATION

Between 2009 and 2013, 17 injuries to Mat-Su seniors resulted in death. This total is small enough that percentages of the total may be misrepresentative. Therefore, counts, rather than percentages, are presented. Of the 17 fatal injuries to seniors in Mat-Su between 2009 and 2013, 9 occurred in a senior's home, 4 in a residential institution, and 4 elsewhere in the community. Statewide, 66 percent of fatal trauma injuries to Alaska seniors occurred in the home, 8 percent in residential institutions, and 25 percent elsewhere.

Table 52. Total Fatalities by Injury Location, By Percent, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Home (%)	Residential Institutions (%)	Unspecified (%)	Other (%)	Number of All Fatalities
Mat-Su					
<65	29%	3%	3%	65%	31
65+	**53%**	**24%**	**0%**	**24%**	**17**
All Alaska					
<65	34%	3%	5%	58%	284
65+	**66%**	**8%**	**1%**	**25%**	**177**

Source: Alaska Trauma Registry.

Table 53. Total Fatalities by Injury Location, By Count, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Home	Residential Institutions	Unspecified	Other	Number of All Fatalities
Mat-Su					
<65	9	1	1	20	31
65+	**9**	**4**	**0**	**4**	**17**
All Ages	18	5	1	24	48
All Alaska					
<65	97	8	13	166	284
65+	**116**	**15**	**2**	**44**	**177**
All Ages	213	23	15	210	461

Source: Alaska Trauma Registry.

FATAL INJURY CAUSE

Falls caused the greatest number of fatal injuries to Mat-Su and Alaska seniors. For Mat-Su seniors, 13 of the 17 fatal injuries resulted from falls. Statewide, 76 percent of fatal senior injuries resulted from falls. Fall injuries were more likely to be fatal for seniors than for non-seniors.

Motor vehicle traffic injuries accounted for the next highest number of fatal injuries to Mat-Su and Alaska seniors. Between 2009 and 2013, there were 3 motor vehicle fatalities to seniors in Mat-Su, and 19 statewide. Motor vehicle traffic injuries were a more prominent contributor to fatality with non-seniors than with seniors in Mat-Su and statewide.

Table 54. Fatalities by Injury Cause, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Fall Fatalities		Motor Vehicle Fatalities		Other Fatalities		
	Number of Fatalities	% of all Fatalities	Number of Fatalities	% of all Fatalities	Number of Fatalities	% of all Fatalities	Total Fatalities
Mat-Su							
<65	4	13%	14	45%	13	42%	31
65+	**13**	**76%**	**3**	**18%**	**1**	6%	**17**
All Ages	17	35%	17	35%	4	29%	48
All Alaska							
<65	41	14%	68	24%	175	62%	284
65+	**135**	**76%**	**19**	**11%**	23	13%	**177**
All Ages	176	38%	87	19%	198	43%	461

Source: Alaska Trauma Registry.

Fall Fatalities

Fall injuries were about four times more likely to result in death for seniors than for non-seniors living in the Mat-Su, and throughout Alaska.

Table 55. Fall Counts and Deaths, Seniors 65+ and Non-Seniors (<65), Alaska and Mat-Su, 2009-2013

	Number of Fall Injuries	Fall Rate per 100,000 PY* at Risk	Number of Fall Fatalities	% Falls Resulting in Death	Number of All Injury Fatalities	Fall Fatalities as % of All Injury Fatalities
Mat-Su						
<65	542	130	4	0.7%	31	13%
65+	**461**	**1,195**	**13**	**2.8%**	**17**	**76%**
All Ages	1,003	220	17	1.7%	48	35%
All Alaska						
<65	4,703	142	41	0.9%	284	14%
65+	**3,405**	**1,145**	**135**	**4.0%**	**177**	**76%**
All Ages	8,108	225	176	2.2%	461	38%

* PY indicates Person-Years
Source: Alaska Trauma Registry.

Profile of Senior Utilization for the MSRMC ED[7]

To better understand the characteristics of seniors and their MSRMC ED and Mat-Su Region Urgent Care (MSR UC) visits, both as a group and relative to the ED/UC patient population overall, 2013 MSRMC ED and MSR UC visit data was analyzed. A detailed analysis is found in Appendix E.

Senior ED Visits

- A total of 2,376 seniors represented 14 percent of all MSRMC ED patients.
- Those senior patients made a total of 3,924 visits to the MSRMC ED, an average of 1.7 visits each in 2013.
- July was the busiest month (364 visits) and February was the slowest month (275 visits) for senior use of the MSRMC ED.
- Weekdays saw an average of 11 visits per day by seniors, weekends 10 seniors per day, and holidays 9 visits per day.
- The busiest hour for senior ED services was 1:00-2:00 pm. That period accounted for about seven times as many visits as the least busy time, 5:00-6:00 am.
- The average length of ED stay for a senior was 3 hours, 5 minutes; the median length was 2 hours, 41 minutes.
- The average ED charge for a senior visit was $3,606, a total of $5,955 for each senior who used the ED that year. In all, visits by seniors accounted for an estimated $14.2 million in ED facility charges.

Discharge Disposition

- Seniors were discharged home after 61 percent of their ED visits.
- 35 percent of the visits resulted in an admission to MSRMC. Older patients (85+) had the highest likelihood of admission at 46 percent.
- The remaining 4 percent of seniors were transferred to another facility.

Bounce Backs

- Bounce backs occur when a patient returns to the ED for additional care within a relatively short period of time.
- Twenty-three percent of seniors age 85+ returned to the ED within 30 days of a previous (or initial) visit compared to 16 percent of seniors age 65-84. The overall bounceback for all MSRMC ED patients (all ages) was 13 percent.

[7] A separate analysis conducted by McDowell Group for the Mat-Su Health Foundation in October 2015, entitled *An Analysis of Senior Use of the Mat-Su Regional Medical Center Emergency Department and the Mat-Su Regional Urgent Car*e is summarized in this section.

Medicare Coverage

- Medicare is the primary insurance coverage for 82 percent of seniors visiting the MSRMC ED.
- The average annual estimated ED facility charge for seniors with Medicare as their primary insurance was $3,444 per visit (or $5,742 per patient).
- ED facility charges billed to Medicare totaled an estimated $11.2 million, approximately 79 percent of all ED facility charges for visits by seniors.

Top Primary Diagnoses and Admission

- The ten most common primary diagnoses made during senior ED visits accounted for 31 percent of all senior visits.
- Forty-three percent of admissions for seniors 65+ are associated with ten primary diagnostic groups The top three diagnostic groups (septicemia, pneumonia, and congestive heart failure) account for 1 in 6 senior admissions (17.2 percent of all senior admissions).
- Urinary Tract Infections and Pneumonia are both considered preventable hospitalizations.

Table 56. Rank of Leading Primary Diagnoses, Seniors 65+
Comparison of Percentage of MSRMC ED Visits and Admissions, 2013

Rank by Number of Visits	Primary Diagnosis Visits	Number of MSRMC ED Visits	Rank by Number of Admissions	Primary Diagnosis Admissions	Number of MSRMC ED Admissions
1	Non-Specific Chest Pains	118	**1**	Septicemia	89
2	Chronic obstructive pulmonary disease and bronchiectasis (COPD)	149	**2**	Pneumonia	76
-	Urinary Tract Infections	149	**3**	Congestive heart failure, non-hypertensive	72
3	Cardia Dysrhythmias	130	**4**	COPD	67
4	Other Nervous System Disorders	117	**5**	Cardia Dysrhythmias	62
5	Pneumonia	114			

- The proportion of seniors who are admitted to MSRMC after their ED visit for treatment of their primary diagnosis is disproportionally higher than other age groups. For example, as seen in the table below, seniors make up 25 percent of all the visits where a urinary tract infection is the primary diagnosis, yet represent 69 percent of all admissions for the same condition.

Table 57. Leading Primary Diagnoses, Seniors 65+
Comparison of Percentage of MSRMC ED Visits and Admissions, 2013

Primary Diagnosis	% Senior Visits of All MSMRC ED Visits with Same Primary Diagnosis	% Senior Admissions of All MSMRC ED Admissions from All ED Visits with Same Primary Diagnosis
Non-Specific Chest Pains	22%	39%
COPD	46	65
Urinary Tract Infections	25	69
Cardia Dysrhythmias	36	63
Other Nervous System Disorders	12	52
Pneumonia	35	58

Source: MSRMC ED Dataset, 2013.

Falls and Trauma

- In 2013, a fall was diagnosed during 388 senior visits to the ED, representing 10 percent of all senior visits to the MSRMC ED. There were 635 senior visits with a trauma injury as a primary diagnosis, representing 16 percent of all senior visits.
- Most falls are considered trauma injuries. In 2013, 339 senior visits to the MSRMC ED had both a trauma injury (primary or subsequent diagnoses) and a fall diagnosis. Of all ED senior fall visits, 87 percent also had a trauma injury diagnosis (primary or subsequent).
- Due to coding practices, falls and trauma injuries are not typically compared to other diagnoses types. However, if compared, falls and trauma injuries led to considerably more ED visits than any other diagnosis in 2013.
- Senior visits with a fall resulted in $1.4 million in estimated ED facility charges, while those with a trauma injury (primary or subsequent diagnosis) resulted in estimated ED charges of $2.6 million.

Behavioral Health Diagnosis

- 16 percent of seniors who visited the ED (374 patients) were diagnosed with a behavioral health (BH) disorder (primary or subsequent diagnoses); 26 percent of seniors age 85+ received a BH diagnosis.
- BH diagnoses were associated with 26 percent of all MSRMC ED visits by seniors in 2013 (1,020 visits).
- On average, seniors with a BH diagnosis went to the ED 2.7 times in 2013; seniors with no BH diagnosis averaged 1.5 visits.
- The five most common primary BH diagnoses made during an ED visit were:

    1. Anxiety disorder
    2. Delirium, dementia, and amnestic & other cognitive disorders
    3. Alcohol-related disorders

4. Schizophrenia/psychotic disorders
5. Suicide/self-inflicted injuries

High-Utilizers (5 or more Annual ED Visits)

- A total of 99 senior high-utilizers represented 4 percent of all senior patients and accounted for 645, or 16 percent, of all senior visits.
- 17 percent of senior ED patients are high-utilizers, compared to 14 percent of ED patients overall.
- Of the 99 seniors who visited the ED five or more times in 2013, 62 percent had a BH diagnosis.

Profile of Senior Utilization for MSR UC

- 894 seniors 65+ visited the MSR UC in 2013, representing 8 percent of all MSR UC patients.
    - Ten percent of all Mat-Su Borough seniors visited the MSR UC in 2013.
- Overall, 53 percent of the senior patients were female; however, of patients 85+, 64 percent were female.
- 29 percent of seniors 65+ who visited the MRC UC also visited the MSRMC ED. A total of 263 seniors used both facilities.
- The busiest day of the week at the MSR UC for senior visits was Monday.

Chapter 5: Existing Senior Services Infrastructure

This inventory of existing senior services infrastructure contains excerpts from *Wasilla Area Seniors, Inc. (WASI) Continuing Care Feasibility Study,* prepared by Agnew::Beck and Northern Economics (June 2015). Additional provider details, based on a provider survey conducted by Agnew::Beck in the fall of 2014, may be found in Appendix C. It is important to note that this inventory indicates what service is available; it does not assess whether there is adequate access to these services.

Senior Housing

There are 12 senior housing providers in the Mat-Su Borough, with 23 senior housing developments containing a total of 467 units. Forty-four of those units are part of the Primrose Retirement Community Campus and are co-located with assisted living. The current waitlist of 513 is greater than the number of units that have been built in the Mat-Su Borough, although an individual may be listed on multiple waitlists concurrently.

Table 58. Senior Housing, Mat-Su Borough

Location	Units	Waitlist
Wasilla	296	315
Palmer	83	168
Houston	18	30
Talkeetna	6	0
Willow	12	0
Sutton	8	0
Total	467	513

Senior independent housing is a broad category that encompasses several types of living arrangements. On one end of the residential continuum, senior independent housing is age-restricted housing for people over a certain age, typically age 55 or age 60 (residents at WASI must be at least age 62). Often some, or all, of the independent senior housing units in a community are designated as affordable for seniors who are low-income.

Senior housing can cost between $545 and $2,800 per month in Alaska, depending on income, level of service and amenities provided. In some instances, senior independent housing includes additional services often for a fee, such as housekeeping, some transportation, some meals, and community activities. However, the services provided do not typically include personal care, chore service, all meals, or other types of assistance with activities of daily living, although a senior may opt to live in a senior independent housing unit and hire a personal care assistant or may receive services through a Medicaid waiver.

Retirement communities also fall into the senior independent housing category and attract seniors interested in living in a residential setting with amenities such as recreation and community activities. For example, Primrose Retirement Community in Wasilla has 56 units of assisted living and 44 units of independent housing and considers itself a retirement community.

Senior Centers/Elder Programs

As of June 2015, there are four senior centers in the Mat-Su Borough, one in Wasilla, Talkeetna, Palmer and Chickaloon (the Houston Senior Center closed on May 12, 2015). The Mat-Su Health Foundation, in collaboration with the senior centers, recently conducted a study to identify ways to decrease overlap and improve service delivery of the senior center system as a whole. The table below shows the types of services provided by each senior center.

While not a senior center, another regular gathering of seniors in the Mat-Su Borough occurs through the Seniors Circle. Offered at Mat-Su Regional Medical Center, Senior Circle is a membership program for individuals age 50+ who are interested in pursuing an active lifestyle, learning about health and wellness, and meeting others. Membership benefits include: physician-led health seminars, social engagements, education programs, volunteer opportunities, entertainment events and activities, free meal for spouse or caregiver each day member is hospitalized, and discounts for prescriptions, hearing care, vision care, dental care, personal emergency response unit, and car rentals.

Table 59. Senior Centers/Elder Programs, Mat-Su Borough

Name	Operator	Location	Info+ Referral	Meals	Adult Day Services	Housing	Chore Services	Respite	Senior Employment Services	Health Promotion/Disease Prevention	Socialization	Transportation
Wasilla Area Senior Center	Wasilla Area Seniors Inc.	Wasilla	X	X		X	X	X		X	X	X
Upper Susitna Senior and Civic Center	USSI, Inc.	Talkeetna		X		X				X	X	
Palmer Senior Citizens Center	Mat-Su Senior Services	Palmer	X	X	X	X	X	X	X	X	X	X
Chickaloon Village Traditional Council Elder Outreach Program	Chickaloon Village Traditional Council	Chickaloon	X	X			X			X	X	X

Source: Mat-Su Regional Plan for Delivery of Senior Services - by the McDowell Group in association with Health Dimensions Group, 2011; www.uppersuseniors.org

Transportation

There are eight transportation providers for seniors. Five are located in Wasilla, one is based in Palmer, one in Talkeetna and one in Chickaloon. Transportation options fall into three categories:

1. **Demand response** – Users must call ahead to pre-schedule a pick-up. Sometimes this service is limited to medical appointments or senior service related destinations, especially when the Medicaid waiver is the payment source.
2. **Flexible fixed routes** – Users can flag stop or pre-schedule deviations within a certain distance of a fixed route.
3. **Fixed routes** – Buses travel on a fixed route with fixed stops and times. Some are senior oriented and others are not.

Mat-Su Community Transit provides public bus transportation services within Knik, Palmer and Wasilla and limited service in Big Lake and Meadow Lakes areas, along a designated bus route. Redi Rides and Mat-Su Senior Services are also transportation options for WASI residents, if they need transport to medical appointments. Valley Mover offers transportation between Wasilla and Anchorage for people of all ages, though routes are limited.

Table 60. Transit Providers, Mat-Su Borough

Name	Geography Served	Type	Payment
Mat-Su Community Transit (MASCOT)	Knik, Palmer, Wasilla	Fixed route, Flexible fixed route, Demand response	Private pay, Medicaid waiver, senior discount
Redi Rides of Alaska	Wasilla	Demand response	Exclusively Medicaid waiver
Mat-Su Senior Services	Mat-Su Borough	Demand response for medical appointments and transportation to senior center and adult day; Scheduled "field trips" to recreation outings, grocery, hair dresser, etc.	Medicaid waiver, donation
Wasilla Area Seniors Inc. (WASI)	Wasilla	Demand response	Medicaid waiver, donation
Valley Mover	Meadow Lakes-Wasilla to Anchorage	Fixed route	Private pay
Chickaloon Area Transit System	Chickaloon, Sutton, Palmer	Demand response	Private pay, Senior discount
Sunshine Community Transit	Talkeetna, Willow, Trapper Creek, Wasilla	Fixed route, Flexible fixed route	Senior discount, regular Medicaid, private pay
Wasilla Retirement LLC (Primrose)	Wasilla	Demand response, limited to residents only	As part of monthly rate

In-Home Services

There are 64 providers that supply in-home services in the Mat-Su Borough.[8] In-home services include the following:

- **Care coordination** – to guide a plan of care and coordinate services and billing (47 providers).
- **Chore service and respite –** to provide support for ancillary activities in the home that support independence such as light cleaning, shopping and providing a break for unpaid caregivers (17 providers).
- **Personal care assistance (PCA) –** to provide help with activities of daily living in the home, primarily related to physical needs like eating, bathing and toileting (10 providers).
- **Home health** – to provide medical care in the home (1 provider).
- **Hospice** – to provide in-home end of life care (1 provider).

Providers offer a combination of services, and the majority accept Medicaid. Care coordinators can work as self-employed individuals or as part of an agency. Providers that offer chore and respite services often also offer PCA services. See Appendix C for the full list of providers.

Without in-home services, people might require care in an assisted living home or skilled nursing. In-home services are often complemented by community-based services such as activities and meals provided by a senior center, transportation, and adult day programs. Assistance at lower levels of care, such as chore and transportation, can prevent or delay seniors from ending up in costlier institutional settings like hospitals and nursing homes. Care coordinators help individuals and caregivers access necessary services to maintain independence and receive the right level of care.

Market rates for PCA and chore service range from $10 to $25 dollars per hour, depending on the provider. The majority of Mat-Su providers accept the Medicaid waiver. The Medicaid rate for PCA is $24.40 per hour, and the rate for chore service under the Medicaid waiver is $26.80 per hour (rates are billed in 15 minute increments).

Alaska's Home and Community-Based Medicaid Waivers

Alaska's home and community based Medicaid waiver program provides a choice of home and community-based services rather than institutional services for individuals who are Medicaid eligible and also meet a nursing facility level of care or an intermediate care facility for intellectual or developmental disability level of care in the case of the Intellectual & Developmental Disabilities waiver. Alaska currently manages four waiver programs. These include the Alaskans Living Independently (ALI) waiver for adults age 21 and older, the Adults with Physical and Developmental Disability (APDD) waiver for people age 21 and over who are developmentally and physically disabled, and the Children with Complex Medical Conditions (CCMC) waiver for those under the age of 22 who experience medical fragility, may be dependent on frequent life-saving treatments or interventions and/or are dependent on medical technology. The Intellectual & Developmental Disabilities (IDD) waiver is for individuals with one or more of the following five qualifying diagnoses: intellectual disability, other intellectual disability-related condition, Cerebral Palsy, Epilepsy, and Autism.

[8] SDS Provider list downloaded October 2014.

Services provided through Alaska's Medicaid waivers include respite care, chore, residential living, care coordination, environmental modifications, community inclusion supports, and various other services. Services are accessed through a State-certified care coordinator who conducts a person-centered planning process with the participant receiving services and creates an individualized plan of care. The plan of care specifies the services to be provided including the scope, frequency, duration and the provider(s). In Alaska, the care coordinator must be "conflict free" (see below).

Conflict Free Care Coordination

On July 1, 2016 all Medicaid waiver care coordinators were required to be "conflict free." This means that care coordinators must not be affiliated with an agency that provides home and community-based services (HCBS) including Medicaid waiver services and Personal Care Assistance (PCA) services. This requirement was implemented in a shortened timeframe throughout late 2014 and 2015, causing significant turmoil in the HCBS system as organizations that once housed both care coordinators and services divested themselves of their care coordinators or their services. In other cases, new organizations or sole proprietorships were formed to employ the newly conflict free and unemployed care coordinators. Many experienced care coordinators left the field altogether, yet in other cases new care coordinators entered the field. The intent of the conflict free care coordination rules is to maximize participant choice in service providers and eliminate self-referral by care coordinators who work for service providers.

Aging and Disability Resource Center (ADRC) and ADRC First Prescreen Program

ADRCs serve to connect seniors, people with disabilities, and caregivers to the long-term services and supports they need. ADRCs provide services statewide to Alaskans regardless of age or income status, through several regional offices. ADRCs are intended to be a conflict-free, trusted resource providing options counseling regarding long-term services and supports, assisting people with accessing the supports they choose and in some cases short-term case management or crisis support to prevent institutionalization.

The ADRC First Prescreen program began in December 2013 on the Kenai Peninsula and is expanding statewide in January 2017. Through the ADRC First Prescreen program, ADRCs prescreen individuals to understand their unique long-term services and supports needs, and provide options counseling that assists in identifying all available options for the individual including Medicaid services, grant services and other community programs or supports. This ADRC First prescreening is required before an individual can access Medicaid-funded long-term services and supports through the Adults Living Independently (ALI) and Adults with Physical and Developmental Disabilities (APDD) Medicaid waiver programs. The ADRCs will discuss all outcomes of the prescreen and options counseling, providing conflict free information about services, including care coordination to access waiver services if the person chooses to access Medicaid supports.

Dementia Care

The Alaska Roadmap to Address Alzheimer's Disease and Related Dementias (ADRD) estimates there were 1,155 seniors in the Mat-Su Borough in 2014 who are living with dementia. This number is expected to grow to 2,468 by 2030. In 2014, these people were primarily cared for in their homes by an estimated 5,600 family caregivers.

Alzheimer's Resource of Alaska (aka Alzheimer's Disease Resource Agency of Alaska) provides services through its Education and Care Coordination Programs for seniors and others experiencing ADRD, and their family caregivers throughout the borough. Other community-based organizations in the Mat-Su, including but not limited to, Mat-Su Senior Services, Wasilla Area Seniors, Inc., the Alaska Veterans and Palmer Pioneer Home, Hearts and Hands, and multiple Personal Care Attendant agencies provide long-term services and supports for people with ADRD in concert with Alzheimer's Resource of Alaska's care coordination and education programs.

ADRD are difficult and challenging diseases to live with for both the individual and the family caregiver, especially as they progress over time. With evidence-based training, accurate and current information, as well as individualized support and coaching, these family caregivers can ensure a high quality of life for their loved one and for themselves. People who have Alzheimer's live an average of 4 – 8 years after diagnosis and continue to enjoy life with proper support. Seniors diagnosed with dementia are supported through regular programming for those with early memory loss, art-based reminiscence activity and private consultations through Alzheimer's Resource of Alaska's Mat-Su office.

Respite services are available through Mat-Su Senior Services, Wasilla Area Seniors, Inc., and many Personal Care Attendant agencies to provide support for the caregiver. Adult day services are available in three locations in the Matanuska-Susitna Borough. The Big Lake and Palmer locations are offered through the Mat-Su Senior Services and the Wasilla location is available through Hearts and Hands.

For individuals with dementia and their family caregivers, there is no charge for services provided by the Alzheimer's Resource Agency of Alaska. These services are primarily funded through State and local grants and Medicaid waiver. Alzheimer's Resource of Alaska's state grants for ADRD Education and Support and National Family Caregiver Support Program statewide are for $346,036 and $271,000, respectively. Based on direct costs incurred in the Mat-Su Borough, this prorates $126,000 of these grants for care in the Mat-Su.

Mat-Su Senior Services receives state and local grants, and Medicaid waiver reimbursement for eligible individuals for respite and adult day services, as well as private pay through a sliding fee scale. Wasilla Area Seniors, Inc. receives state and local grants and Medicaid waiver reimbursement to support their respite program. Other community-based organizations support their services through Medicaid, Medicaid waiver and private pay.

Due to the nature of the disease, people with ADRD often experience cognitive impairments while physically being very healthy. Alaska's eligibility criteria for the Medicaid Home- and Community-Based waiver services nursing facility level of care is based on physical impairments and does not take into consideration the need for prompting or cueing to complete the task. Therefore, some individuals are not eligible for Medicaid waiver services, which can result in caregiver burnout, exceeding the services provided under the limited grant

funding. Despite the good work by community providers, many individuals with ADRD are not served or underserved, and at times are placed in the Alaska Psychiatric Institute (API), have extended stays in the hospital or other unsuitable settings due to unsafe discharge, difficult behaviors, and other challenges that make it difficult to live independently.

Adult Day Services

Adult day services provide respite for caregivers supporting elders who would otherwise need to be in assisted living if not for the support of their caregiver. Caregivers can bring their elder to adult day services so the caregiver can work, do errands or have time to themselves. Adult day services are also for adults with physical, cognitive and/or developmental disabilities and many programs serve both seniors and non-seniors who need assistance with activities of daily living.

Table 61. Adult Day Services, Mat-Su Borough

	Location	Average Daily Census	Daily Capacity
Mat-Su Senior Services	Palmer Big Lake	28-35 5-7	60 18
Hearts and Hands	Wasilla (based in Anchorage)	Few	unknown
Total		~35	78+

Source: Mat-Su Regional Plan for Delivery of Senior Services - by the McDowell Group in association with Health Dimensions Group, 2011, SDS Provider List downloaded 10.28.14

Because adult day services are typically accessed by families on their way to work from their homes, the facilities are often located to serve a particular community, and people from other communities may be unwilling to drive the distances necessary to access the same service. Currently, there are three adult day programs in the Mat-Su Borough. Mat-Su Senior Services built an adult day services in Palmer that serves both seniors and those with developmental disabilities. There are no waitlists for these centers.

Assisted Living

There are 17 assisted living providers with 23 homes in the Mat-Su Borough licensed for seniors. A little more than half operate at the smallest scale of five or fewer beds per home. There are 311 beds currently available.[9] This includes Primrose Retirement Community's assisted living home, which has 56 beds and is co-located with an additional 44 units of independent senior housing.

Table 62. Assisted Living Homes, Mat-Su Borough

Location	Homes	Beds	Waitlist
Wasilla	15	186	28
Palmer	7	120	121 [1]
Houston	1	5	0
Total	**23**	**311**	**149**

[1] Includes 121 on the active wait list for the Alaska Veterans. Based on point in time of when the survey was conducted.

Assisted living providers report that they maintain close to full occupancy of their assisted living beds. Providers indicate that while there is often no running waitlist, it is not difficult to find people to move into available beds. The reason assisted living homes often do not have a wait list is that seniors who need assisted living typically need care right away and cannot wait for those services through a wait list process. If nothing is available, they often look elsewhere, find a different type of care, or live in a situation where they do not have the care that they need.

[9] In February, 2015, a fire destroyed half of Northern Comfort Assisted Living http://www.alaskapublic.org/2015/02/09/fire-sweeps-wasilla-assisted-living-home/. Though these residents were moved to new locations, it is expected that the facility will rebuild and the beds are included in this count.

Assisted living homes serve seniors and adults with developmental or physical disabilities and are designed to assist individuals with activities of daily living (ADLs), which include help with eating, bathing, dressing and instrumental activities of daily living (IADLs), such as performing household chores. Assisted living homes can also provide services to those who suffer from Alzheimer's disease or related dementia (ADRD) diagnosis and need memory care. The services offered by an assisted living home can range from a level of care that is very basic to a level of care that includes one-on-one care or assistance getting in and out of bed, depending on the needs of the client/resident mix and what the assisted living home's licensing, staffing and facility design will allow.

In Alaska, assisted living homes may aid with ADLs and IADLs, intermittent nursing services, and skilled nursing care, by arrangement. The home may supervise the resident's self-administration of medications, which means staff may pick up the medications at the pharmacy and hand them to the resident, but the resident must self-administer them. Medical care that requires a registered nurse may not be performed by caretaker staff, such as a PCA or certified nurse's assistant (CNA); these care tasks may be performed by family caretakers who come to the assisted living home or by a licensed third-party nurse who provides intermittent care. A resident who needs 24-hour skilled nursing care for 45 or fewer consecutive days may, with the consent of the assisted living home, arrange for that care to be provided in the assisted living home by a licensed nurse if that arrangement does not interfere with the services provided to other residents. Terminally ill residents may remain in the home if a physician confirms their needs are being met.[10]

Various types of assisted living homes currently operate in Alaska. The Medicaid Home and Community Based (HCB) waiver program reimbursement rates define three sizes of facility, as shown in the figure below.

Figure 10. Assisted Living Homes at Three Scales of Operation

*Plus a regional cost adjustment (where applicable) and with a 2.4 percent inflation rate effective July 1, 2014.
Source: Department of Health and Social Services Chart of Personal Care Assistant and Waiver Service Rate effective July 2014

Memory Care

Memory care assisted living homes offer additional support for people with ADRD. The facilities can have a higher level of supervision such as cueing for activities of daily living. Usually memory care assisted living homes have specific designs that enable residents to live more comfortably and safely. Though memory care assisted living homes generally are not on lockdown, they have doors with a 15-second delay that alerts staff that people are trying to leave. The Pioneer Homes and the Providence cottages in Anchorage and Seward have door locking delay functionality. The cottages include circular hallways so residents can walk in a circle and move around without the fear of wandering away. At the Anchorage Pioneer Home, the doorway is painted as brick, so they do not notice that there is a door to leave from, which helps limit the potential for

[10] The State of Alaska regulations pertaining to assisted living homes are: Alaska Statutes Title 47, Chapters 32 and 33 (AS 47.32 – AS 47.33) and the Alaska Administrative Code Title 7, Chapters 10 and 75 (7 AAC 10 and 7 AAC 75).

wandering. The Mat-Su Aging and Disability Resource Center identifies six homes, including the Pioneer Home, that are willing to take individuals with memory care needs.[11]

Skilled Nursing

There are no skilled nursing facilities in the Mat-Su, so people go to Anchorage or other locations throughout the state and outside of Alaska if they need longer term skilled nursing care. In Anchorage, there are three facilities, offering a total of 147 beds.

Skilled nursing facilities are designed to care for very frail people who are not able to care for themselves and have numerous health care requirements. Skilled nursing facilities are staffed 24 hours per day by trained medical professionals such as CNAs, registered nurses and other health care providers, under the direction of a physician. Skilled nursing facilities are often nearby or associated with a hospital, which is the case with the Providence facilities. There are examples of independent skilled nursing facilities that are either for-profit or non-profit. Prestige is a for-profit, national provider of skilled nursing that operates in Anchorage. Wildflower Court is an example of a non-profit and independent skilled nursing facility that operates in Juneau, Alaska.

Table 63. Skilled Nursing Facilities, Anchorage

Name	Number of Beds	Number on Waitlist
Prestige Care and Rehabilitation Center of Anchorage	101	0
Providence Extended Care	96	10
Providence Transitional Care Center	50	114
Total	**147**	

Note: Providence Transitional Care provides nursing care for shorter stays (approximately two to four weeks). Examples include people of all ages who are recovering from traumatic physical injuries, heart attacks and strokes, or elderly individuals on Medicare funded skilled nursing stays of 100 days or less. The Transitional Care Center is costlier at $1,235 per day and is intended as a transitional residence for people moving between acute care in the hospital to their home or an assisted living home. Providence Extended Care is for individuals who need longer term skilled nursing care at $832 per day. Providence Extended Care is arranged in cottages of 16 residents each, to provide more of a home like setting. The waitlist is triaged to ensure a good fit within each of the cottages. A higher percentage of individuals in Extended Care are elderly.

[11] As of Jan 2014. http://linksprc.org/adrc/assisted_living_homes

Chapter 6: Senior Services Demand Analysis

Summary

A summary of projected need for studied services in the Mat-Su is presented in the table below. Note the need for services is identified as either episodes, bed need, candidates, ADC, or users, depending on the level of care.

Table 64. Consolidated Senior Service Need Projections, Mat-Su Borough, 2010, 2015, 2020, 2025, and 2030 Estimates

	Current Supply Available (2015)	2010 Demand Estimates (*2011 Report*)	2015 Demand Estimates	2020 Demand Estimates	2025 Demand Estimates	2030 Demand Estimates
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)	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.

Demand Analysis

The study team analyzed potential demand for services typically used by seniors and their family caregivers. While these analyses were focused primarily on existing community-based services, the study team also examined demand for services currently not present in the Mat-Su, but typically found elsewhere in the nation.

Industry-accepted demand-projection methodologies were applied to the forecast demographics in the Mat-Su through 2030. Because fundamental changes in service delivery and reimbursement systems (for example Medicare and Medicaid) cannot be predicted, the analyses assume that per capita rates of utilization of a service will remain relatively stable over the projection period within age and other demographic segments.

Medicare-Certified Home Health Care Demand

Medicare-certified home health care involves skilled nursing and certain other services (e.g., therapy services) that are provided in a client's home for the treatment of an illness or injury. All Medicare beneficiaries can receive home health care benefits. The actual number of episodes in the Mat-Su 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.

The study team completed two high-level demand analyses for Medicare-certified home health in the Mat-Su Borough. The starting point for the analysis was that 3.2 percent of Medicare fee-for-service (FFS) beneficiaries used home health services in 2013. Home health utilization in the Mat-Su is slightly lower than Alaska (3.4 percent), but significantly lower than nationally (9.4 percent). Home health agencies are paid based on the number of episodes instead of the number of visits. The average number of episodes in the Mat-Su was 1.53 per home health user, which was higher than Alaska (1.51), but less than nationally (1.96). The first high-level demand analysis assumes a static utilization of 3.2 percent, but varies the number of episodes from the current Mat-Su average (1.53), to the national average (1.96), and also halfway in between (1.75).

Table 65. Medicare-Certified Home Health Care Demand, Mat-Su Borough 2015, 2020, 2025, and 2030

Year	Senior Population	3.2% Utilization (Mat-Su)	1.53 Episodes per User (Mat-Su)	1.75 Episodes per User (Average)	1.96 Episodes per User (National)
2015	9,994	320	489	560	627
2020	14,123	452	691	791	886
2025	18,434	590	903	1,032	1,156
2030	21,421	685	1,049	1,200	1,344

Source: The Nielsen Company, Centers for Medicare and Medicaid Services and HDG analysis.

The second high-level demand analysis assumes an increase in the utilization of home health care services. Nationally, the utilization of home health care users has been slowly increasing. In 2007, 8.8 percent of Medicare FFS beneficiaries nationwide utilized home health services. Presently, national home health care utilization is higher than in 2007, at 9.4 percent. However, utilization trends within the Mat-Su Borough contrast with these national trends throughout the period. Utilization in the Mat-Su was 4.0 percent in 2007, decreasing to 3.2 percent by 2013. The second demand analysis shows the utilization increasing 20 percent, from 3.2 percent to 3.8 percent, to more closely mirror Mat-Su utilization in 2007.

Table 66. Medicare-Certified Home Health Care Demand with Increased Utilization, Mat-Su Borough 2015, 2020, 2025, and 2030

Year	Senior Population	3.8% Utilization (Mat-Su)	1.53 Episodes per User (Mat-Su)	1.75 Episodes per User (Average)	1.96 Episodes per User (National)
2015	9,994	380	581	665	744
2020	14,123	537	821	939	1,052
2025	18,434	700	1,072	1,226	1,373
2030	21,421	814	1,245	1,424	1,595

Source: The Nielsen Company, Centers for Medicare and Medicaid Services and HDG analysis.

Long-Term Nursing Home Bed Demand

A nursing home is a place for individuals who do not require hospitalization, but cannot be cared for safely in their own home. Nursing homes are the highest level of care for older adults outside of a hospital. Most individuals in the nursing home are in need of 24-hour supervision and need assistance with custodial care. Nursing homes are also sometimes referred to as long-term care facilities. Medicare does not cover long-term care services. Nursing home bed demand is the overall demand for individuals within a nursing home, which includes both short-term and long-term care.

The demand for nursing home beds was calculated for the Mat-Su using two different methodologies. The first methodology was based on Alaska utilization rates for nursing home beds. The second methodology was calculated using the number of seniors per occupied Alaska bed.

FIRST METHODOLOGY: UTILIZATION

Utilization is the percentage of individuals, by age cohort, that were cared for in a nursing home bed in the State of Alaska. The utilization is based on calendar year 2014, which is the most recent data available. Although utilization has been decreasing, the analysis assumes it will be stable moving forward, in part because utilization has been restricted by lack of available beds in the state. The following should be noted:

- Alaska's nursing home utilization is among the lowest in the U.S.
- There currently are no nursing home beds in the Mat-Su.
- Utilization of nursing home beds is defined to include all nursing home beds, regardless of primary payer.

Nursing home census has remained relatively stable in Alaska since 2000. Although census has remained stable, the senior population has increased dramatically, resulting in a lower utilization of nursing home beds. The tables below summarize the nursing home bed need assuming 92 percent occupancy to account for variation in census throughout the year.

Table 67. Nursing Home Bed Demand Utilization Methodology, Mat-Su Borough, 2015 and 2020

Age Cohort	2015			2020		
	Population	Utilization	Bed Demand	Population	Utilization	Bed Demand
0-21 Years	32,107	0.0000025	0	33,578	0.0000025	0
22-30 Years	11,502	0.0000117	0	12,536	0.0000117	0
31-64 Years	44,465	0.0003537	16	45,534	0.0003537	16
65-74 Years	6,892	0.0025715	18	9,787	0.0025715	25
75-84 Years	2,430	0.0101202	25	3,502	0.0101202	35
85+ Years	672	0.0301842	20	834	0.0301842	25
Total	**98,068**		**79**	**105,771**		**101**
Total Bed Need 92% Occupancy			**86**			**110**
Existing Beds in Market Area			**0**			**0**
Beds Serving the Market Area			**0**			**0**
Unmet Demand (Excess)			**86**			**110**

Source: The Nielsen Company; Cowles Research Group's 2014 Nursing Home Statistical Yearbook; 2013 Nursing Home Compendium; and HDG methodology.

Table 68. Nursing Home Bed Demand Utilization Methodology, Mat-Su Borough, 2025 and 2030

Age Cohort	2025			2030		
	Population	Utilization	Bed Demand	Population	Utilization	Bed Demand
0-21 Years	40,629	0.0000025	0	44,568	0.0000025	0
22-30 Years	14,984	0.0000117	0	16,319	0.0000117	0
31-64 Years	51,243	0.0003537	18	55,363	0.0003537	20
65-74 Years	11,680	0.0025715	30	12,070	0.0025715	31
75-84 Years	5,403	0.0101202	55	7,418	0.0101202	75
85+ Years	1,351	0.0301842	41	1,933	0.0301842	58
Total	**125,290**		**144**	**137,671**		**184**
Total Bed Need 92% Occupancy			**157**			**200**
Existing Beds in Market Area			**0**			**0**
Beds Serving the Market Area			**0**			**0**
Unmet Demand (Excess)			**157**			**200**

Source: The Nielsen Company; Cowles Research Group's 2014 Nursing Home Statistical Yearbook; 2013 Nursing Home Compendium; and HDG methodology.

SECOND METHODOLOGY: SENIORS PER OCCUPIED BED

Seniors are identified as individuals age 65 and older. The number of seniors per occupied bed in Alaska and nationally has steadily increased since 2000 due to population growth, despite a stable nursing home census. The utilization is based on calendar year 2014, the most recent data available. The analysis assumes the number of seniors per occupied bed will remain stable at 118.65, in part due to an artificially high ratio due to lack of nursing home beds in the state. The following should be noted:

- Alaska has one of the highest ratios of seniors per occupied bed in the nation.
- There currently are no nursing home beds in the Mat-Su.

- Ratio of seniors per occupied nursing home beds includes all nursing home beds, regardless of primary payer.

Nursing home census has remained relatively stable in Alaska since 2000. However, the senior population has increased dramatically, resulting in a continued increase in the number of seniors per occupied bed. The tables below summarize the nursing home bed need assuming 92 percent occupancy to account for variation in census throughout the year.

The analysis compares Alaska to the nation and selected other states. States such as Arizona and Oregon have among the highest number of seniors per occupied bed. These states have been aggressive in managing long-term care patients covered by Medicaid for more than 20 years and have funded alternative options to keep individuals out of nursing homes, since nursing home placement is the most-costly care setting.

Table 69. Nursing Home Bed Demand Seniors per Occupied Bed Methodology, Mat-Su Borough 2015, 2020, 2025, and 2030

Geographic Benchmark	Year	Seniors	Seniors Per Occupied Bed	Market Area Bed Demand	Total Bed Need 92% Occupancy
Alaska	2015	9,994	118.65	84	91
	2020	14,123	118.65	119	129
	2025	18,434	118.65	155	168
	2030	21,421	118.65	181	197
United States	2015	9,994	34.42	290	315
	2020	14,123	34.42	410	446
	2025	18,434	34.42	536	583
	2030	21,421	34.42	622	676
Arizona	2015	9,994	91.91	109	118
	2020	14,123	91.91	154	167
	2025	18,434	91.91	201	218
	2030	21,421	91.91	233	253
Oregon	2015	9,994	87.31	114	124
	2020	14,123	87.31	162	176
	2025	18,434	87.31	211	229
	2030	21,421	87.31	245	266
Wisconsin	2015	9,994	33.10	302	328
	2020	14,123	33.10	427	464
	2025	18,434	33.10	557	605
	2030	21,421	33.10	647	703

Source: The Nielsen Company; Cowles Research Group's 2014 Nursing Home Statistical Yearbook; and HDG methodology.

AVERAGE OF TWO METHODOLOGIES

The table below shows the results of the utilization and occupied-bed methodologies previously described and the average of both.

Table 70. Nursing Home Bed Demand Average of Two Methodologies, Mat-Su Borough 2015, 2020, 2025, and 2030

Year	Demand Scenario	Bed Demand	Total Bed Need 92% Occupancy
2015	Utilization	79	86
	Average	**82**	**89**
	Seniors Per Occupied Bed	84	91
2020	Utilization	101	110
	Average	**110**	**120**
	Seniors Per Occupied Bed	119	129
2025	Utilization	144	157
	Average	**150**	**163**
	Seniors Per Occupied Bed	155	168
2030	Utilization	184	200
	Average	**183**	**198**
	Seniors Per Occupied Bed	181	197

Source: The Nielsen Company; Cowles Research Group's 2014 Nursing Home Statistical Yearbook; and HDG methodology.

Skilled Nursing Care

Medicare beneficiaries who need short-term skilled nursing care or rehabilitation services daily in an inpatient setting following a medically necessary hospital stay of at least three days qualify to receive covered services in a skilled nursing facility (SNF). SNF services may be provided in freestanding or hospital-based facilities. A freestanding SNF is typically part of a nursing home that also provides long-term care, which Medicare does not cover. The skilled nursing care demand is for individuals who qualify for short-term skilled nursing care or rehabilitation. A majority of these individuals will return home following their care, but some will transition into long-term care.

In fiscal year 2014, Mat-Su Regional Medical Center, which is the only acute care hospital located in the Mat-Su, discharged 1,529 Medicare Fee for Service (FFS) patients. Of these patients, 52 (3.4 percent) were discharged to an SNF. The typical acute care hospital discharges approximately 18 percent of Medicare FFS patients to an SNF which positions Mat-Su Regional Medical Center considerably lower than the national average. There are currently no SNFs in the Mat-Su to discharge patients, which provides rationale for Mat-Su Regional Medical Center's low discharge to SNF volume. The presence of an SNF would likely result in a higher volume of patients from Mat-Su Regional Medical Center that would be discharged to an SNF. The project team has estimated 12 percent of patients would be a likely target discharge percentage, which equates to 183 SNF discharges.

The average length of stay (ALOS) of patients that originated in the Mat-Su Borough and were discharged to an SNF was 23.3 days in 2013, according to CMS. Assuming a 23-day ALOS would result in 4,209 patient days (183 discharges times 23-day ALOS). Average daily census (ADC) is calculated by dividing the total patient days by 365 days, resulting in an ADC of 11.5. Therefore, on any given day, we project approximately 12 patients who would receive skilled nursing care in an SNF.

Table 71. Skilled Nursing Care Demand, Mat-Su Borough, 2014

MSRMC Discharges	% of Discharges to Skilled Rehab	MSRMC Discharges to Skilled Nursing	Total Patient Days Average Length of Stay = 23	Average Daily Census
1,529	12%	183	4,209	12

Source: CMS and HDG analysis.

It is difficult to project future ADC for skilled nursing beds since there are many variables to consider. For example, utilization of acute services will likely decline, and the ALOS of skilled nursing patients has been historically declining and will continue to decline.

Geriatric Care Management Demand and Household/Income Qualification

Geriatric care management is a client-centered approach to caring for elderly adults. Programs typically involve the services of a care manager with experience in nursing, gerontology, psychology, or social work who provides case management services in a preventative model of geriatric care. An initial assessment is completed to determine the individual's needs, the level(s) of care needed, and how it relates to their current living situation. Following the initial assessment, the care manager helps the elderly individual and their family navigate the complex and confusing medical options, assisting with planning, coordinating, and monitoring care. An initial assessment may be billed, and then the care managers charge on an hourly basis for their services. Services are largely paid for privately.

The demand for geriatric care management was calculated by analyzing the population by age cohort and gender for seniors 75 to 84 and 85 years of age and older, and targeting seniors living alone. Individuals age 75 and older are targeted since they have typically reached an age at which they might benefit from assistance or service. The number of individuals living alone in 2015, the most recent estimates available, was then applied to the demographics by age cohort for future years to project how many individuals are/will be living alone in the Mat-Su. Those individuals living alone, and lacking the support of a spouse or other living partner, are those most likely to use the services of a geriatric care manager. Age cohort is important since household size decreases with age. The table below summarizes the number of individuals who could benefit from geriatric care management services.

Table 72. Seniors Age 75+ Living Alone, Mat-Su Borough, 2015, 2020, 2025, and 2030

	2015	2020	2025	2030
75-84 Age Cohort				
Population	2,430	3,502	5,403	7,418
% of Population Living Alone	34%	34%	34%	34%
Estimated Population Living Alone	**826**	**1,191**	**1,837**	**2,522**
	2015	**2020**	**2025**	**2030**
85+ Age Cohort				
Population	672	834	1,351	1,933
% of Population Living Alone	39%	39%	39%	39%
Estimated Population Living Alone	**262**	**325**	**527**	**754**

Source: The Nielsen Company and HDG analysis.

After determining the number of individuals living alone, income qualification is then applied to determine who can afford the service. Household income of $75,000 was used in the analysis as the lower bound for households that can afford to pay for services. Age cohort is important, as senior household incomes decrease with age. The following table summarizes the income distribution of senior households in the Mat-Su in 2015. The analysis assumes a consistent household income distribution through 2030.

Table 73. Seniors Age 75+ Household Incomes, Mat-Su Borough—2015, 2020, 2025, and 2030

Head of Households Age 75-84	2015	2020	2025	2030
<$20,000	26.65%	26.65%	26.65%	26.65%
$20,000-$24,999	11.73%	11.73%	11.73%	11.73%
$25,000-$34,999	15.29%	15.29%	15.29%	15.29%
$35,000-$49,999	13.42%	13.42%	13.42%	13.42%
$50,000-$74,999	12.11%	12.11%	12.11%	12.11%
$75,000-$99,999	11.05%	11.05%	11.05%	11.05%
$100,000+	9.75%	9.75%	9.75%	9.75%
Head of Households Age 85+	**2015**	**2020**	**2025**	**2030**
<$20,000	34.11%	34.11%	34.11%	34.11%
$20,000-$24,999	12.98%	12.98%	12.98%	12.98%
$25,000-$34,999	15.53%	15.53%	15.53%	15.53%
$35,000-$49,999	11.65%	11.65%	11.65%	11.65%
$50,000-$74,999	10.92%	10.92%	10.92%	10.92%
$75,000-$99,999	6.80%	6.80%	6.80%	6.80%
$100,000+	8.01%	8.01%	8.01%	8.01%

Source: The Nielsen Company and HDG analysis.

The following table summarizes the number of households that would benefit from geriatric care management services, and the number of households that can afford to pay for the services (household incomes of $75,000 and higher).

Table 74. Geriatric Care Management Demand, Seniors Age 75+, Mat-Su Borough, 2015, 2020, 2025, and 2030

Household Income	2015	2020	2025	2030
<$20,000	309	428	670	929
$20,000-$24,999	131	182	283	394
$25,000-$34,999	167	232	363	503
$35,000-$49,999	142	198	308	426
$50,000-$74,999	129	179	280	387
$75,000-$99,999	109	154	239	330
$100,000+	102	142	221	306
Total	**1,089**	**1,515**	**2,364**	**3,275**
Income $75,000+	**211**	**296**	**460**	**636**

Source: The Nielsen Company and HDG analysis.

Low-Income Senior Apartments

Low-income senior housing is designated for individuals age 55+. To qualify for affordable housing programs provided by or through the government, seniors must meet maximum household income limits that vary by geography. In the Mat-Su, the 2015 Area Median Income (AMI) is $83,900, according to Affordable Housing Online. To qualify for low-income rental assistance, household incomes cannot exceed 60 percent of AMI. Affordable apartment buildings may have multiple rental assistance programs and serve low-income (50 percent AMI) or very low-income (30 percent AMI) tenants.

The demand for low-income housing was calculated by segmenting the population by age cohort and by those individuals who qualify for low-income assistance. The table below summarizes the candidates age 55+ for low-income apartments. The number of candidates is divided by 30 percent AMI ($17,500), 50 percent AMI ($29,100) and 60 percent AMI ($34,920).

Table 75. Low-Income Apartment Candidates Age 55+, Mat-Su Borough, 2015, 2020, 2025, and 2030

Household Income	2015	2020	2025	2030
<$17,500	3,071	3,831	4,463	5,067
$17,501-$29,100	3,009	3,849	4,608	5,279
$29,101-$34,920	1,115	1,453	1,761	2,013
Total	**7,196**	**9,132**	**10,832**	**12,360**

Source: The Nielsen Company and HDG analysis.

Although there are a significant number of senior candidates that would qualify by age and income for low-income apartments, not all will choose to move into low-income housing. The table below summarizes the number of units that could be supported if 10 percent of the candidates moved into low-income housing.

Table 76. Candidates Age 55+ Likely to Move into Low-Income Apartments (10 Percent Scenario) Mat-Su Borough, 2015, 2020, 2025, and 2030

Household Income	2015	2020	2025	2030
<$17,500	307	383	446	507
$17,501-$29,100	301	385	461	528
$29,101-$34,920	112	145	176	201
Total	**720**	**913**	**1,083**	**1,236**

Source: The Nielsen Company and HDG analysis.

Traditional Assisted Living Demand

The senior market for assisted living is typically age 75 or older and needs regular assistance with activities of daily living (ADLs) but does not have to be placed in a formal nursing home. Services and support would include three daily meals, flat linen and personal laundry, assistance with ADLs as needed, medication supervision, daily housekeeping, scheduled transportation, and all utilities. The demand analysis takes into account age and physical capabilities.

The demand for traditional assisted living was calculated by segmenting the population by age: seniors age 75–84 and 85 and older living in the Mat-Su. This population is adjusted to show individuals who need assistance from a formal caregiver for ADLs, by applying a "disability factor". The age 75–84 cohort has a 9.7 percent disability factor, while the age 85-and-older population has a 28.6 percent disability factor. The table below summarizes the candidates for assisted living.

Table 77. Assisted Living Candidates Age 75+, Mat-Su Borough, 2015, 2020, 2025, and 2030

Household Income	2015	2020	2025	2030
<$15,000	76	101	160	224
$15,000–$19,999	53	71	112	156
$20,000–$24,999	53	71	112	156
$25,000–$34,999	66	89	140	196
$35,000–$49,999	54	73	115	161
$50,000–$74,999	50	67	106	148
$75,000-$99,999	39	54	84	117
$100,000+	38	52	82	114
Total	**428**	**579**	**910**	**1,273**

Source: The Nielsen Company and HDG analysis.

Not all candidates who need assisted living services will choose to move into assisted living. Most new developments would expect to serve between 10 and 25 percent of the candidates not already in assisted living. The table below summarizes the number of units that could be supported if 25 percent of the candidates moved into assisted living.

Table 78. Assisted Living Candidates Age 75+ Likely to Move Into Assisted Living, Mat-Su Borough, 2015, 2020, 2025, and 2030

Household Income	2015	2020	2025	2030
<$15,000	19	25	40	56
$15,000–$19,999	13	18	28	39
$20,000–$24,999	13	18	28	39
$25,000–$34,999	16	22	35	49
$35,000–$49,999	14	18	29	40
$50,000–$74,999	12	17	26	37
$75,000-$99,999	10	13	21	29
$100,000+	10	13	20	29
Total	**107**	**145**	**228**	**318**

Source: The Nielsen Company and HDG analysis.

Alzheimer's/Dementia (Memory-Care) Assisted Living Demand

The market for this alternative senior housing includes the moderately dependent resident who has some form of memory loss and requires supervised living. The demand analysis is based on age and prevalence of Alzheimer's and/or dementia.

The demand for Alzheimer's assisted living was calculated by segmenting the population by age: seniors age 75–84 and 85 and older living in the Mat-Su. The prevalence rates, which are specific to Alaska, are 12 percent for the 75–84 age cohort and 33 percent for the 85-and-older age cohort. Prevalence rates in Alaska are slightly lower than the national rates, which are 14 percent for the 75–84 age cohort and 34 percent for the 85-and-older age cohort.

Table 79. Number of Seniors Age 75+ with Alzheimer's and/or Dementia, Mat-Su Borough, 2015, 2020, 2025, and 2030

Household Income	2015	2020	2025	2030
<$15,000	90	121	191	268
$15,000–$19,999	63	85	134	187
$20,000–$24,999	63	85	134	187
$25,000–$34,999	79	107	168	235
$35,000–$49,999	65	88	139	194
$50,000–$74,999	60	81	127	177
$75,000-$99,999	47	65	102	142
$100,000+	46	63	99	138
Total	**514**	**695**	**1,094**	**1,528**

Source: The Nielsen Company, Centers for Medicare and Medicaid Services and HDG analysis.

Not all candidates who need memory care assisted living services will choose to move into memory care assisted living. Like assisted living, most new developments would expect to serve between 10 and 25 percent of the candidates not already living in memory care assisted living. The table below summarizes the number of units that could be supported if 25 percent of the candidates moved into memory care assisted living.

Table 80. Seniors Age 75+ with Alzheimer's and/or Dementia Likely to Move Into Memory Care Assisted Living, Mat-Su Borough, 2015, 2020, 2025, and 2030

Household Income	2015	2020	2025	2030
<$15,000	23	30	48	67
$15,000–$19,999	16	21	34	47
$20,000–$24,999	16	21	33	47
$25,000–$34,999	20	27	42	59
$35,000–$49,999	16	22	35	48
$50,000–$74,999	15	20	32	44
$75,000-$99,999	12	16	25	35
$100,000+	12	16	25	34
Total	**129**	**174**	**274**	**382**

Source: The Nielsen Company, Centers for Medicare and Medicaid Services and HDG analysis.

Hospice

Hospice service provides comfort care to individuals at end of life who are no longer receiving medical treatment. The hospice benefit is available to all individuals enrolled in Medicare and is typically provided in the patient's home, nursing home, or hospital. Currently, there are no designated hospice beds in the Mat-Su Regional Medical Center hospital or in any other institutional setting (like a nursing home). However, hospice care is available through in-home services.

The study team completed a high-level demand analysis for Medicare hospice potential in the Mat-Su. Projected demand (average daily census) was based on utilization (by age cohort), average length of stay, and discharges.

Historical utilization in the Mat-Su has been low. In 2013, 1.27 percent of Medicare beneficiaries used hospice services in the Mat-Su. The utilization is higher than the Alaska average (1.13 percent), but lower than neighboring Municipality of Anchorage (1.65 percent), and significantly lower than the national rate (2.69 percent). While utilization has been slowly increasing both in Alaska and nationally, it has been slowly decreasing in the Mat-Su. The study team calculated hospice utilization at current levels and with a 20 percent increase over current levels.

The average length of stay (ALOS) has remained relatively stable nationally over the past seven years. In 2013, it was 67.5 days. Mat-Su's ALOS is lower, at 56.1 days, but higher than both Anchorage (49.7) and Alaska as a whole (49.2).

Nationally, approximately 85 percent of discharges have a discharge disposition of "deceased" and 15 percent "discharged alive." A movement to serve patients longer in hospice, and therefore reduce the number discharged alive has resulted in the study team providing three different average daily census (ADC) targets:

- 0 percent discharged alive is not an attainable goal, but represents the theoretical maximum number of patients that could be discharged as "deceased."
- 10 percent discharged alive is a more attainable and realistic goal for hospice agencies. It represents the likely future trend for ADC of hospice patients in the Mat-Su.

- 15 percent discharged alive is the current national distribution rate. If hospice agencies continue this trend, then the final column in the table below will be the projected ADC of hospice patients in the Mat-Su.

The demand assessment suggests the average daily census is likely too low to support new infrastructure development, and that agencies offering hospice services could staff up to the demand, although there may constraints in servicing areas outside the most populated areas (Palmer/Wasilla core).

Table 81. Medicare Hospice Demand, Mat-Su Borough, 2015, 2020, 2025, and 2030

Year	Hospice ADC (0% Discharged Alive)	Hospice ADC (10% Discharged Alive)	Hospice ADC (15% Discharged Alive)
Historical Utilization			
2015	16.8	17.7	19.7
2020	23.2	24.6	27.3
2025	33.5	35.5	39.5
2030	43.8	46.4	51.5
20 Percent Increase in Utilization			
2015	20.1	21.3	23.7
2020	27.9	29.5	32.8
2025	40.2	42.6	47.3
2030	52.6	55.7	61.8

Source: The Nielsen Company, Centers for Medicare and Medicaid Services and HDG analysis.

Adult Day Services

Adult day services are provided in a professional center in which older adults receive social, therapeutic, and health services. The adult day center is typically open five days per week, with the average participant attending 3.0 to 3.5 days per week.

There are three types of adult day centers: social, medical/health, and specialized. A social adult day service center provides meals, social activities and limited health services. Adult day service health centers provide the same services as a social adult day service center, but also include more intensive health and therapeutic services. Specialized adult day service centers may provide services to recipients of a certain diagnosis, such as Alzheimer's/dementia or developmental disabilities.

The number of projected adult day service center attendees was segmented by individuals requiring Alzheimer's/dementia programming and those needing general older adult day health care. A combination of the two results is the total adult day demand. The analysis also calculated the average daily census (ADC) of adult day users. The ADC assumes the average participant will attend 3.5 days per week. The following tables summarize the total adult day demand and ADC.

(See table next page.)

Table 82. Adult Day Services Demand, Mat-Su Borough—2015

Household Income	Total Adult Day Demand			Adult Day Average Daily Census		
	Alzheimer's Adult Day	Other Adult Day	Total Adult Day	Alzheimer's Average Daily Census	Other Average Daily Census	Total Average Daily Census
<$15,000	4	7	**11**	3	5	**8**
$15,000-$24,999	5	11	**16**	4	7	**11**
$25,000-$34,999	4	7	**11**	3	5	**8**
$35,000-$49,999	3	7	**10**	2	5	**7**
$50,000-$74,999	4	7	**11**	3	5	**8**
$75,000-$99,999	4	7	**11**	3	5	**8**
$100,000-$124,999	1	3	**4**	1	2	**3**
$125,000-$149,999	1	1	**2**	0	1	**1**
$150,000-$199,999	1	1	**2**	0	1	**1**
$200,000+	1	1	**2**	0	1	**1**
Total	**28**	**52**	**80**	**19**	**37**	**56**
$35,000+	15	27	**42**	9	20	**29**
$50,000+	12	20	**32**	7	15	**22**
$75,000+	8	13	**21**	4	10	**14**

Source: The Nielsen Company, National Center for Health Statistics and HDG analysis.

Table 83. Adult Day Services Demand, Mat-Su Borough—2020

Household Income	Total Adult Day Demand			Adult Day Average Daily Census		
	Alzheimer's Adult Day	Other Adult Day	Total Adult Day	Alzheimer's Average Daily Census	Other Average Daily Census	Total Average Daily Census
<$15,000	5	10	**15**	4	7	**11**
$15,000-$24,999	7	15	**22**	5	10	**15**
$25,000-$34,999	5	10	**15**	4	7	**11**
$35,000-$49,999	5	10	**15**	4	7	**11**
$50,000-$74,999	5	11	**16**	4	7	**11**
$75,000-$99,999	5	10	**15**	4	7	**11**
$100,000-$124,999	2	4	**6**	1	3	**4**
$125,000-$149,999	1	2	**3**	1	1	**2**
$150,000-$199,999	1	2	**3**	1	1	**2**
$200,000+	1	2	**3**	1	1	**2**
Total	**37**	**76**	**113**	**29**	**51**	**80**
$35,000+	20	41	**61**	16	27	**43**
$50,000+	15	31	**46**	12	20	**32**
$75,000+	10	20	**30**	8	13	**21**

Source: The Nielsen Company, National Center for Health Statistics and HDG analysis.

Table 84. Adult Day Services Demand, Mat-Su Borough—2025

Household Income	Total Adult Day Demand			Adult Day Average Daily Census		
	Alzheimer's Adult Day	Other Adult Day	Total Adult Day	Alzheimer's Average Daily Census	Other Average Daily Census	Total Average Daily Census
<$15,000	7	14	**21**	5	10	**15**
$15,000-$24,999	10	22	**32**	7	15	**22**
$25,000-$34,999	7	15	**22**	5	10	**15**
$35,000-$49,999	7	14	**21**	5	10	**15**
$50,000-$74,999	7	15	**22**	5	10	**15**
$75,000-$99,999	6	14	**20**	4	10	**14**
$100,000-$124,999	3	5	**8**	2	4	**6**
$125,000-$149,999	1	3	**4**	1	2	**3**
$150,000-$199,999	1	3	**4**	1	2	**3**
$200,000+	1	3	**4**	1	2	**3**
Total	**50**	**108**	**158**	**36**	**75**	**111**
$35,000+	26	57	**83**	19	40	**59**
$50,000+	19	43	**62**	14	30	**44**
$75,000+	12	28	**40**	9	20	**29**

Source: The Nielsen Company, National Center for Health Statistics and HDG analysis.

Table 85. Adult Day Services Demand, Mat-Su Borough—2030

Household Income	Total Adult Day Demand			Adult Day Average Daily Census		
	Alzheimer's Adult Day	Other Adult Day	Total Adult Day	Alzheimer's Average Daily Census	Other Average Daily Census	Total Average Daily Census
<$15,000	9	19	**28**	6	14	**20**
$15,000-$24,999	13	28	**41**	9	20	**29**
$25,000-$34,999	9	19	**28**	6	14	**20**
$35,000-$49,999	8	18	**26**	6	12	**18**
$50,000-$74,999	8	18	**26**	6	12	**18**
$75,000-$99,999	8	16	**24**	5	12	**17**
$100,000-$124,999	3	7	**10**	2	5	**7**
$125,000-$149,999	2	3	**5**	1	3	**4**
$150,000-$199,999	1	3	**4**	1	2	**3**
$200,000+	2	3	**5**	1	3	**4**
Total	**63**	**134**	**197**	**43**	**97**	**140**
$35,000+	32	68	**100**	22	49	**71**
$50,000+	24	50	**74**	16	37	**53**
$75,000+	16	32	**48**	10	25	**35**

Source: The Nielsen Company, National Center for Health Statistics and HDG analysis.

The following table summarizes the overall adult day participants and ADC.

Table 86. Summary of Adult Day Services Demand, Mat-Su Borough 2015, 2020, 2025, and 2030

Year	Adult Day Participants	Adult Day Average Daily Census
2015	80	56
2020	113	80
2025	158	111
2030	197	140

Source: The Nielsen Company, National Center for Health Statistics and HDG analysis.

Program of All-inclusive Care for the Elderly (PACE)

The Program of All-inclusive Care for the Elderly (PACE) is a model designed to provide for the well-being of seniors with chronic care needs. Funding for the PACE program is accomplished through a partnership with the state (Medicaid) and federal government (Medicare). To be eligible for the PACE program, an individual must meet the following requirements:

- Age 55+
- State-certified as needing nursing home care (definition varies by state)
- Able to live in the community safely at time of the enrollment with supportive services
- Living in a designated PACE service area (there are currently no PACE programs in Alaska)

Although not a requirement, 99 percent of enrollees are eligible for Medicaid. Services include: therapies, meals, social work, personal care, medical care, home health care, prescription drugs, social services, medical specialties, respite care, and hospital and nursing home care when necessary.

The study team calculated the number of PACE-eligible individuals living in the Mat-Su who are also eligible for Medicaid, as summarized in the table below. Nationally, PACE programs average a penetration rate of 9.4 percent, indicating the programs have successfully enrolled 9.4 per 100 individuals eligible for PACE enrollment in their service areas. To financially break even, most programs need an enrollment of at least 150 individuals, although the break-even enrollment will vary by state reimbursement, expenses, ramp-up, etc. If the Mat-Su were to achieve a 10 percent penetration, which is slightly higher than the national average, the program would have an enrollment of 47 individuals in 2020, indicating that a financially successful program in Mat-Su would be extremely difficult to achieve.

Table 87. Number of PACE Eligible Candidate Age 55+, Mat-Su Borough 2015, 2020, 2025, and 2030

Age Cohort	2015	2020	2025	2030
55-64 Population	56	61	56	56
65-74 Population	76	108	130	134
75+ Population	217	300	469	650
Total PACE Eligible	**349**	**469**	**655**	**840**

Source: The Nielsen Company, American Fact Finder and HDG analysis.

Primary Care

Projected need for physicians in the MSRMC service area is based on the surplus or shortage of physicians by specialty. The existing inventory of physicians within the MSRMC's service area was compiled from the online rosters of MSRMC and the American Medical Information Physician Database. All the physicians identified as located within the MSRMC's service area were called to confirm their continued practice activity and specialty, as well as to identify the amount of time they spend in clinical practice, days and hours available, and the extent of involvement in teaching and/or research. Physicians who have retired, moved out of the service area, or otherwise are not practicing were removed from the inventory. Hospitalists and residents are also excluded.

The FTEs for physicians ages 65+ were adjusted to reflect a reduction in patient volume and work hours, and to account for anticipated retirement from practice. Unless determined otherwise through the validation calls, physicians ages 65 to 67 are assigned an FTE of 0.75, 68 to 69 an FTE of 0.5, and physicians age 70+ an FTE of 0.0. FTEs were also adjusted to reflect physicians who do not practice full-time due to teaching, administrative work, research, work at multiple offices (in and out of the service area), are in concierge practice, or are committed to other personal obligations.

Physician-to-population ratios by specialty were used to determine whether the supply of physicians listed in the inventory is sufficient to provide adequate care to the service area based on a proprietary database of 14 sets of published physician-to-population ratios and on Health Resources and Services Administration physician ratios and physician activity data. Other sources used include GMENAC ratios, Merritt Hawkins figures, and other ratios where appropriate for selected specialties. Key trends have resulted in changes in the patterns of patient utilization and the number of physicians required; these ratios have been adjusted to reflect these changes accordingly.

Table 88. Estimated Demand for Physician by Specialty, Mat-Su Borough, 2016 and 2019 Projections

Specialty	2016			2019		
	FTE Need	FTE Supply	(Need)/ Oversupply	FTE Need	FTE Supply	(Need)/ Oversupply
Family Medicine	25	44	19	26	43	17
General Practice/Internal Medicine	28	14	(15)	30	13	(16)
Sub-Total	**53**	**58**	**4**	**56**	**56**	**1**
OB/GYN	10	10	(0)	10	9	(1)
Pediatrics	15	6	(9)	16	6	(10)
Total	**78**	**73**	**(5)**	**82**	**71**	**(11)**

Note: 2016 estimates based on a service area population of 99,484. 2019 estimates based on a service area population of 104,097
Source: GE Healthcare Camden Group.

A list published by LINKS (ADRC) of physicians in the Mat-Su, and those accepting new Medicare and Medicaid patients can be found in Appendix C. The ADRC regularly includes this list of physicians, including the 34 who currently accept Medicare, in the options they provide clients.

Chapter 7: Analysis of State and Other Senior Services Funding

Summary

In 2015, approximately $26.5 million was spent by DHSS on Mat-Su seniors (age 65+) receiving Medicaid, General Relief or Senior Benefits support, or participating in programs paid for by community based support programs. The funding averaged $2,581 for each senior living in the Mat-Su. These same programs spent an estimated $3,837 for each Alaskan senior living elsewhere in Alaska. A summary of DHSS funding to support senior services in the Mat-Su is found below.

The state offers additional support to seniors through its Pioneer Homes (also administered by DHSS), as beneficiaries of the Alaska Mental Health Trust Authority, and when they access housing programs and services through the Alaska Housing and Finance Corporation.

Table 89. Estimated DHSS Funding for Selected Mat-Su Senior Services, FY2015/CY2015

Type	Division	Mat-Su Spending	Rest of Alaska Spending	Total Alaska Spending	Mat-Su % of Alaska Total	Estimated Mat-Su Per Capita (65+)	Estimated Rest of State Per Capita (65+)	Difference between Rest of the State and Mat-Su Per Capita Spending
Medicaid Spending	Public Assistance	$21.9 million	$203.1 million	$225.0 million	9.7%	$2,128	$3,254	-$1,126
Community Based Support Programs	Senior and Disabilities Services	$1.5 million	$14.8 million	$16.3 million	9.3%	$147	$237	-$90
General Relief	Senior and Disabilities Services	$0.2 million	$1.9 million	$2.1 million	10.5%	$22	$30	-$8
Senior Benefits Program	Public Assistance	$2.9 million	$19.7 million	$22.6 million	12.9%	$284	$316	-$32
Sub-total		**$26.5 million**	**$239.5 million**	**$266.1 million**	**10.0%**	**$2,581**	**$3,837**	**-$1,256**
Alaska Veteran and Palmer Pioneers Home	Alaska Pioneer Homes	$9.5 million	$51.2 million	$60.7 million	15.7%			

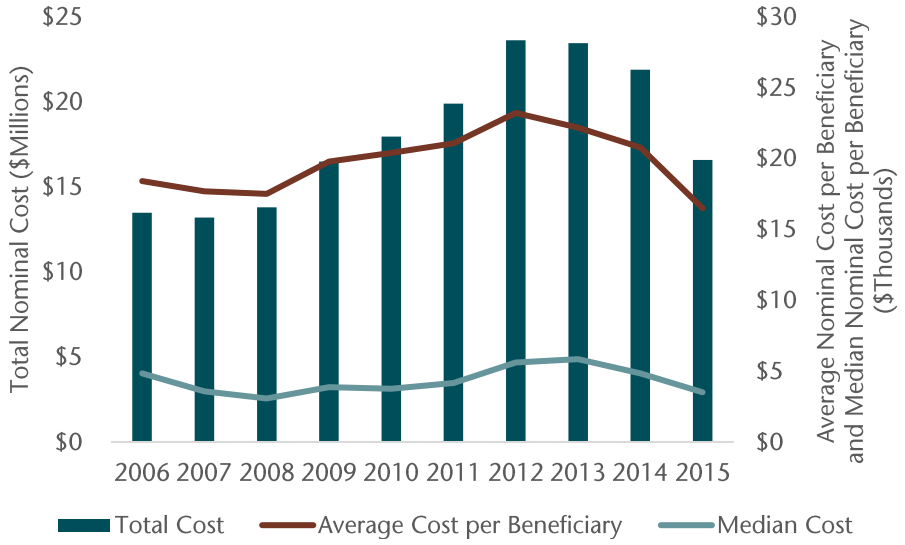
Notes: Per capita spending based on an estimated 10,284 seniors living in the Mat-Su and 62,432 seniors living in the rest of Alaska (total of 72,716 seniors) in 2015 (ADOLWD). Mat-Su seniors comprise 14 percent of the state's seniors.
Source: Alaska Department of Health and Social Services and McDowell Group calculations.

Alaska Department of Health and Social Services

Medicaid Spending

- The number of Mat-Su senior Medicaid beneficiaries increased from 732 to 1,054 (44 percent) between 2006 and 2014.
- Unadjusted for inflation, between 2006 and 2014, total annual Medicaid payments for Mat-Su seniors rose 62.5 percent from $13.5 million to $21.9 million. During this period, total annual payments rose at an average of 6.3 percent annually, and peaked in 2012 at $23.5 million.
- In 2014, there were 10,084 Medicaid recipients in Alaska who were seniors. Total Medicaid payments for all Alaska seniors was $225.0 million.
- Annual average Medicaid payments per beneficiary increased 13 percent during the same period, from $18,397 in 2006 to $20,765 in 2014. The figure increased at an annual average rate of change of 1.5 percent. Like total annual Medicaid payments, average annual Medicaid payments per beneficiary peaked in 2012 at $23,211.
- Median payments per beneficiary remained fairly constant between 2006 and 2014. Median payments per beneficiary were $4,836 in 2006 and $4,830 in 2014.

Figure 11. Total Annual Medicaid Payments for Mat-Su Seniors and Average Annual Cost Per Medicaid Beneficiary, 2006-2014



Source: Alaska DHSS Division of Public Assistance.

- The top three claims by total payments (comprising 83 percent of total Medicaid payments for senior residents of the Mat-Su) in 2014 were HCBS Waiver Claims, Personal Care Services, and Long Term Care:
    - **HCBS Waiver Claims**: These claims are part of the 1915 (c) Home & Community-Based Waiver program. HCBS waivers provide long term care in home and community settings, and are intended to allow people who would otherwise be in an institutional setting, such as a nursing home, to stay in the community.

In Alaska, the 1915 (c) waiver program provides such services as adult day services, care coordination, meals, respite, specialized private duty nurses, and transportation for seniors and people of all ages with physical, developmental, or mental disabilities. The program also funds specialized medical equipment and supplies.

- **Personal Care Services:** For these services, personal care attendants assist seniors or people with disabilities to carry out activities of daily living such dressing, hygiene, shopping, cooking, wound care, and medication consumption. Care is provided in-home and enables Alaskans to continue life in their community rather than an institution. Eligibility for these services is determined through financial need and a functional assessment. The Alaska Department of Health and Social Services Senior and Disabilities Services oversees the program.
- **Long Term Care:** For those seniors in need of long term care that includes skilled oversight of medical conditions, Alaska's Medicaid program pays for services in skilled nursing and intermediate care facilities. These facilities must be certified and licensed by the State of Alaska. Certification and licensing requirements include medical professionals with the ability to manage, in the case of skilled nursing facilities, unstable medical conditions, or, in the case of intermediate care facilities, stable but long-term illnesses. These services are intended for those requiring more intensive and expert care. Since no long term care facilities currently exist in the Mat-Su Borough, Mat-Su seniors presumably receive this care elsewhere in the state (likely in Anchorage).

- All claim types except for Pharmacy Claims, Outpatient, and Part A Crossover, exhibited growth in payment totals between 2006 and 2014.
- Dental, Long Term Care, and Mental Health claim types experienced the largest growth between 2006 and 2014, at 1,177 percent, 851 percent, and 740 percent, respectively.

(See table next page.)

Table 90. Mat-Su Senior Medicaid Payments, by Claim Type, 2014, Rate of Change (2006, 2014)

Claim Type	Total Payments	% of Total	% Change from 2006	Annual Average Rate of Change since 2006
HCBS Waiver Claims	$10,310,603	47.1%	86.0%	8.1%
Personal Care Services	6,655,197	30.4	16.3	1.9
Long Term Care	1,250,587	5.7	850.8	32.5
Part B Crossover	738,172	3.4	97.1	8.9
Durable Medical Equipment	645,735	3.0	73.5	7.1
Inpatient	451,422	2.1	388.6	21.9
Dental	448,574	2.0	1,176.6	37.5
Professional	369,316	1.7	81.5	7.7
Part B UB Crossover	291,765	1.3	21.7	2.5
Pharmacy Claims	267,491	1.2	-12.1	-1.6
Mental Health	137,366	0.6	739.9	30.5
Transportation Services	110,614	0.5	103.2	9.3
Outpatient	96,856	0.4	-59.8	-10.8
Part A Crossover	81,276	0.4	-32.8	-4.8
FQHC RHC Tribal Clinics	14,191	0.1	28.5	3.2
Independent Lab and X-ray Services	7,849	0.0	198.7	14.7
Home Health	7,504	0.0	- *	- *
Targeted Case Management School Based Services	1,500	0.0	- *	- *
Hospice	0	0.0	- *	- *
Mat-Su Total	**$21,886,019**	**100.0%**	**62.5%**	**6.3%**
Alaska Total	**$225,015,874**			

Notes: Definition of claim types can be found in the Methodology section of this report.
*There were no Medicaid payments in 2006 and several other years for these claim types. The percent change and annual average rate of change are therefore not presented.
Source: Alaska DHSS Division of Public Assistance.

- Beneficiaries may be counted in multiple claim types. The sum of the number of beneficiaries in each claim type (3,973) is greater than the actual total number of beneficiaries (1,054), as individuals are counted more than once. On average, Medicaid beneficiaries accessed almost four different types of Medicaid services during the year. This average is calculated by summing the number of patients for each claim type, and dividing this figure by the total number of Medicaid beneficiaries (3,973 divided by 1,054).
- The Medicaid service most accessed was Part B Crossover, with 875 beneficiaries, or 83 percent of all beneficiaries.

- The highest average payments per beneficiary were for Long Term Care ($65,820) followed by HCBS Waiver Claims ($31,628). Because long term care facilities are not available in the Mat-Su Borough, Medicaid beneficiaries who are Mat-Su residents may have received these services elsewhere in the state (presumably Anchorage).

Table 91. Mat-Su Senior Medicaid Payments, Number of Beneficiaries, and Average Payment Per Beneficiary, by Claim Type, 2014

Claim Type	Total Payments	# Beneficiaries	Average $/Beneficiary
HCBS Waiver Claims	$10,310,603	326	$31,628
Personal Care Services	6,655,197	332	20,046
Long Term Care	1,250,587	19	65,820
Part B Crossover	738,172	875	844
Durable Medical Equipment	645,735	359	1,799
Inpatient	451,422	15	30,095
Dental	448,574	329	1,363
Professional	369,316	512	721
Part B UB Crossover	291,765	571	511
Pharmacy Claims	267,491	196	1,365
Mental Health	137,366	26	5,283
Transportation Services	110,614	92	1,202
Outpatient	96,856	54	1,794
Part A Crossover	81,276	198	410
FQHC RHC Tribal Clinics	14,191	15	946
Independent Lab and X-ray Services	7,849	49	160
Home Health	7,504	*	*
Targeted Case Management School Based Services	1,500	*	*
Hospice	0	0	0
Total	**$21,886,019**	**1,054****	**$20,765**

*These numbers are suppressed to due total number of beneficiaries less than five.
**Some beneficiaries are counted in multiple categories. Thus, the total number of beneficiaries is not the sum of the number of beneficiaries for each type of claim.
Source: Alaska DHSS Division of Public Assistance.

MEDICAID SPENDING ON BEHAVIORAL HEALTH

The per capita Alaska Medicaid portion for all behavioral health clients regardless of age in 2013 was $115.[12] When extrapolated to the Mat-Su Borough senior population, this accounts to $1,030,515. The average annual Medicaid portion per behavioral health client in Mat-Su was $2,426. When applied to the total number of Mat-Su seniors receiving behavioral health treatment – ~230 Mat-Su seniors – this totals $557,980.

[12] Alaska Behavioral Health Systems Assessment 2009-2013 Mat-Su Regional Data Report, 2015, http://mhtrust.org/mhtawp/wp-content/uploads/2015/11/MatSu_Regional_Data_Report.pdf

Table 92. Per Capita Medicaid Payments for Behavioral Health Clients by Region (Based upon 2013 Population and Payment Data) and Average Annual Medicaid Payments Per Client

Region	Per Capita $ Value	Average Annual Medicaid Payments Per Client
Other Southeast	423	6,788
Juneau	386	7,300
Anchorage	311	7,400
Kenai Peninsula	283	5,552
Fairbanks	277	8,541
Matanuska-Susitna	115	2,426
Y-K Delta	94	2,469
Northwest	53	1,746
Southwest	45	1,808
Other Interior	18	1,020
Alaska	268	7,239

Source: Alaska Behavioral Health System Assessment Regional Data Report 2009-2013, Matanuska-Susitna Borough Region.

Division of Public Assistance

The Division of Public Assistance administers the Senior Benefits Payment Program. This program distributes cash to Alaska seniors (age 65+) with low incomes. In 2015, $22,631,700 was distributed statewide. Of this spending, $2,923,625, or 13 percent, went to Mat-Su seniors. Monthly payments ($125, 175, and $250) vary according to an individual or couple's income.

Additionally, this division also administers the Senior Farmers Market Nutrition grant of $66,211 to the United Way of Mat-Su. The program provides coupons worth $25-50 to low-income seniors to redeem at participating individual farmers, farmers' markets, and roadside stands.

Division of Public Health

The Division of Public Health administered a grant, Community Health Centers – Seniors Access Programs, of $8,335 to the Sunshine Community Health Center in FY2015. The goal of the program is to increase access to and delivery of primary care to Alaska seniors through Alaska's Community Health Centers. Funding is to help alleviate strain on these centers resulting from their provision of medical homes for seniors who have been refused care by private practice physicians due to low Medicare reimbursement rates.

The division also administered the grant, Coordinated Community Older Adult Fall Prevention, of $145,500 to the Wasilla Area Seniors, Inc. The grant sought to establish and strengthen fall prevention services for seniors who are at-risk for serious fall related injuries and those that currently experience repeated falls. Since the grant was discontinued July 1, 2015 and short-term, the program was not in existence long enough to measure impacts.

Alaska Veterans and Palmer Pioneers Home

The Alaska Veterans and Pioneers Home in Palmer was built in 1971. In May 2004, the Alaska legislature approved development of the state's first veterans home. After renovations were made to meet U.S. Department of Veterans Affairs (VA) requirements, the facility was renamed the Alaska Veterans and Pioneers Home. Seventy-five percent of the 79 beds in the home are designated for veterans and 25 percent are available for non-veterans. Qualifying veterans from all over the state are eligible for a per diem from the VA to offset costs of their care. In FY2015, Federal VA funding was approximately $750,000. On average, 74 out of the 79-bed capacity are filled.

Services vary, depending on health status and need, and include: private or semi-private rooms, recreation and physical activities, meals, housekeeping, emergency assistance, assistance with activities of daily living, nursing assessment and intermittent health services, payment assistance (for those who qualify) and pharmacy services.

Division of Senior and Disabilities Services

GENERAL RELIEF

The Division of Senior and Disabilities Services provides Alaska Adult Protective Services General Relief to meet the immediate, basic needs of Alaskans requiring temporary funding assistance for assisted living home placement. As of June 1, 2015, there were 21 Assisted Living Homes in the Mat-Su Borough that were approved to accept General Relief payments, of which 15 homes were licensed to provide senior care. Ten of these 15 homes had seniors living in them.

Statewide, there were 295 seniors who received $2.1 million in FY2015 in the General Relief benefit, of which 39 were Mat-Su seniors (receiving $221,378, or $5,676 each recipient).

SENIOR COMMUNITY BASED GRANTS

The Division also provides Senior Community Based Grants that support seniors age 60+ (based on the Older American's Act definition):

- **ADULT DAY SERVICES**: Adult Day Services provides supervision for those seniors who face a health risk if left alone and unsupervised throughout the day. The program is especially intended for very frail seniors or seniors with Alzheimer's Disease, developmental disabilities, and/or brain injuries. Adult Day Services provide social and recreational interactions and keep seniors physically active and engaged.
- **NUTRITION, TRANSPORTATION, AND SUPPORT SERVICES**: Senior centers provide a host of services for seniors. They include hot meals, both on-site or by delivery through Meals on Wheels. Senior centers also assist with transportation, helping seniors to travel to and from the senior center, medical appointments, adult day services, grocery stores, and shopping centers. Other support services include opportunities for socialization, recreation, and physical activity. For services that senior centers do not provide, the seniors centers serve as information centers where seniors can receive referrals to other programs better suited to address their needs.

- **HEALTH PROMOTION AND DISEASE PREVENTION**: Some senior service providers focus on wellness. Seniors centers offer daily activities like education and fitness classes. One goal of these classes is to increase socialization and prevent isolation. Other wellness services include chaplain services, blood pressure checks, health fairs, and exercise facilities.
- **NATIONAL FAMILY CAREGIVER SUPPORT PROGRAM**: This program assists family and other caregivers of seniors. The program shares knowledge of support services and how to access those services. It also provides respite care and organizes support groups for caregivers.
- **SENIOR IN-HOME SERVICES**: These services include a variety of in-home services packaged to meet the individual and family's unique needs. Senior in-home services include care coordination, chore, respite, extended respite and supplemental services.
- **AGING AND DISABILITY RESOURCE CENTER (ADRC) GRANT**: ADRCs function as information banks, fostering awareness through a staff knowledgeable of a large array of services – such as Medicare, Medicaid, Social Security, veterans' benefits, long-term care, and community living – and how to access them. ADRCs connect seniors and people with disabilities with the proper resources and help them navigate complex systems.

  Additionally, the ADRC also provides **MEDICARE COUNSELING AND OUTREACH.** Administered by LINKS Mat-Su Parent Resource Center, the staff is trained to assist with Medicare enrollment and any other question pertaining to navigating Medicare. In the first half of FY2016 (July 1-December 31, 2015), the ADRC served 913 unduplicated individuals. Of these individuals, 403 received Medicare counseling, 388 received options counseling, 233 received short term coordination, and 1,140 referrals were made. By the end of the fiscal year (June), they expect to serve 1,700 individuals.[13]

Table 93. Division of Senior and Disabilities Services Community Based Support Funding for Mat-Su Seniors, Mat-Su Borough (FY2016)

Program/Service	Grant Recipient	Partners	Amount Awarded
Adult Day Services	Mat-Su Senior Services		$278,296
Nutrition, Transportation and Support Services	Mat-Su Senior Services	Wasilla Area Seniors/ Upper Susitna Seniors	$612,492
Health Promotion and Disease Prevention	Wasilla Area Seniors	Mat-Su Senior/ Upper Susitna Seniors	$45,538
National Family Caregiver Support Program*	Mat-Su Senior Services		$41,014
Senior In-Home Services*	Mat-Su Senior Services, Wasilla Area Seniors		$135,133 96,811
Aging & Disability Resource Center Grant (inc. Medicare Counseling & Outreach)	LINKS		$189,000
Total			**$1,398,284**

Notes: DSDS provides grant dollars to the Mat-Su Services for Children and Adults in the form of Community Developmentally Disabled Grants and Short Term Assistance and Referral; however, seniors make up less than 2 percent of these clients served. The division also provides Traumatic Brain Injury Grants; however, these dollars are primarily used to serve people under the age of 65.
*. In FY2016, the Alzheimer's Disease Resource Agency of Alaska was awarded $1,253,573 to provide senior in-home services for all seniors statewide (including those in the Mat-Su). In addition, the Agency received state grants for ADRD Education and Support, and National Family Caregiver Support Program statewide for $346,036 and $271,000 respectively. Based on direct costs incurred in the Mat-Su Borough, these last two grants prorate ~$126,000 of these grants for care in the Mat-Su.
Source: Alaska Department of Health and Social Services, Division of Senior and Disabilities Services.

[13] Per email correspondence to Melissa Kemberling from Eric Wade, Executive Director, LINKS Mat-Su Parent Resource Center, January 20, 2016.

Alaska Mental Health Trust

The Alaska Mental Health Trust Authority (AMHTA) Mini Grant program provides funds for senior beneficiaries up to $2,500 to address needs to improve overall health and well-being in the areas of developmental disabilities, behavioral health, and Alzheimer's disease and related disorders. The AMHTA awards these grants based upon need to an agency on the beneficiary's behalf. In FY2015, $1,207,329 in mini grants were distributed statewide. The total dollar amount given to serve Mat-Su seniors was unavailable. These funds aims to capture essential needs of AMHTA beneficiaries that are not covered by other entities, including:

1. Ensure for dementia patients
2. Diapers for elderly
3. Non-traditional sized wheel chairs

Alaska Department of Labor and Workforce Development

ADOLWD administers Mature Alaskans Seeking Skills Training (MASST) Program (federally known as the Senior Community Service Employment Program). An important goal of MASST is to help participants achieve self-sufficiency when they exit the program. Grantees must provide training opportunities for unemployed low-income persons age 55+ that will enable participants to obtain the unsubsidized employment goal identified in each participant's Individual Employment Plan. Of the $319,000 awarded to the Palmer Seniors Center in FY2016, $255,413 was spent. In FY2017, $261,948 was awarded to support 21 participants. Three-quarters of the grant covers the participant's wages, and the remaining quarter covers other enrollee costs and administration.

Alaska Housing Finance Corporation

The Alaska Housing Finance Corporation (AHFC) provides a cross-section of housing support that impact seniors. To date, AHFC has funded approximately 280 units of senior housing in the Mat-Su Borough. Recently, a new senior development called "Vista Rose" with 42 units was awarded in Wasilla under the **Greater Opportunities for Affordable Living (GOAL)** program. The development received a state award under the **Senior Citizen Housing Development Fund** of $300,000; $1,170,000 in Federal Home Funds; plus, another $575,970 in Low Income Housing Tax Credits.[14]

Seniors also benefit from the **Accessibility Modification** grants, a program that funds accessibility modifications in senior (age 55+) homes. In 2015, approximately $50,000 was granted to seven households in the Mat-Su, of which six households had a senior age 65+.[15]

[14] Per email correspondence with Mark Romick, AHFC, February 10, 2016.
[15] Ibid.

The **Senior Housing Office** aides hundreds of seniors and their family members each year in locating suitable housing options. While it not known how many calls originate from the Mat-Su Borough on behalf of seniors, it is presumed the office provides assistance to seniors seeking assisted living and/or long-term care options – particularly involving memory care issues.[16]

Individuals who meet certain income limits (for instance, $66,500 for two-person household in the Mat-Su Borough) are eligible for **Weatherization at No Cost** program. Seniors are considered high priority for program support. For the work season extending from April 1, 2015 to March 31, 2016, approximately $1 million will be spent on 83 senior households in the Mat-Su Borough. Of these households, 27 households have 32 seniors (age 60+) and 56 households have 77 seniors (age 55+).[17] Some dollars may also go to seniors in the Mat-Su for the **Home Energy Rebate Program**, however, no data was readily available regarding Mat-Su seniors.

Overview of Federal Spending

Medicare

Medicare pays for seniors' personal health care services and products (hospital care, physician services, nursing home care, prescription drugs, etc.).

In 2009 (most recent data available), $553 million was spent by Medicare in Alaska or $8,812 per Alaskan resident enrollee (compared to $10,365 per enrollee in the U.S.).[18] Assuming all seniors in the Mat-Su were enrolled in Medicare, this would suggest total spending of around $58.4 million (2009), or 10.6 percent of total Medicare spending. In 2009, Mat-Su seniors represented 12.7 percent of Alaska's seniors. Between 2009 and 2014, Mat-Su's senior population has grown by 45 percent.

Between 1991-2009, the average annual percent growth in Medicare spending per enrollee in Alaska was 5.4 percent, below the rate of 6.3 percent for the U.S.[19] The average annual percent growth in Medicare spending in Alaska was 10.6 percent; above 8.0 percent in the U.S.[20]

The following data summarizes costs for Medicare patients with serious chronic illnesses who were in their last two years of life and enrolled in the Medicare's traditional fee-for-service benefit. Once assigned to a hospital, the beneficiary's information links to the hospital, and all treatment received, regardless of where services were subsequently provided, is associated with the hospital. Because of this distinction, the text uses "Mat-Su" to refer to the data reported for the Mat-Su Regional Medical Center.

In 2012, the total reimbursements per Mat-Su Medicare patient during the last two years of life per decedent were $69,538. This is higher than the statewide average of $68,832, but lower than the national average of $80,378.

[16] Per email correspondence with Jim McCall, AHFC, February 8, 2016.
[17] Per email correspondence with John Anderson, AHFC, February 9, 2016.
[18] http://kff.org/medicare/state-indicator/per-enrollee-spending-by-residence/
[19] Centers for Medicare & Medicaid Services (2011). _Health Expenditures by State of Residence (http://kff.org/medicare/state-indicator/growth-in-per-enrollee-spending-91-09/).
[20] http://kff.org/medicare/state-indicator/avg-annual-growth-in-spending-91-09/.

Table 94. Total Reimbursements per Decedent during the Last Two Years of Life at the Mat-Su Regional Medical Center with State and National Comparisons, 2012

Region	Total Reimbursement
Mat-Su Regional Medical Center	$69,538
Alaska	$68,832
U.S.	$80,378

Source: Dartmouth Atlas of Care

The Medicare reimbursements per decedent by type of care during the last two years of life in the Mat-Su (regardless of where they received care) were $2,920 for hospice, $42,600 for inpatient services, $12,085 for outpatient services, $3,893 for a skilled nursing facility/long-term care services, and $3,983 for home health. The Mat-Su values were higher than statewide amounts for hospice and inpatient, but lower for outpatient, skilled nursing facilities/long-term care, and home health. When compared to the nationwide values, Mat-Su was lower for all types of care except inpatient services.

Table 95. Mat-Su Regional Medical Center Medicare Total Reimbursements Per Decedent, by Type of Care during the Last Two Years of Life with State and National Comparisons, 2012

Type of Care	Mat-Su Regional Medical Center	Alaska	U.S.
Hospice	$2,920	$1,725	$5,058
Inpatient	$42,600	$37,126	$37,796
Outpatient	$12,085	$12,145	$13,929
Skilled Nursing Facility/Long-Term Care	$3,893	$4,547	$15,085
Home Health	$3,983	$2,333	$4,794

Source: Dartmouth Atlas of Care

Tribal Support

The Benteh Nuutah Valley Native Primary Care center provides primary care services, optometry, pharmacy, audiology, wellness courses, and behavioral health services for the entire population. This includes access to physical activity classes and other wellness classes. Benteh Nuutah does not have an elder program currently and does not provide home-based services for seniors. However, the Wellness Center offers an "Elder's Wellness" class.

Knik Tribal Council and Chickaloon Village lead efforts to expand senior home-based services in collaboration with Southcentral Foundation. Knik Tribal Council partners with WASI to provide congregate and meals on wheels to eligible Title 6 beneficiaries (Alaska Native, American Indian, and Native Hawaiian).

Chapter 8: Senior System of Care Policy Review

Summary of Policy Initiatives for Consideration

Senior care, services and supports in the U.S. are both governed and informed by a range of policies at state, national, and infrequently, local levels. While national policy with respect to senior care was established primarily with the passage of the Social Security Act of 1935 and subsequent amendments (i.e., Medicaid and Medicaid in 1965), other aspects of federal policy greatly impact care and service for seniors, not only in Alaska but also across the country. The summary findings of this report imply six key policy initiatives for consideration:

1. Pursue participation for the Mat-Su as a key demonstration or pilot region for any Medicaid expansion effort that may benefit or impact seniors, especially the proposed primary care improvement initiative and accountable care organizations pilot.
2. Seek and support changes in Alaska's Medicaid-funded home and community-based elder care services and programs to include increased oversight and certification of providers, key quality measures and related, data and performance improvement analysis initiatives that correlate Medicaid beneficiary spending and related outcomes with broader measures of population health – reduced ED visits, hospital admission rates and primary-care engagement.
3. Support state and federal policy initiatives to restore Section 202 housing funding (or a similar program) to foster development of affordable housing the Mat-Su. Alternatively, seek special legislation to fund development of low-income housing for Mat-Su seniors.
4. Require the development of a permanent funding stream to support long-term operation of ADRCs across Alaska.
5. Support expansion of a new Older Americans Act that revises the current funding methodology and increases available Title III dollars for nutrition and transportation programs.
6. Continue to work with the Alaska Commission on Aging for changes to the Funding Formula of the Alaska State Plan for Senior Services, incorporating appropriate definitions of "urban" and "rural" that mesh with the Mat-Su Borough's geographic and demographic realities, and revisiting annual population estimates to more accurately capture changes in Mat-Su's senior population throughout the State Plan cycle.

Continuum of Care, Access, and Health Outcome Policy Barriers

The summary presentation below characterizes significant aspects of policy that are both recent and pertinent to senior care and service in the Mat-Su.

Affordable Care Act

Passed in early 2010 and subsequently signed into law in March of that year, the Affordable Care Act (ACA) (PL 111-148 and PL 111-152) provides for sweeping change of healthcare financing and access for Americans of all ages. The ACA is driving reform in both Medicaid and Medicare, establishing requirements for insurance provision (e.g., individual and employer mandates), expanding access for at-risk populations, establishing programs to support healthcare quality, and emphasizing preventative models of care. In effect, the ACA serves to accelerate the transformation of our healthcare system from that of a reactive, fee-for-service model towards that of a preventative, population health oriented culture. For seniors, the ACA has empowered states to expand and reform Medicaid services, which will potentially increase program offerings and coverage. As a result of the ACA, states can shift traditionally waiver-supported services (which are limited in scope) into benefit plan offerings and increase the types of service and coverage they may offer. States are additionally afforded flexibility in transitioning services from traditional management models towards two-way and three-way partnerships with managed care organizations (and with CMS) to more effectively manage Medicaid populations.

With respect to Medicare, the ACA encompasses a range of requirements focused on revising approaches to both care delivery and payment. Accountable models of care and episodic approaches to payment – long studied in pilots and demonstrations – are fully realized in the ACA, which has led to the development of accountable care organizations, bundled payment programs, patient-centered medical homes, care transition programs and similar efforts. These efforts serve to shift an emphasis away from "volume" oriented use of service in favor of "value" – applying the right service or care at the right time in a patient's care, service or aging journey.

For seniors, the emphasis on Medicare reform is to achieve better coordinated service that is preventative in nature, emphasize greater use of primary care physicians, and integrate more effectively with other providers to create a more inter-connected continuum of care and service. The ACA has additionally created a framework to both experiment with and define innovative models of care for seniors. The Center for Medicare and Medicaid Innovation (CMMI) – a key outgrowth of the ACA – serves as the test-bed incubator for many aspects of the ACA and has provided an environment to experiment outside the often limiting requirements of the Medicare and Medicaid programs. Much of the innovation related to senior care (and potential funding streams for experimentation) are accessible via CMMI. Impacts of the ACA are already at play in the Mat-Su, as healthcare provider organizations must contend with quality and performance reporting requirements imposed by the Act. Potential revisions to Medicaid in Alaska, allowed under the ACA, may have greater impacts for long-term services and supports providers, which offers the potential for expanded service provision.

Older Americans Act

Passed during the Johnson administration and signed into law in July 1965, the Older Americans Act (OAA) (PL 89-73) established the first federal level effort aimed at defining and providing comprehensive services and supports for older adults. The OAA created the national Administration on Aging, as well as state and local units for aging (i.e., Area Agencies on Aging). The OAA is significant for the Mat-Su, as it provides direct funding for many programs historically offered in the region: nutrition and supportive home and community-based services, disease prevention/health promotion services, elder rights programs, and caregiver supports. Funding for a given region is determined by the total age 60+ population in its geography. (By way of example, Alaska received $5.8 million in Title III OAA funding in FY2015.) The OAA was most recently reauthorized in 2007. The nature of grant funding within the OAA creates a highly competitive environment among community organizations, as evidenced by provider behaviors in the Mat-Su, who compete directly for funding to support their nutrition and transportation programs. Changes in a revised or reauthorized OAA, which is not presently under consideration, could impact funding and should be a source of continued evaluation among Mat-Su based providers.

Section 202 of Housing Act of 1959

Section 202 supports the development of supportive (e.g., affordable) housing for the senior population by providing interest-free capital advances to private, nonprofit sponsors to finance the development of supportive housing for seniors. Sponsors are not required to repay the capital advance as long as the project serves very low-income elderly persons for 40 years. Project rental assistance funds are provided to cover the difference between the Housing and Urban Development-approved operating cost for the project and the tenants' contribution towards rent. Occupancy in a Section 202 property is open to any very low-income household comprised of at least one person who is at least 62 years old at the time of initial occupancy.

While the Section 202 program has served an important and essential role for senior housing for more than half a century and continues to support existing programs around the country, funding for the program was eliminated during the FY2012 federal budget cycle and has yet to be restored. As such, the development of affordable housing for seniors has been virtually eliminated, as the funding removal eliminates both the capital grant advances and rental assistance funds. Demand for affordable housing far exceeds the available supply, and according to an AARP study in 2006, there are ten people on the waiting list for each available Section 202 unit. For the Mat-Su, affordable housing represents an urgent need, and the ideal vehicle for addressing development of such service is unavailable. As such, restoring Section 202 funding represents an urgent legislative concern not only for the Mat-Su but also for the nation as a whole.

Alaska Medicaid

Alaska's Medicaid program is operated by the Department of Health and Social Services and serves more than 130,000 Alaskans across the state through a range health and supportive programs that are funded via a combination of state and federal streams. Medicaid was created in 1965 during the Johnson administration and primarily serves low-income, at-risk populations who cannot otherwise afford or secure such services from employment or another mechanism. In most states, Medicaid serves as a dominant funding stream for long-term services and supports for seniors who must meet certain age and income requirements to qualify.

In Alaska, roughly 9,400 seniors currently receive services via Medicaid, via either state plan options or waiver services, managed by the Division of Senior and Disability Services. Medicaid programs vary greatly from state to state, depending on the needs of its citizens, available funding and inherent limitations. Alaska, given its size and diversity, is no exception. When it comes to senior-related services, Alaska is unique in that the bulk of Medicaid programs are directed towards home or community-based service options, rather than more common institutional-based services (i.e., nursing homes and custodial care models) found in other states. The various options include Alaska's personal care attendant program (either agency-based or consumer-directed), a grants program to address the diverse challenges of Alaskan seniors, and two waiver programs with home and community-based supports for seniors who meet nursing-facility level of care.

Following the path of other states because of the ACA, Alaska implemented its own version of Medicaid Expansion in September 2015, which has increased the total number of Alaskans who qualify for, and have subsequently enrolled in, Medicaid Services. At the same time, the state is actively exploring Medicaid Reform (or Redesign) to address limitations of current plan offerings, develop better systems of accountability and quality measurement in Medicaid, and disseminate new models or approaches to plan and service delivery that will more effectively manage Medicaid cost growth into the future.

The proposed reform initiatives, which were announced in January 2016, include initiatives related to primary care improvement and behavioral health access, improved analytics infrastructure, and pilot programs for emergency care and a Medicaid accountable care organization. These efforts at both expansion and reform may serve to improve the delivery of care and services for older Alaskans in the Mat-Su and represent a key area of focus for Mat-Su stakeholders, providers and consumers.

Alaska State Plan for Senior Services Funding Formula

The Alaska State Plan for Senior Services FY2016-2019 includes a funding formula to regionally distribute state and Federal funds for the Nutrition, Transportation and Support program, and for Senior In-Home services. A Funding Formula Task Force was created to produce recommendations to revise the funding formula for activation on July 1, 2016 (for FY2017-2019). During this process (in April 2016), it was agreed that Region V would be subdivided into two subsets – Mat-Su (Region Va) and Kenai/Valdez/Cordova (Region Vb).

Other considerations were made regarding the definition of "rural" to include a "remote" classification based on Metro & Micropolitan Area Standards developed by the Office of Management and Budget – a definition developed for statistical purposes not for funding formulas. Under this definition, the Mat-Su Borough was considered urban while other areas, such as Kenai Peninsula Borough, City of Juneau, and Ketchikan Gateway Borough were considered rural. Yet, parts of the Mat-Su Borough (such as Lake Louise, Talkeetna, etc.) do not display characteristics of urban environments and this broad urban definition is not responsive to the inherent challenges in delivering community and in-home services to seniors living in non-urban areas within the Borough.

Additionally, the FY2017-2019 funding formula is not structured to incorporate annual changes in population estimates. Combining strong growth in the Mat-Su senior population and other imminent economic and fiscal developments, a policy that bases FY2019 funding on population estimates developed four years earlier likely will not result in appropriate funding support for Mat-Su senior services throughout the State planning cycle.

Chapter 9: Literature Review of "Best Approaches"

Summary

The literature review provides a summary of research, program development, and policy that supports best practices around an individualized and wraparound functional model of care for seniors.

Designed originally for youth with serious emotional and behavioral needs, the "Wraparound Functional" system-of-care model, coined in North Carolina (Behar, 1985), is built on a philosophy of care with defined planning process used to build constructive relationships and support networks among seniors, their families, and their providers. The model is community based, culturally relevant, individualized, strength based, and family centered (Winters & Metz, 2009). The intent of a wraparound model is to support seniors through their aging process, regardless of age or income status, via broad functional pillars that correlate with various aspects of senior circumstance and need.

This literature review focuses on best approaches around four functional pillars of a senior care system, including:

1. **Assessment** encompassing services, programs or processes to evaluate a senior's current status (medical, social, physical, or behavioral) and deploy preventative solutions or courses of action.

2. **Intervention** involving efforts or systems to change or fix an emergent or immediate problem that may be either high frequency or high risk.

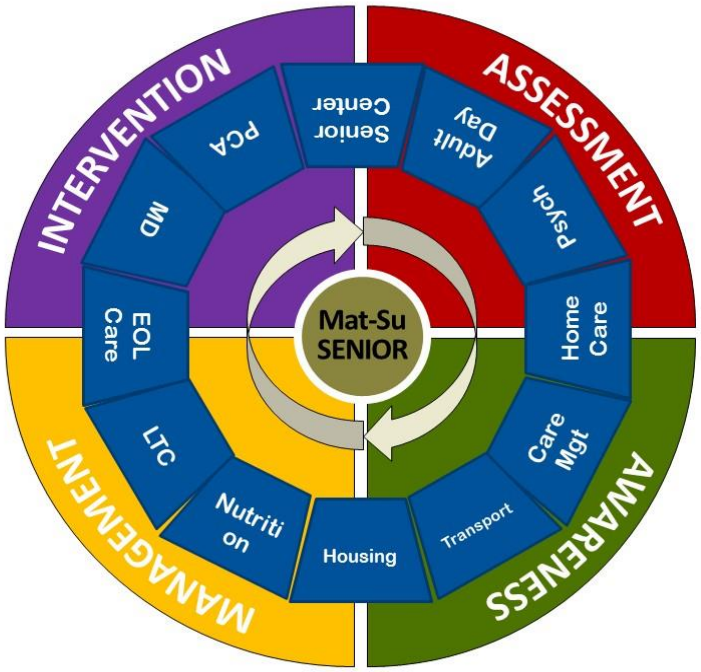
3. **Management** addressing functions or programs to ensure continued health or improvement, foster independence, or maintain functional status.

4. **Awareness** involving systems and processes to increase senior understanding of programs and services, improve understanding of access points within the continuum and promote broader community engagement in supporting seniors.

Surrounding the model's four pillars are the orbiting array of supports that may actually deliver or provide services – family members, existing senior or elder care providers, hospitals, physicians, broader community and so on.

Figure 12. Wraparound Functional (Four Pillar) Model of Mat-Su Senior Care

The four pillar model creates a system where services can be customized or "wrapped around" seniors so they can access services and services can reach seniors. The pillars interact with one another to deliver appropriate service at appropriate times and encourages collaboration among seniors, providers and other stakeholders.



Assessment

Seniors are more likely to have health problems and endure worse outcomes than younger members of the community (Hastings & Heflin, 2005). Consequently, the identification of illness is crucial, as seniors face significant risk if illnesses go unnoticed and untreated.

Several barriers stand in the way of seniors accessing health care providers: there exists a lack of primary care providers, in particular, family practice doctors, internal medicine doctors, and geriatric physicians, and especially in rural areas. Literature suggests an ideal physician to population ratio of 1:1,200 (*Physician Shortages…*, 2010). In the rural United States, this ratio averages 1:1,910 for primary care physicians and 1:2,940 for family practice physicians (*Keeping Physicians…*, 2014). Further, while over 20 percent of the U.S. population lives in rural areas, only 10 percent of physicians practice in rural areas (*New paradigms…*, 2007). With the number of primary care physicians predicted to fall short of demand by 45,400 providers in 2020 (*Physician Shortages…*, 2010), this shortage will only worsen.

Communities have limited ability to influence this shortage of primary care physicians. For one, the responsibility of training physicians lies beyond the reach of individual communities. Also, programs developed to bring physicians to rural communities operate at federal and state, not community, levels. Despite these limitations, some efforts can be made at the community level. In Alaska, the State runs the Supporting Health-care Access through Loan Repayment (SHARP) program, which aims to attract and retain health care providers. Medical facilities and sites throughout the state can apply to become part of the program and serve as employer sites, which would bring physicians to the region. Communities can also attract physicians by encouraging local youth to pursue a career in medicine. Physicians raised in a rural region are more likely to return to a rural area to practice (*Future of Family Medicine…*, 2014).

Besides a general lack of physicians, seniors face an additional barrier accessing care since physicians that do practice locally can only accept a limited proportion of Medicare patients, due to the often below-cost Medicare reimbursement rates. Thus, seniors covered by Medicare struggle to find primary care providers and wait longer for appointments. Consequently, they sometimes do not have access to medical care in a timely manner and turn instead to the ED as a first point of contact with the health system (Bodenheimer & Pham, 2010).

Nationally, seniors self-report several additional barriers to accessing care. They report the greatest barrier as doctors' lack of responsiveness to concerns (Fitzpatrick et al., 2003). This may be due, in part, to inadequate experience and training in caring for seniors. Studies have demonstrated that not all sectors of the medical field have adequate expertise in geriatric care. For example, in the emergency department (ED), fewer than 30 percent of nurses and 25 percent of physicians screen for geriatric conditions (Carpenter et al., 2011). Furthermore, physicians in the ED identify only a quarter of delirium cases in seniors they see (Han et al., 2009). A community can overcome this barrier through targeted recruitment and training. Medical facilities can hire professionals with prior geriatric experience, and communities can encourage local providers to seek out continuing medical education focused on senior care.

Nationally, seniors report the next greatest barrier to accessing care as cost. A comprehensive strategy to reduce health care costs lies beyond the scope of this literature review. However, a few efforts, applicable at the community level, do exist that affect costs without requiring involved health care reform. Urgent care clinics represent one such effort. Urgent care clinics have capacity to treat ailments often seen at EDs at a smaller fee (Weinick, Burns, & Mehrota, 2010). Additionally, urgent care clinics can be dispersed throughout a community to provide more proximal care for all residents. Another strategy to lower costs includes transferring care from a hospital to a patient's home. Telehealth and related technology allow for the remote monitoring of vitals and physiological indicators. Avoiding doctor visits in this way reduces medical costs and avoids the challenges some seniors face in physically getting to an appointment (*Telemedicine consultations…*, 2015).

Nationally, the third most self-reported barrier to accessing care is transportation. As seniors age and lose the ability to drive, other modes of transit become necessary for them to access health care. One study demonstrated that seniors without a car or unable to drive made fewer trips to see a doctor than those capable of driving (Degood, unknown date). Many of the community transportation programs throughout the nation rely on federal funds. Arrowhead Transit in Minnesota operates through funding from the Federal Transit Administration Rural Area Formula Program to provide transportation in communities with populations less than 50,000. The service offers customizable routes at an average cost of $7.63 per trip. In South Dakota, the River Cities Public Transit non-profit specializes in rural transit and provides rides for both medical and non-medical purposes. The program accepts Medicaid benefits and allows Personal Care Attendants to accompany clients for free. Other communities have sought alternatives to federal funding. In Maryland, the non-profit organization, Partners in Care, operates exclusively through volunteers to provide rides. Volunteers offer their time in a variety of ways, and receive credit for that time. In return, they can use that credit to buy rides from other volunteers. The program operates in urban, suburban, and rural settings.

While access to care plays an important role in identifying health problems, so too does the quality of care. The medical community has developed screening tools intended specifically to uncover health problems of seniors. One simple screening tool, intended for use by a provider, is the Frailty Index (Schoon et al., 2014)). The Frailty Index sums the number of frail conditions exhibited by a patient. That sum, based on prior statistical analysis, correlates with health outcomes such as use of health care services and mortality rate, and can be used as a predictive tool. In addition to its predictive capabilities, one benefit of the Frailty Index is to simply focus a provider's attention on health factors that may otherwise go unnoticed.

Other screening tools include those implemented in EDs, such as the "Identification of Seniors at Risk" questionnaire. Nurses employ this questionnaire at triage, inquiring of information like previous hospitalizations and patient baseline function and cognition, to provide the necessary level of care. Although the questionnaire is designed for the ED, the ideas can be applied to other medical settings.

Falls do not have to be an inevitable part of aging. The CDC developed (Stopping Elderly Accidents, Deaths,& Injuries (STEADI) – Older Adult Fall Prevention to reduce the risks of falls. STEADI provides screening tools to identify and address fall risk factors, such as lower body weakness, gait and balance problems, psychoactive medications, postural dizziness, poor vision, problems with feet and/or shoes, and home safety (http://www.cdc.gov/steadi/materials.html). STEADI also provides training and intervention recommendations.

Stepping On, a multifaceted, community-based falls prevention program in Sydney, Australia, aimed to improve fall self-efficacy, encourage behavioral change, and reduce the incidence of falls among the elderly. Stepping On targeted community residents aged 70 or older who had had a fall in the previous 12 months or were concerned about falling. The program used a small-group learning environment focused on improving lower-limb balance and strength, improving home and community environmental and behavioral safety, encouraging regular visual screening, making adaptations to low vision, and encouraging medication review. The intervention group experienced a clinically meaningful 31% reduction in falls over a median period of 429 days, demonstrating that the Stepping On program is effective for community-residing elderly people. Secondary analysis of subgroups showed that the program proved particularly effective for men. (Clemson et al. 2004)

Not all screening tools require a provider or medical setting. Self-performed tests such as measuring step length or gait speed, which correlate with a risk for negative health outcomes, allow seniors to assess their health on their own (Schoon et al. 2014). They merely need to be informed that such tests exist and encouraged to use them.

Intervention

The next function of a community, once a health problem is identified, is to intervene and implement quality treatment that addresses the new problem and prevents further decline. This is especially key for seniors who have high risk for further decline after onset of a new health problem.

Existing ED models typically do not provide the most appropriate or effective environment for senior care and may underserve high-risk seniors. For example, following discharge from the ED, seniors exhibit high rates for functional impairment and mortality, and a quarter are back in the ED within three months (Hastings & Heflin, 2005). Below are some approaches to improving senior care in the ED. Some have been shown by studies to statistically improve patient outcomes, while others are perceived by patients, ED staff, or geriatric medical specialists as positive contributions to senior care. (A more detailed literature review specific to seniors and ED settings, can be found in Appendix E: Senior Use of MSRMC ED.)

- *Implement screening that adequately addresses comorbidities, geriatric syndromes, and other senior illnesses or injuries that commonly go unnoticed.* Screening tools for this purpose, such as ISAR, are available.

- *Allocate additional effort to education and recruitment of ED staff with expertise in senior care.* Existing ED physicians and nurses can attend geriatric training to become more comfortable caring for seniors. EDs can recruit nurses with experience in both ED and geriatric settings and make geriatric consultations available for ED physicians.

- *After discharge from the ED, use home-based follow-up, preferably in person but also by telephone, to improve patient outcomes.* Some benefits of follow-up include that nurses can monitor adherence to the treatment plan and convey information to the patient's primary doctor, specialists, or other care providers.

- *Evaluate physical changes to the ED that can improve patient care without requiring expensive remodeling or overhaul.* Efforts may focus on just a portion of the ED to create a specialized environment for seniors. Minor changes include the placement within rooms of hearing devices, walking aids, large clocks and TVs, and large-font instructional text to keep patients informed and avoid confusion.

- *Link discharge treatment plans through telemedicine or remote patient monitoring.* Telemedicine and remote monitoring allow doctors to receive vitals from patients living at home, thereby reducing the number of ED visits and hospital (re-)admissions and lowering costs. While telemedicine programs are not managed by ED physicians, the process could be implemented upon discharge from the ED by specialists or primary care providers.

A first treatment step for those facing a sudden decline in health is transitional care, which eases a patient's adjustment to their new functional capacity. Transitional care takes many forms, ranging from temporary boarding in a skilled nursing facility to having a care taker support a patient in the patient's home on a semiregular basis. All forms are necessary to meet the varying needs of different patients.

While the mere availability of transitional care is key, so too is the quality of the transitional care. For transitions from a hospital to home setting, Eric Coleman, a doctor with an expertise in geriatric and chronic disease care, developed a model demonstrated to reduce re-hospitalization rates and lower hospital costs (Coleman, Parry, & Chalmers, 2006). Other studies have shown the model to improve patient rehabilitation outcomes (Coleman, Roman, Hall, & Min, 2015). His model centers around patient and caregiver education conducted by a Transitions Coach®. The Transitions Coach® follows the patient during their recovery, with multiple phone calls and in-person visits, one in the hospital prior to discharge and one in the patient home following discharge.

The Transitions Coach® instructs on four topics: self-managing medication, follow up with additional providers, red-flag symptoms that would indicate worsening health, and the development of a personal health record owned by the patient to assist in providing continuity across multiple providers. The model, dubbed Care Transitions Intervention®, empowers patients and has been implemented with success, improving patient health and lowering costs.

Another key component of senior treatment is how providers manage their care. Certain practices and models of care management realize better patient outcomes. One model of care management, the Comprehensive Geriatric Assessment (CGA) has demonstrated decreased rates of functional decline, admission, and readmission (Deschodt, et al., 2015). The success of the CGA rests upon its use of a multidisciplinary team, composed of physicians (including geriatricians), nurses, social workers, therapists, and mental health specialists, to manage a patient's care. The CGA team meets regularly to discuss patient progress and evaluate the treatment plan. Part of the CGA model includes transitional care. Nurses visit a patient in the patient's home where they teach medication management and assist with making and attending follow up appointments. Nurses assess a patient's ability to live independently and report back to the larger CGA medical team, communicating details such as whether a patient requires assistance with activities of daily life (ADL). They identify health risks in the home, such as potential for falls, and determine what action may be necessary to mitigate those risks. The CGA initially developed as a model of care management for patients discharged after a hospital admission. More recently, EDs began to employ the CGA for senior discharges. The benefits of the CGA are universal and not specific to any one particular medical setting. Senior care can be improved by introducing aspects of the CGA in more treatment plans.

With age and the associated physical and mental decline, vulnerability rises. Seniors become more susceptible to abuse by others, abuse that can take the form of, for example, neglect, physical infliction, psychological distress, financial theft, and medication theft. Senior neglect or abuse is often an issue that receives little awareness. A healthy community aims to overcome senior abuse through prevention, detection, and, in the case of abuse, intervention. Adding complexity to the issue, studies have found that senior victims of abuse often live with their abuser (Lacher et al., 2016). Furthermore, because seniors may interact within small social circles or even in isolation, few opportunities arise in which to identify abuse.

Medical visits and other service providers offer optimal checkpoints at which to identify elder abuse. Medical visits are common among seniors and can represent one of the few social interactions they maintain with others. Within a visit and its accompanying confidential one-on-one interactions, seniors may have greater comfort in disclosing abuse. The visits also allow providers an opportunity to implement screening tools. There are symptoms which correlate with abuse (Ferreira, Santos, & Vieira, 2015). Medical professionals have compiled these symptoms into questionnaires with which providers can assess senior patients for abuse. In-home patient visits also provide an opportunity to identify elder abuse. If included in post-discharge treatment plans and even standard primary care, in-home visits can improve quality of care while showing a detailed view of a senior's home life that may expose abuse. Finally, prescription drug monitoring programs can also act to counter senior abuse. When seniors are taken advantage of and prescription drugs are stolen, red flags may be revealed by drug monitoring systems. Again, responsibility of this oversight would fall under the realm of medical providers.

NICHE Program

Not all geriatric-focused care programs are based in a specific unit such as the ED. Some are hospital wide, such as the Nurses Improving Care for Healthsystem Elders (NICHE) program, which provides additional nurse training and team management. Hospitals participating in the NICHE program employ many of the approaches discussed above. They have staff with geriatric training and a team focused on identifying and preventing geriatric syndromes. They may also implement physical changes to the ED that offer greater safety and community for seniors (NICHE, 2015).

NICHE's role is to provide training and resources to implement the senior-ED program, the tools and oversight to gauge its success, and lessons learned from implementing the program in other institutions. NICHE's program has demonstrated improved clinical and cost-related outcomes for senior care (Boltz et al., 2008). In Alaska, Mat-Su Regional Medical Center is the only facility to have earned the NICHE designation.[21]

Management

Once a senior identifies a health problem and receives initial care, their next challenge is to maintain their health. Communities can aid in this effort by first providing continued access to care, not only primary care, as described above, but also long-term care and chronic care management. Factors outside of the direct medical realm, such as affordable housing, also impact a senior's ability to maintain their wellbeing (Krieger & Higgins, 2002).

To maintain health, seniors face the same challenges accessing primary care addressed previously. However, once they acquire more health maladies, they have even greater need for that access. Not only must they attend appointments with general practitioners, seniors must also see specialists, pick up medication, and travel to other locations demanded by a treatment and care management plan. The same solutions discussed earlier – geriatric expertise, affordable care, and flexible transportation – also apply with regards to maintaining health.

The level of independence a senior retains while aging depends on his or her local support group, such as the presence of family, and the degree of cognitive and physical decline experienced. Some seniors without family to call upon for assistance who lose mental or physical capacity may require institutional living options such as a nursing home or assisted living facility. Nursing homes and assisted living facilities provide not only housing and everyday needs such as food, hygiene, and socialization, but also medical services such as skilled nursing. Other seniors who retain their cognitive and physical abilities may continue living independently as they have for years. In between these extremes, lie seniors whose care may be able to managed in their homes with minor outside assistance, such as a caretaker coming in several days a week to help with cooking, cleaning, or other daily tasks. To accommodate this need diversity, communities must offer a wide array of long-term care options.

[21] Mat-Su Regional becomes only hospital in Alaska to earn NICHE designation for commitment to elder care excellence. Retrieved 15 July, 2015, from http://www.matsuregional.com/mat-su-regional-medical-center/press1/matsu-regional-becomes-only-hospital-in-alaska-to-8756.aspx

Specific management for chronic conditions is also necessary and especially needed among seniors, as over 85 percent of seniors have at least one chronic condition and the majority have at least two (*Chronic Care…*, date unknown). Chronic conditions are important economically as well, as they are associated with considerable expense. Across the nation, people with four or more chronic conditions represent 25 percent of Medicare beneficiaries, yet account for 80 percent of Medicare spending (Boult et al, 2008). Different primary care models have evolved to provide better chronic care management. One such model is the Geriatric Resources for Assessment and Care of Elders (GRACE). Through improved chronic care management and preventative care, GRACE aims to improve senior health, reduce the use of healthcare, and help keep seniors out of residential institutions such as nursing homes. GRACE includes many of the same components as the CGA. It centers around a team of diverse medical providers such as geriatricians, pharmacists, and physical therapists. Social workers and nurse practitioners provide outreach and frequent patient interaction. Initially, the GRACE team evaluates the patient during an in-home visit and forms a plan of care. A key aspect of the model includes communication and collaboration with the patient's primary care provider. A randomized control trial found GRACE to lower ED visit rates as well as improve the general health, vitality, social functioning, and mental health of seniors (Counsell et al, 2009). Another study demonstrated these benefits cost no more than typical care (Counsell et al., 2007).

Other models take the idea of integrated and comprehensive care even further. The Program of All-Inclusive Care for the Elderly (PACE) offers chronic care management and more. PACE began in San Francisco's Chinatown in the 1970s as a way to provide long term care to the local elderly while allowing them to continue living in the community. Since, the Centers for Medicare & Medicaid Services (CMS) have adopted the program and implemented it across the nation. With PACE, seniors live in the community and are transported daily to facilities that provide adult day services and medical services. From adult day services, seniors receive socialization opportunities, meals, and other daily necessities. PACE also greatly improves access to medical services. All medical services offered by Medicaid and Medicare centralized at a single location, the PACE facility. Care is comprehensive and includes preventative, primary, emergency, rehabilitative, and long-term services. PACE has been shown to improve health outcomes and reduce hospitalizations and nursing home admissions (Weiland et al., 2000). These benefits come at a lower cost than residential nursing homes (Bodenheimer, 1999). Part of PACE's success comes from team-based care management and improved communication between providers.

Not all models of care, for chronic conditions or otherwise, work in all situations. For example, some models require a certain number of patients, and therefore a sufficiently dense population, for financial sustainability. Nevertheless, identifying what makes models successful is an important takeaway. Successful models presented in this report share common characteristics. One of the crux characteristics is team-based care management: where the wellbeing of an individual rests upon the collaboration of a diverse set of providers, including not only medical professionals but social workers as well. This team-based method augments collective expertise and improves communication among a patient's providers. Another factor contributing to the success of these models is a commitment to personalized and involved care. Patient interaction takes place not just in the office of a primary care provider, but during home visits and regular phone calls too. Care models can be utilized to improve senior care, even if they are not implemented in their entirety.

Besides medical services, factors such as housing also strongly influence senior health. Substandard housing correlates with numerous poor health outcomes – increased risk of infection, chronic disease, injury, malnutrition, and poor mental health (Krieger & Higgins, 2002). In many cases, seniors struggle to afford quality housing. Around age 50, annual household income begins to decline (Housing America's…). In 2012, the median annual income was $15,000 less for households in their late 60s than for households in their late 50s. Inadequate funds stifle access to safe housing, but also, if a senior does have secure housing, inhibit the repairs and upkeep required to maintain a home's quality. Unaffordable housing affects other life essentials as well. When seniors spend a high proportion of their income on housing, they reduce spending on other necessities, such as food, transportation, and health care.

The federal government has programs to reduce the financial burden for senior housing. Some come in the form of favorable loans to developers of low-income housing construction, as with the Department of Agriculture's (USDA) Section 515 Rural Rental Housing Loans, USDA's Section 538 Guaranteed Rural Rental Housing Program, and the Department of Housing and Urban Development's (HUD) Section 202 Supportive Housing for the Elderly Program. Other federal programs provide loans directly to senior homeowners. USDA's Section 504 provides low-income seniors in rural areas with grants for home repairs or safety improvements.

Many federally financed home improvement programs exist, and with a sturdy understanding of them, communities can facilitate access to them to encourage the construction of affordable housing or provide individuals with direct assistance. However, federal funding support for these programs is increasingly limited.

Not all efforts to make senior housing affordable come from federal government agencies. With a mission to make housing affordable in rural America, the Housing Assistance Council provides training opportunities and expertise to enable communities and other groups to develop senior housing. They also offer loans and grants towards this end. Additionally, some communities fund and support their own programs. Around the country, communities lend their own money, to developers and individuals, to renovate or build more senior housing.

Awareness

While providing resources to seniors – high quality care or affordable housing – is paramount, these efforts help little if seniors are unaware of them. Thus, informing seniors of opportunities available to them is just as key as providing the opportunities themselves. Seniors need to know which medical providers accept Medicare patients. They need to know about events in the community to stay socially engaged and stimulated. Perhaps most important, they need to know where to turn when they come up against a challenge too great to overcome on their own.

Aging and Disability Resource Centers (ADRC) address most of these needs. ADRCs are federally funded and function as information banks, fostering awareness through a staff knowledgeable of a large array of services – like Medicare, Medicaid, Social Security, veterans' benefits, long-term care, and community living – and how to access them. ADRCs connect people with the proper resources and help them navigate complex systems.

Senior awareness also relies heavily upon effective communication with a community's older population. As people age, they decline physically and mentally, losing cognition or sensory perception like hearing and sight (Yorkston, Borgeois, & Baylor, 2010). These losses arise in much of the senior population: a survey of Medicare beneficiaries over the age of 65 found 42 percent to have hearing problems, 26 percent writing problems, and 7 percent problems with the telephone (Hoffman, et al., 2005). These physical and mental changes place new demands on communication. When these demands are not met, communication with the senior population diminishes, fostering an environment of isolation based on misinformation or lack of information.

Seniors stand to lose more through communication barriers than just social interaction. In hospital inpatient settings, patients with difficulty communicating are three times as likely as patients without these barriers to experience an adverse event (Bartlett, et al., 2008). In outpatient settings, seniors have worse collaboration with physicians than the population under 65 (Adelman, Greene, & Ory, 2000). Physicians are less responsive to their concerns and have less consideration of their views when making decisions. The presence of third parties, which is common for seniors, can either improve or hinder communication, adding further complexity.

Health settings can easily improve senior communication through changes to the physical environment and adjustments to provider behavior. Seniors interact more easily in quiet rooms without distraction. They also benefit from face-to-face interaction, and the physical layout of reception areas and patient rooms can be altered to accommodate this. As for provider-patient interactions, numerous resources exist that offer techniques for communicating with seniors. They boil to down to taking the time when speaking with a senior to listen fully and ensure the senior's comprehension. This may require sensory aids, speaking slowly, and more interaction time than normal.

Not only providers, but all employees with patient interaction can draw upon senior communication techniques to improve care for seniors. And not only medical institutions, but all services assisting seniors could strengthen their work through better communication. For example, including seniors in design of a service provider's webpage can improve the user-friendliness with a senior-oriented information architecture for health-related information (Kurniawan, Zaphriris, & Ellis, date unknown). Techniques for communication (training manuals and senior customer training programs) can also improve communication and enhance the senior's experience.[22]

[22] For example, *Communicating with Seniors: Advice, Techniques, and Tips,* a training manual produced by Health Canada, http://publications.gc.ca/collections/Collection/H88-3-30-2001/pdfs/com/comsen_e.pdf).

Appendix A: Literature Review Bibliography

Adelman RD, Greene MG, Ory MG. (2000) Communication between older patients and their physicians. *Clin Geriatr Med;16*(1), 1–24.

Bartlett, G., Blais, R., Tamblyn, R., Clermont, R. J., & MacGibbon, B. (2008). Impact of patient communication problems on the risk of preventable adverse events in acute care settings. *CMAJ : Canadian Medical Association Journal*,*178*(12), 1555–1562. http://doi.org/10.1503/cmaj.070690

Behar L. Changing patterns of state responsibility: a case study of North Carolina. *Journal of Clinical Child Psychology* 1985;14(3):188–95.

Blankevoort, C. G., van Heuvelen, M. J. G., Boersma, F., Luning, H., de Jong, J., & Scherder, E. J. A. (2010). Review of effects of physical activity on strength, balance, mobility and ADL performance in elderly subjects with dementia. *Dementia and Geriatric Cognitive Disorders, 30*(5), 392-402.

Bodenheimer, T. (1999). Long-term care for frail elderly people – the On Lok model. *New England Journal of Medicine, 341*(17), 1324.

Bodenheimer, T., & Pham, H. H. (2010). Primary care: Current problems and proposed solutions. *Health Affairs, 29*(5), 799-805.

Boltz, M., Capezuti, E., Bowar-Ferres, S., Norman, R., Secic, M., Kim, H., et al. (2008). Changes in the geriatric care environment associated with NICHE (nurses improving care for HealthSystem elders). Geriatric Nursing, 29(3), 176-185.

Boult, C., Karm, L., & Groves, C. (2008). Improving chronic care: The "Guided Care" model. *The Permanente Journal, 12*(1), 50-54.

Carpenter, C. R., Griffey, R. T., Stark, S., Coopersmith, C. M., & Gage, B. F. (2011). Physician and Nurse Acceptance of Technicians to Screen for Geriatric Syndromes in the Emergency Department. *Western Journal of Emergency Medicine, 12*(4), 489–495. doi:10.5811/westjem.2011.1.1962.

Chronic care: A call to Action for Health Reform – Chronic Conditions among Older Americans. AARP.

Clemson L, Cumming RG, Kendig H, Swann M, Heard R, Taylor K. (2004.) The Effectiveness of a Community-Based Program for Reducing the Incidence of Falls in the Elderly: A Randomized Trial. *J Am Geriatr Soc* 52(9):1487-1494.

Coleman EA, Parry C, Chalmers S,Min S. (2006). The care transitions intervention: results of a randomized controlled trial. *Archives of Internal Medicine, 166*(17), 1822-1828.

Coleman EA, Roman S, Hall K, & Min S. (2015). Enhancing the care transitions intervention protocol to better address the needs of family caregivers. *Journal for Healthcare Quality, 37*(1)

Counsell SR, Callahan CM, Clark DO, et al. (2007). Geriatric care management for low-income seniors: A randomized controlled trial. *JAMA, 298*(22), 2623-2633.

Counsell, S. R., Callahan, C. M., Tu, W., Stump, T. E., & Arling, G. W. (2009). Cost analysis of the geriatric resources for assessment and care of elders care management intervention. *Journal of the American Geriatrics Society, 57*(8), 1420-1426.

DeGood, K. Aging in Place, Stuck Without Options. *Transportation for America*. Date unknown.

Deschodt, M., Devriendt, E., Sabbe, M., Knockaert, D., Deboutte, P., Boonen, S., Milisen, K. (2015). Characteristics of older adults admitted to the emergency department (ED) and their risk factors for ED readmission based on comprehensive geriatric assessment: a prospective cohort study. *BMC Geriatrics, 15,* 54. doi:10.1186/s12877-015-0055-7.

Ellis, G., Whitehead, M. A., O'Neill, D., Langhorne, P., & Robinson, D. (2011). Comprehensive geriatric assessment for older adults admitted to hospital. *The Cochrane Database of Systematic Reviews,* (7), CD006211-CD006211.

Ellis, G., Whitehead, M. A., O'Neill, D., Langhorne, P., & Robinson, D. (2011). Comprehensive geriatric assessment for older adults admitted to hospital. *The Cochrane Database of Systematic Reviews,* (7), CD006211-CD006211.

Ferreira, M., Santos, C. L. d., & Vieira, D. N. (2015). Detection and intervention strategies by primary health care professionals in suspected elder abuse. *Acta Med Port, 6*, 687-694.

Fitzpatrick, A. L., Powe, N. R., Cooper, L. S., Ives, D. G., & Robbins, J. A. (2003). Barriers to health care access among the elderly and who perceives them. *American Journal of Public Health, 94*(10), 1788-1794.

Fuller, G. (2000). Falls in the elderly. *American Family Physician, 61*(7), 2159.

Future of Family Medicine Project Leadership Committee. (2004). The future of family medicine: A collaborative project of the family medicine community. *The Annals of Family Medicine, 2* (suppl 1), S3-S32.

Geyman, J. P., Hart, L. G., Norris, T. E., Coombs, J. B., & Lishner, D. M. (2000). Educating generalist physicians for rural practice: How are we doing? *The Journal of Rural Health, 16*(1), 56-80.

Golden, A. G., Ortiz, J., & Wan, T. T. H. (2013). Transitional care: Looking for the right shoes to fit older adult patients. *Care Management Journals: Journal of Case Management; the Journal of Long Term Home Health Care, 14*(2), 78-83.

Grover, A., & Niecko-Najjum, L. (2013). Primary care teams: Are we there yet? Implications for workforce planning. *Academic Medicine, 88*(12).

Han, J. H., Zimmerman, E. E., Cutler, N., Schnelle, J., Morandi, A., Dittus, R. S., et al. (2009). Delirium in older emergency department patients: Recognition, risk factors, and psychomotor subtypes. Academic Emergency Medicine, 16(3), 193-200.

Hastings, S. N., & Heflin, M. T. (2005). A systematic review of interventions to improve outcomes for elders discharged from the emergency department. Academic Emergency Medicine, 12(10), 978-986.

Hauer, K., Durning, S., Kernan, W., Fagan, M., Mintz, M., & O'Sullivan PS, e. a. (2008). Factors associated with medical students' career choices regarding internal medicine. *Jama, 300*(10), 1154.

Hoffman, J., Yorkston, K., Shumway-Cook, A., Ciol, M., Dudgeon, B., & Leighton, C. (2005). Effect of communication disability on satisfaction with health care. *American Journal of Speech-Language Pathology, 14,* 221-228.

Housing America's Older Adults, Meeting the Needs of an Aging Population (2014). Joint Center for Housing Studies of Harvard University.

Iwata, M., Kuzuya, M., Kitagawa, Y., Suzuki, Y., & Iguchi, A. (2006). Underappreciated predictors for post-discharge mortality in acute hospitalized oldest-old patients. *Gerontology, 52*(2), 92-98.

Keeping Physicians in Rural Practice. (2014). *American Academy of Family Physicians.*

Krieger, J., & Higgins, D. L. (2002). Housing and health: Time again for public health action. *American Journal of Public Health, 92*(5), 758-768.

Kurniawan, Sri H., Zaphiris, P., & R. D. Ellis (date unknown). *Involving Seniors in Designing Information Architecture for the Web.* Institute of Gerontology and Department of Industrial and Manufacturing Engineering, Wayne State University https://users.soe.ucsc.edu/~srikur/files/HCII_health.pdf

Lacher, S., Wettstein, A., Senn, O., Rosemann, T., & Hasler, S. (2016). Types of abuse and risk factors associated with elder abuse. *Swiss Med Wkly, 146.*

New Paradigms for Physician Training for Improving Access to Health Care. (2007). No. 18). Rockville, MD: Council on Graduate Medical Education.

NICHE. (2015). Retrieved 14 July, 2015, from http://www.nicheprogram.org/

Physician Shortages to Worsen without Increases in Residency Training (June 2010). AAMC Center for Workforce Studies.

The Physician Workforce (2008). Rockville, MD: Health Resources and Services Administration, Bureau of Health Professions.

Report on Seniors' Falls in Canada (2005). Ottawa: Public Health Agency of Canada.

Rieselbach, R., Crouse, B., & Frohna, J. (2010). Teaching primary care in community health centers: Addressing the workforce crisis for the underserved. *Annals of Internal Medicine, 152*, 118.

Rockwood, K., Song, X., & Mitnitski, A. (2011). Changes in relative fitness and frailty across the adult lifespan: Evidence from the Canadian national population health survey. *Canadian Medical Association Journal, 183*(8), E487-E494.

Schoon, Y., Bongers, K., Van Kempen, J., Melis, M., & Rikkert, O. (2014). Gait speed as a test for monitoring frailty in community-dwelling older people has the highest diagnostic value compared to step length and chair rise time. *European Journal of Physical and Rehabilitation Medicine, 6*(50), 693-701.

Scuffham, P., Chaplin, S., & Legood, R. (2003). Incidence and costs of unintentional falls in older people in the United Kingdom. *Journal of Epidemiology and Community Health, 57*(9), 740-744.

Sjölund, B., Wimo, A., Engström, M., & von Strauss, E. (2015). Incidence of ADL disability in older persons, physical activities as a protective factor and the need for informal and formal care – Results from the SNAC-N project. *Plos One, 10*(9), e0138901.

Telemedicine consultations for patients in long term care: A review of clinical effectiveness, cost-effectiveness, and guidelines. (2015). *Ottawa (ON): Canadian Agency for Drugs and Technologies in Health, Summary of Evidence*

Weiland, D., Lamb, V., Wang, H., Sutton, S., & et al. (2000). Hospitalization in the program of all-inclusive care for the elderly (PACE): Rates, concomitants, and predictors. *J Am Geriatr Soc, 48*, 1373.

Weinick, R. M., Burns, R. M., & Mehrotra, A. (2010). Many emergency department visits could be managed at urgent care centers and retail clinics. *Health Affairs, 29*(9), 1630-1636.

Winters, N.C. & Metz, W.P. (2009). The Wraparound Approach in Systems of Care. *Psychiatric Clin of North America,* 32, 135-151.

Yorkston, K. M., Bourgeois, M. S., & Baylor, C. R. (2010). Communication and Aging. *Physical Medicine and Rehabilitation Clinics of North America*, *21*(2), 309–319. http://doi.org/10.1016/j.pmr.2009.12.011.

Yoshida, S. *A global report on falls prevention epidemiology of falls.* World Health Organization.

Appendix B: Providers Interviewed

- Lisa Behrens, Mat-Su EMS
- Nathan Dahl, Colony Manor Assisted Living Homes
- Karl Garber, Alzheimer's Resources of Alaska
- Rachel Greenburg, Mat-Su Senior Services
- Melissa J. Heflin, ANTHC Elder/Rural Health Program Coordinator
- Christine Inglet, LINKS (ADRC)
- John Lee, CEO, MSRMC
- Ingrid Ling, WASI
- Duane Mayes, Division of Senior and Disability Services, Alaska Department of Health and Social Services
- Dr. Jeff Melendez, MSRMC Hospitalist Physician
- Kirsten Nelson, MSRMC Social Worker
- Josh Shaver, Alaska Veterans and Palmer Pioneers Home
- Herman Thompson, Upper Su Seniors
- Eric Wade, LINKS (ADRC)
- Frances Walker, Care Coordinator, Su-Valley Care Coordination
- Mary Beth Wesland, Care Coordinator, Mat-Su Senior Services
- Dr. Anne Zink, MSRMC Emergency Department Physician

Appendix C: Senior Service Infrastructure Inventory

The inventory of existing senior services infrastructure is excerpted from *Wasilla Area Seniors, Inc. (WASI) Continuing Care Feasibility Study,* prepared by Agnew::Beck and Northern Economics (June 2015), with some modifications (updates) by McDowell Group.

Senior Independent Housing Providers

Table 96. Senior Independent Housing Providers, Mat-Su Borough, 2015

Name	Location	Number of Units	Waitlist	Notes
Houston				
Blueberry Pointe	Houston	8	~30 people; one-year	Income Restricted
Valley Residential Services Cranberry Ridge Mid Valley Manor	Houston	Total 10 5 5	No information available	Income Restricted
Palmer				
Mat-Su Senior Services Chugach Estates Colony Estates	Palmer	Total: 55 31 units 24 units	19 on market rate list; 141 low income list; one to two years	1 resident manager; 7 market rate; Balance is Income Restricted, tax credit apartments; 55+
Commodore Park Plaza Palmer Manor Sutton Manor/Annex	 Palmer Sutton	Total 12 4 units 4 and 4	No waitlist in Palmer, but could fill when one comes open. Sutton has two vacancies, no waitlist.	Income Restricted [2]
Willow Pointe	Palmer	24	8 people on waitlist	Rural development tax credit property, rent based on income [3]
Talkeetna				
Sunshine Senior Village	Talkeetna	6	No waitlist; one opening for a one-bedroom	Market-rate; take section 8 [1]
Wasilla				
Alaska Housing Finance Corporation Williwa Manor	Wasilla	32	150-180 people; 2 – 3 years	62+
Unknown owner Birches I Birches II Ridge Crest Park	Wasilla	Total: 100 32 units 28 units 40 units	No information available	Income Restricted 55+

Name	Location	Number of Units	Waitlist	Notes
Chinook Villa	Wasilla	32	10-15 people at all times; one-year	Rent based on income; 62+
Melville	Wasilla	4	No waitlist	Ranch style duplex, private rental; not handicap accessible
Wasilla Area Seniors	Wasilla	128 Total	Waitlist:	WASI
Alderview		29	35 for market rate	Income Restricted and Market Rate
Eagle Nest		26	91 for Home 50	
Knik Manor		23	11 for HOME 60	
Raven Tree		26		
Susitna Place		24	Occupancy	
			97%	
			100%	
			97%	
			99%	
			98%	
Willow				
Willow Area Senior Housing	Willow	12 Total	No information available	
Willow Creek Parkway		6		
Willow Haven		6		
Total		**423**		

Source: Mat-Su Regional Plan for Delivery of Senior Services - by the McDowell Group in association with Health Dimensions Group, 2011; Alaska Housing Finance Corporation Senior Independent Living Statewide List, 10.15.14

[1] There are four one-bedrooms and two two-bedrooms. There isn't a demand for two bedrooms. The waitlist for one bedrooms was at five, but they just worked through the list and it is now open again. One person on the waitlist had found housing in Willow, one needed Section-8, but is on a 5-year waitlist and couldn't afford. The other person moved to the the lower 48. They might build a lower income senior housing development in 5-8 years.

[2] The housing organization is governed by a nonprofit board of directors. The Sutton housing is more difficult to fill because the location is such that a senior citizen needs to be independent to drive to get to for health care. They do get interest from villages for people who want access to health care they can't get in their home community.

[3] People have to come in to fill out the application, people call all the time. They keep another list of people who could be called to fill waitlist. There were two turnovers last year and they filled quickly.

Senior Centers

Table 97. Senior Centers, Mat-Su Borough, 2015

Name	Operator	Location	Info+ Referral	Meals	Adult Day	Employment Assistance	Housing	Chore	Transportation
Wasilla Area Senior Center	Wasilla Area Seniors Inc.	Wasilla	X	X			X		
Upper Susitna Senior and Civic Center	USSI, Inc.	Talkeetna		X			X		
Palmer Senior Citizens Center	Mat-Su Senior Services	Palmer	X	X	X	X	X	X	X
Chickaloon Village Traditional Council Elder Outreach Program	Chickaloon Village Traditional Council	Chickaloon	X	X				X	X

Transportation

Table 98. Senior Transportation Providers, Mat-Su Borough, 2015

Name	Geography Served
Wasilla Area Seniors, Inc.	Wasilla
Mat-Su Community Transit (MASCOT)	Knik, Palmer, Wasilla
Chickaloon Area Transit System	Chickaloon, Sutton, Palmer
Redi Rides of Alaska	Wasilla
Sunshine Community Transit	Talkeetna, Willow, Trapper Creek
Wasilla Retirement LLC (Primrose)	Wasilla
Valley Mover	Meadow Lakes-Wasilla to Anchorage
Mat-Su Senior Services	Mat-Su Borough

Source: Mat-Su Regional Plan for Delivery of Senior Services - by the McDowell Group in association with Health Dimensions Group, 2011, SDS Provider List downloaded 10.28.14 (updated 2012). Updated October 2016 by McDowell Group.

Senior In-home Service Providers

Table 99. Senior In-Home Service Providers, Mat-Su Borough, 2015

Name	Location	Care Mgmt/ Coord.	Chore Service/ Respite	Personal Care Assistance	Home Health	Hospice	Notes
Palmer							
Alzheimer's Resource of Alaska	Palmer	X					
DM Care Coordination	Palmer	X					MW
Donald Henry	Palmer	X					MW
Elisa Winchester	Palmer	X					MW
Elizabeth Smith	Palmer	X					MW
Helen Rice	Palmer	X					MW
Kathleen Roberts	Palmer	X					MW
Laura Crum	Palmer	X					MW
Lourdette D Neuburg	Palmer	X					MW
Mat-Su Senior Services	Palmer		X				MW
Merrie Zucconi	Palmer	X					MW
Nicole Skube	Palmer	X					MW
Red Mountain Care Coordination	Palmer	X					MW
The Homestead ALH	Palmer		X				MW
Talkeetna							
Sarah Kehoe	Talkeetna	X					MW
Sunshine Community Health Center	Talkeetna	X					MW
Wasilla							
ABC Connections	Wasilla	X					MW
Access Alaska	Wasilla		X	X			MW
Alaska Business Solutions	Wasilla	X					MW
Alaska Consumer Direct Personal Care – Mat Su	Wasilla		X	X			MW
Alaska Home Care	Wasilla		X	X			MW
Amber Bartz	Wasilla	X					MW
Angela Day	Wasilla	X					MW

Name	Location	Care Mgmt/ Coord.	Chore Service/ Respite	Personal Care Assistance	Home Health	Hospice	Notes
Care Coordination and Social Work Professionals	Wasilla	X					MW
Care Core	Wasilla	X					MW
Comfort Keepers	Wasilla		X	X			Anchorage based, Consumer directed PCA, no MW
Consumer Direct Mat-Su	Wasilla			X			
Cynthia Farrens	Wasilla	X					MW
Danny Kilanowski	Wasilla	X					MW
Desiree Ortega	Wasilla	X					MW
Dina Byuller	Wasilla	X					MW
Genacta in Home Care	Wasilla			X			AD,CD
Hearts and Hands of Wasilla	Wasilla			X			
Home Instead Senior Care	Wasilla			X			No MW
Jenny's Home	Wasilla		X				
Jeremy Grube	Wasilla	X					MW
Linda Knott	Wasilla	X					MW
Liza McCafferty	Wasilla	X					MW
Mad Dogs & Englishmen	Wasilla	X					MW
Mat-Su Care Coordination	Wasilla	X					MW
Mat-Su Regional Home Care	Wasilla				X	X	
Monica Ockwig	Wasilla	X					MW
Nataliya's Care Services	Wasilla		X				MW
Nina DeLaCruz	Wasilla	X					MW
Prime Care Inc	Wasilla		X				
ResCare	Wasilla		X	X			
Sandra Kilanowski	Wasilla	X					MW
Starfish Cares	Wasilla	X					MW
Susan Reed	Wasilla	X					MW
Trinion Quality Care Services	Wasilla		X				no MW
Wasilla Area Seniors, Inc.	Wasilla		X				MW

Name	Location	Care Mgmt/ Coord.	Chore Service/ Respite	Personal Care Assistance	Home Health	Hospice	Notes
Wasilla Retirement, LLC (Primrose)	Wasilla		X				MW
Wickersham House, LLC	Wasilla		X				MW
Valley Care Coordination	Wasilla	X					MW
Yolondia Rodland-Knodel	Wasilla	X					MW
Willow							
Frances Walker	Willow	X					MW
Su-Valley Care Coordination	Willow	X					MW
Upper Susitna Valley Care Coordination	Willow	X					MW
Willow Personal Care Assistants	Willow			X			no MW

Source: Mat-Su Regional Plan for Delivery of Senior Services - by the McDowell Group in association with Health Dimensions Group, 2011, SDS Provider List downloaded 10.28.14 (updated 2012), SDS PCA provider list updated 9.29.14; MW is the Medicaid waiver, Older Alaskans or Adults Living Independently.

Licensed Senior Assisted Living Homes

Table 100. Licensed Senior Assisted Living Facilities, Mat-Su Borough, 2015

Name	Location	Number of Beds	Waitlist	Rate
Alta's House	Wasilla	3		
Among Friends ALH, LLC	Palmer	4		Medicaid
Colony Manor Assisted Living		Total 30	Most are full; 28 on wait list, 5 or more waiting 6 months or more	Medicaid; private pay and insurance; GR as stop gap [1]
Colony House Inc.	Wasilla	15		
Colony Manor	Palmer	5		
Colony Manor at Creekside	Wasilla	5		
Colony Manor at Village Park	Wasilla	5		
Golden Agers Home Care LLC	Wasilla	5		Medicaid
Golden Pond Assisted Living Home	Houston	5		Medicaid
Granny's Log Cabin Inc.	Wasilla	12	Full most of the time	Medicaid
Jenny's Home (Dual Licensed)	Wasilla	5		No OA
Northern Comfort	Wasilla	16	Yes	Medicaid; Private Pay
Northern Living Centers, LLC	Wasilla	12	No waitlist; one availability	$6300/month; both Medicaid + private pay
Oma & Opa's Place	Wasilla	5		
Pioneers' Home-Palmer	Palmer	79	8 available level three units; 121 active waitlist, 1,549 inactive waitlist	Medicaid
Sunrise House LLC		Total 25	Full now; no waitlist because no reason; expanding	Medicaid; private pay at Medicaid rate; some GR
Sunrise House 1 + 11	Wasilla	10		
Homestead ALH	Palmer/ Butte	5		
Caring Hands	Wasilla	10		
Sunrise Manor ALH	Palmer	5		
Tranquility Manor LLC		Total 34	No waitlist, though expect to fill up; several deaths	Medicaid
Tranquility Manor Estates	Palmer	17		
Harbor View Manor	Wasilla	17		
Two Sisters Assisted Living Home	Palmer	5		Medicaid
Wickersham House, LLC	Wasilla	10	No waitlist; always full	Medicaid; private pay; insurance; up to $7800 from $5800 [2]
Total		**255**		

Combined Independent Housing and Assisted Living

Table 101. Combined Independent Housing and Assisted Living Facilities, Mat-Su Borough, 2015

Name	Location	Assisted Living Units	Independent Living Units	Notes
Primrose Retirement Community	Wasilla	56 [1]	44	92 percent full both; 100 percent full for assisted living, waitlist for Medicaid assisted living [1]
Total		**56**	**44**	

Source: Mat-Su Regional Plan for Delivery of Senior Services - by the McDowell Group in association with Health Dimensions Group, 201; Alaska Department of Health and Social Services, Senior and Disabilities Services Licensed Assisted Living Database, 10.14.14, downloaded 10.29.14; Alaska Housing Finance Corporation Senior Independent Living Statewide List, 10.15.14
[1] March 2015; 70% full in spring 2014, when they didn't accept Medicaid; all full when accepted Medicaid.

Adult Day Services

Table 102. Adult Day Service Providers, Mat-Su Borough, 2015

	Location	Average Daily Census	Capacity
Mat-Su Senior Services	Palmer Big Lake	28-35 5-7	60 18
Hearts and Hands	Wasilla (based in Anchorage)	Few	
Total		**~35**	

Skilled Nursing

Currently all skilled nursing beds serving Mat-Su seniors are located outside of the Mat-Su Borough.

Table 103. Skilled Nursing, Anchorage, 2015

Name	Beds	Waitlist
Prestige Care and Rehabilitation Center of Anchorage	101	0
Providence Extended Care	96	10
Providence Transitional Care Center	50	114
Total	**147**	

Note: Providence Transitional Care provides nursing care for shorter stays. Examples include people of all ages who are recovering from traumatic physical injuries, heart attacks and strokes, or elderly individuals on Medicare funded skilled nursing stay of 100 days or less. The Transitional Care Center intended as transitional residence for people moving between acute care in the hospital to their home or an assisted living home. Providence Extended Care is for individuals who need long term skilled nursing. Providence Extended Care is arranged in cottages of 16 residents each to provide more of a home like setting. A higher percentage of individuals in Extended Care are elderly.

Physicians

Table 104. Physicians, Mat-Su Borough, 2015

	Accepting New Patients	
Physician	**Medicare**	**Medicaid**
Adonai Diabetes & Endocrinology (Dr. Samuel Abbate)	Yes	Yes
Alaska Brain Center LLC (Dr. Jeffrey Sponsler)	Yes	Yes
Alaska Sleep Clinic	Yes	Yes
Alaska Heart Institute LLC (All Physicians)	Yes	Yes
Alaska Urology	Yes	Yes
Algone Interventional Pain Clinic	Yes	Yes
All Seasons Family Health Care (All Physicians)	By physician referral only	Yes
Andrew Pulliam, Plastic Surgery	Yes	Yes
Arctic Skye Family Medicine	No	Yes
Breast Center of Alaska	By physician referral only	By physician referral only
Brent Taylor, General Surgery	Yes	Yes
Brian Coyne, Podiatrist	Yes	Yes
Capstone Family Medicine		Denali KidCare only
David Barnes, Internal Medicine		Yes
Denali Orthopedic Surgery	Yes	Yes
Family Health Center	Yes	Yes
Family Life Matters (Caryn Gonzales, ADP)	No	No
Family Medicine of Alaska (Dr. Freeman)	Yes	Yes
Fresenius Medical Care/Mat-Su Dialysis	Yes	Yes
Generations Medical Center (All Physicians)	By physician referral only	Yes
Heather Brock, ANP (Psychiatric)	No	Yes
Heritage Family Medicine (Christopher Sahlstrom, MD)		Denali KidCare only
Hill & Llewellyn MDs	Yes	Yes
Imaging Associates of Providence	Yes	Yes
John Boston, D.O.	Yes	Yes
Cottonwood Creek Clinic (Thomas Lutz, D.O.)	Yes	Yes
John Oliver, Gyn/Pelvic Surgery	Yes	Yes

Physician	Accepting New Patients	
	Medicare	Medicaid
Kathleen Hammaker, ANP	No	Yes
Laser Vein of Mat-Su Valley	Yes	Yes
Lisa Cooney, Internist	No	Yes
Mat-Su Plastic Surgery	Yes	Yes
Matanuska Emergency Med Physicians	Yes	Yes
Mat-Su Health Services	Yes	Yes
Mat-Su Integrative Medicine		Case-by-case basis
Mat-Su Regional Outpatient Surgical Center	Yes	Yes
Mat-Su Regional Urgent Care	Yes	Yes
Michael Fitzgerald, Ob/Gyn		Yes
Midnight Sun Oncology	Yes	
Natalie Beyeler, D.O.	No	No
Odland Family Practice		No
Palmer Family Medicine		Yes
Providence Behavioral Medicine	Yes	Yes
Prov. Matanuska Health Care Palmer	Yes	Yes
Sharon Schafer, M.D. General Surgery	Yes	Yes
Sunshine Community Health Center (Willow & Talkeetna locations)	Yes	Yes
Urgent Care at Lake Lucille	Yes	Yes
Valley Dermatology Center	Yes	Yes
Valley Native Primary Care Center	Will accept from spouses of people who are of Alaska Native or First Nations descent	
Valley Radiation Therapy Center (John Yordy, M.D.)	Yes	Yes
Valley Surgical Associates	Yes	Yes
Wasilla Internal Medicine (Loetta Horswill-Woods)	Yes	Only if patient also has Medicare
Wasilla Medical Clinic		Yes

Source: LINKS (accessed 9/2016)

Appendix D: Additional Health Profile Data

This appendix contains detailed Medicare, BRFSS and Alaska Trauma Registry indicator data.

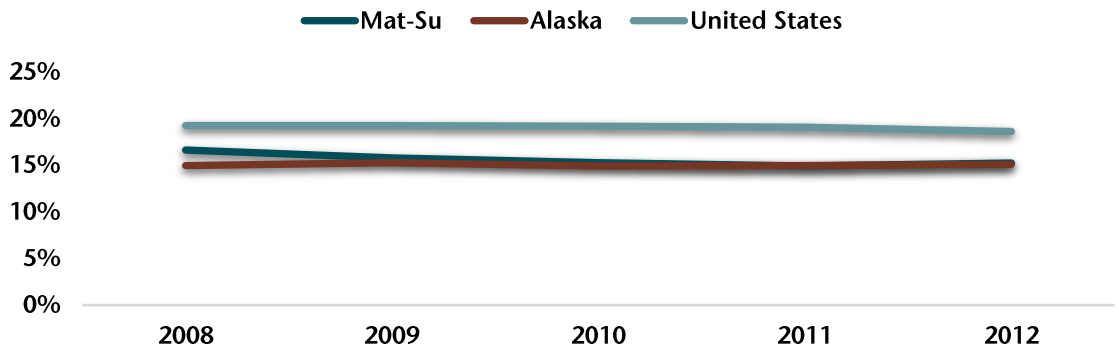
Medicare Utilization Data

Table 105. Acute Hospital Readmissions, Mat-Su Borough, Alaska, and United States, Count and Percent, 2008-2012

	2008	2009	2010	2011	2012
Count					
Mat-Su	291	280	275	258	265
Alaska	1,962	1,988	2,011	2,073	2,116
United States	1,992,456	1,945,007	1,948,054	1,929,143	1,819,104
Percent					
Mat-Su	16.65%	15.81%	15.30%	14.94%	15.26%
Alaska	14.98%	15.29%	14.93%	14.97%	15.12%
United States	19.28%	19.27%	19.21%	19.12%	18.64%

Source: CCS (CMS), MAD (CMS), HIW.

Figure 13. Acute Hospital Readmissions, Mat-Su Borough, Alaska, and United States, Percent, 2008-2012



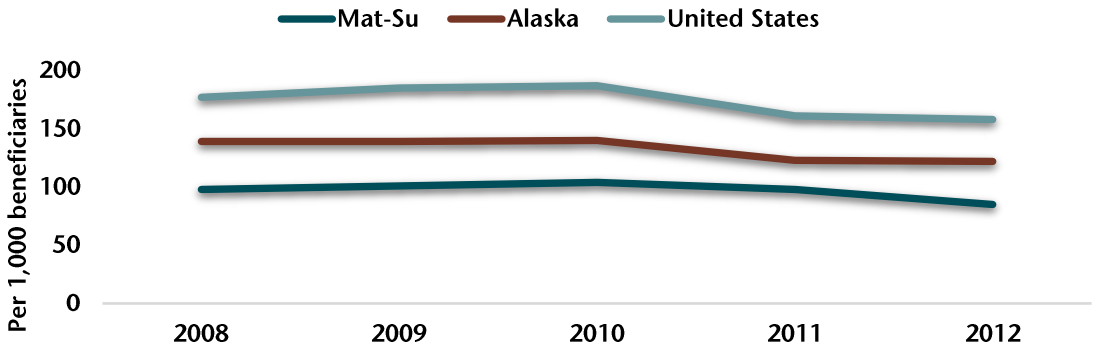
Source: CCS (CMS), MAD (CMS), HIW.

Table 106. Ambulatory Surgery Center Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
User Count					
Mat-Su	388	404	439	484	471
Alaska	4,484	4,527	4,782	5,188	5,572
United States	3,144,354	3,191,747	3,228,076	3,258,972	3,312,391
Utilizations Percent					
Mat-Su	5.86%	5.78%	5.90%	6.20%	5.69%
Alaska	8.05%	7.85%	7.89%	8.14%	8.29%
United States	9.64%	9.81%	9.77%	9.66%	9.71%
Service Events Per 1,000 Beneficiaries					
Mat-Su	98	101	104	98	85
Alaska	139	139	140	123	122
United States	177	185	187	161	158

Source: CCS (CMS), MAD (CMS), HIW.

Figure 14. Ambulatory Surgery Center Medicare, Mat-Su Borough, Alaska, and United States, Service Events Per 1,000 Beneficiaries, 2008-2012



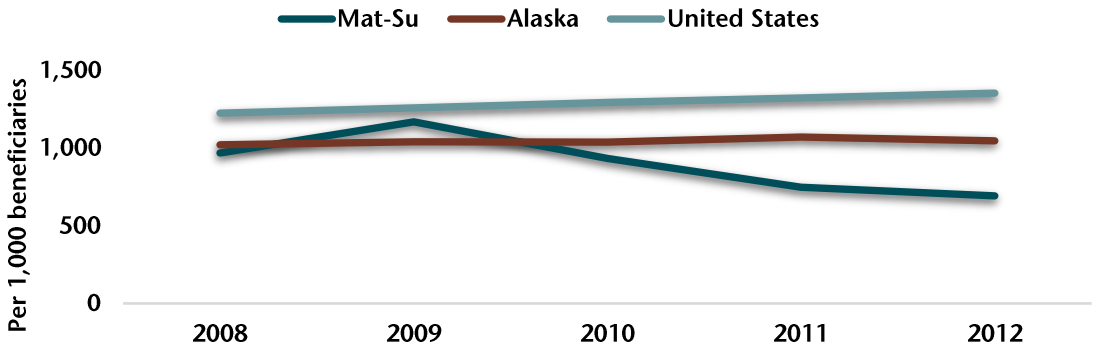
Source: CCS (CMS), MAD (CMS), HIW.

Table 107. Dialysis Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
User Count					
Mat-Su	40	48	47	40	33
Alaska	388	386	427	458	452
United States	321,176	328,315	339,130	348,822	353,367
Utilizations Percent					
Mat-Su	0.60%	0.69%	0.63%	0.51%	0.40%
Alaska	0.70%	0.67%	0.70%	0.72%	0.67%
United States	0.98%	1.01%	1.03%	1.03%	1.04%
Service Events Per 1,000 Beneficiaries					
Mat-Su	970	1,170	935	748	693
Alaska	1,022	1,042	1,039	1,072	1,047
United States	1,226	1,259	1,294	1,323	1,355

Source: CCS (CMS), MAD (CMS), HIW.

Figure 15. Dialysis Medicare, Mat-Su Borough, Alaska, and United States, Service Events Per 1,000 Beneficiaries, 2008-2012



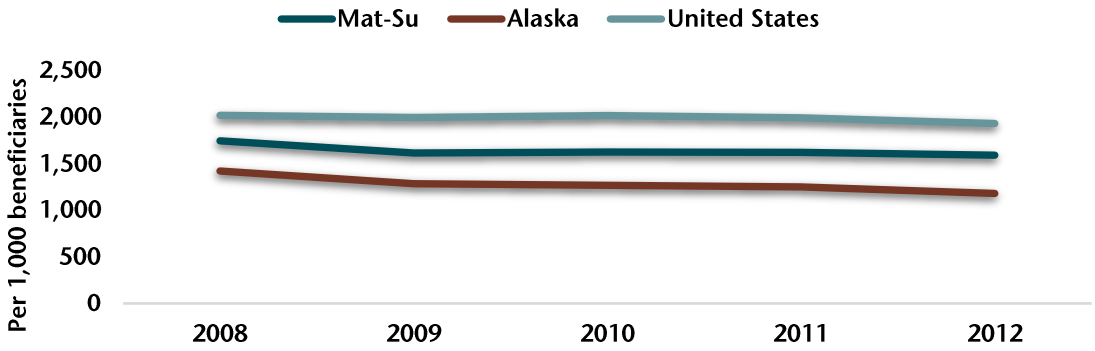
Source: CCS (CMS), MAD (CMS), HIW.

Table 108. Durable Medical Equipment Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
User Count					
Mat-Su	1,722	1,768	1,871	1,974	1,994
Alaska	12,084	12,374	12,803	13,453	13,619
United States	9,488,295	9,592,321	9,760,384	9,857,155	9,870,480
Utilizations Percent					
Mat-Su	26.02%	25.30%	25.15%	25.27%	24.08%
Alaska	21.69%	21.45%	21.13%	21.11%	20.27%
United States	29.08%	29.47%	29.54%	29.22%	28.92%
Service Events Per 1,000 Beneficiaries					
Mat-Su	1,746	1,614	1,627	1,622	1,592
Alaska	1,422	1,286	1,269	1,252	1,181
United States	2,020	1,997	2,018	1,995	1,932

Source: CCS (CMS), MAD (CMS), HIW.

Figure 16. Durable Medical Equipment Medicare, Mat-Su Borough, Alaska, and United States, Service Events Per 1,000 Beneficiaries, 2008-2012



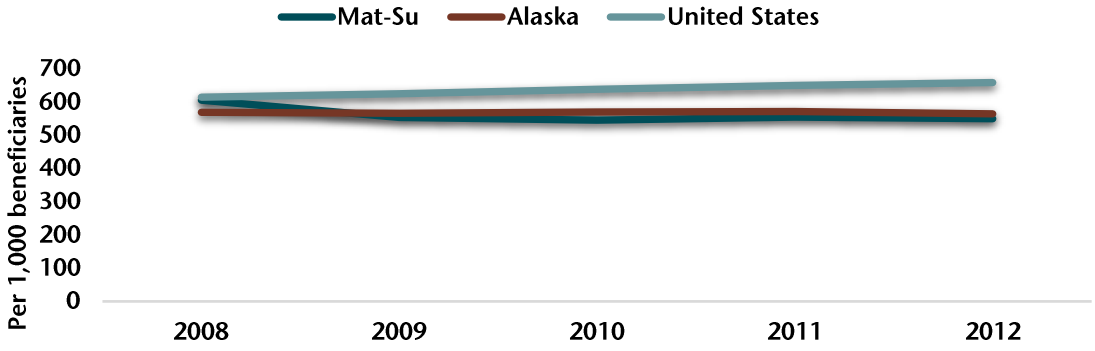
Source: CCS (CMS), MAD (CMS), HIW.

Table 109. Emergency Department Visits Mat-Su Borough, Alaska, and United States, Count and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
Count					
Mat-Su	4,003	3,865	4,054	4,331	4,545
Alaska	31,703	32,628	34,526	36,386	37,878
United States	20,044,246	20,315,258	21,070,452	21,881,807	22,460,630
Per 1,000 Beneficiaries					
Mat-Su	605	553	545	554	549
Alaska	569	566	570	571	564
United States	614	624	638	649	658

Source: CCS (CMS), MAD (CMS), HIW.

Figure 17. Emergency Department Visits Mat-Su Borough, Alaska, and United States, Per 1,000 Beneficiaries, 2008-2012



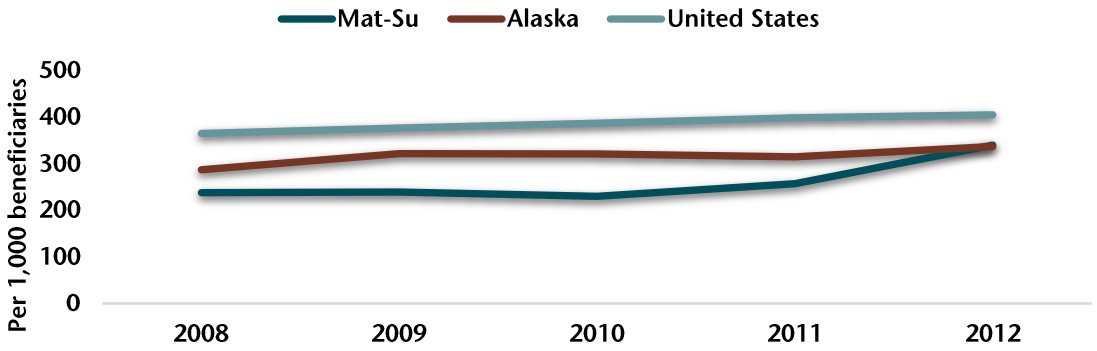
Source: CCS (CMS), MAD (CMS), HIW.

Table 110. FQHC and Rural Health Clinic Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
User Count					
Mat-Su	416	470	525	597	690
Alaska	4,176	4,842	5,177	5,209	5,611
United States	2,504,559	2,582,020	2,733,456	2,867,458	2,984,663
Utilizations Percent					
Mat-Su	6.29%	6.72%	7.06%	7.64%	8.33%
Alaska	7.50%	8.39%	8.55%	8.17%	8.35%
United States	7.68%	7.93%	8.27%	8.50%	8.75%
Service Events Per 1,000 Beneficiaries					
Mat-Su	238	239	230	257	340
Alaska	287	322	321	315	337
United States	365	377	387	399	405

Source: CCS (CMS), MAD (CMS), HIW.

Figure 18. FQHC and Rural Health Clinic Medicare, Mat-Su Borough, Alaska, and United States, Service Events Per 1,000 Beneficiaries, 2008-2012



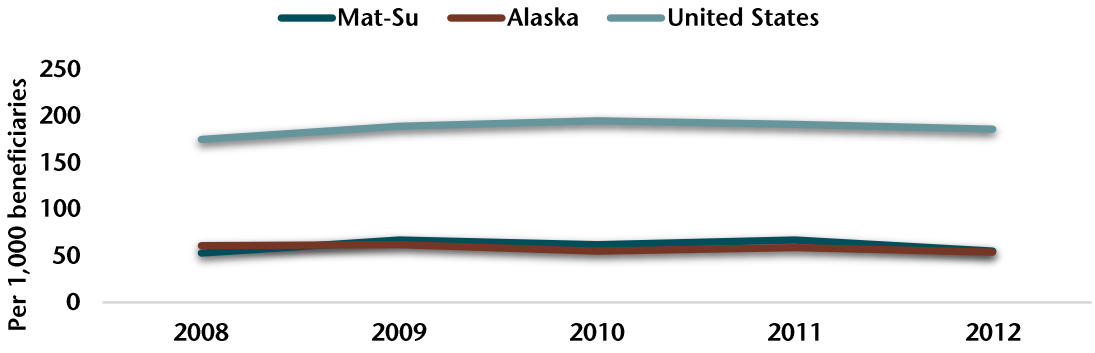
Source: CCS (CMS), MAD (CMS), HIW.

Table 111. Home Health Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
Count					
Mat-Su	257	317	296	344	309
Alaska	2,186	2,320	2,218	2,464	2,354
United States	2,953,728	3,073,545	3,216,206	3,236,493	3,220,475
Percent					
Mat-Su	3.88%	4.54%	3.98%	4.40%	3.73%
Alaska	3.92%	4.02%	3.66%	3.87%	3.50%
United States	9.05%	9.44%	9.73%	9.59%	9.44%
Episodes Per 1,000 Beneficiaries					
Mat-Su	53	67	62	67	55
Alaska	61	62	55	59	54
United States	175	189	195	191	186
Visits Per 1,000 Beneficiaries					
Mat-Su	876	1,029	940	1,076	936
Alaska	944	911	836	862	771
United States	3,460	3,760	3,573	3,337	3,166

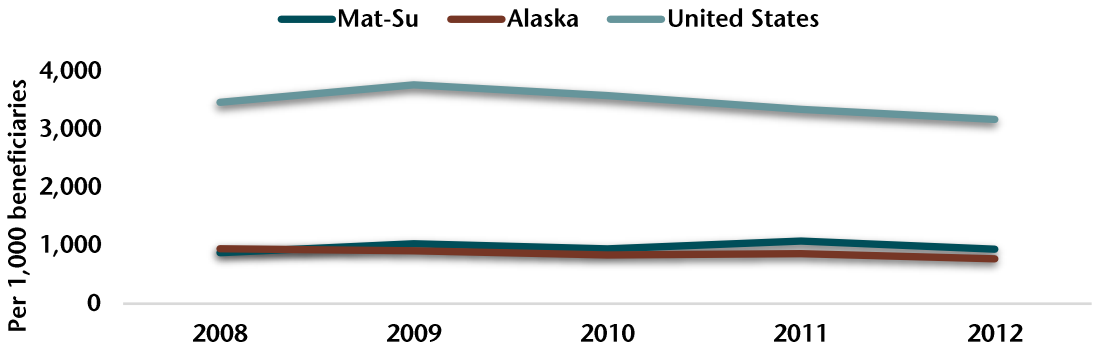
Source: CCS (CMS), MAD (CMS), HIW.

Figure 19. Home Health Medicare, Mat-Su Borough, Alaska, and United States, Episodes Per 1,000 Beneficiaries, 2008-2012



Source: CCS (CMS), MAD (CMS), HIW.

Figure 20. Home Health Medicare, Mat-Su Borough, Alaska, and United States, Visits Per 1,000 Beneficiaries, 2008-2012



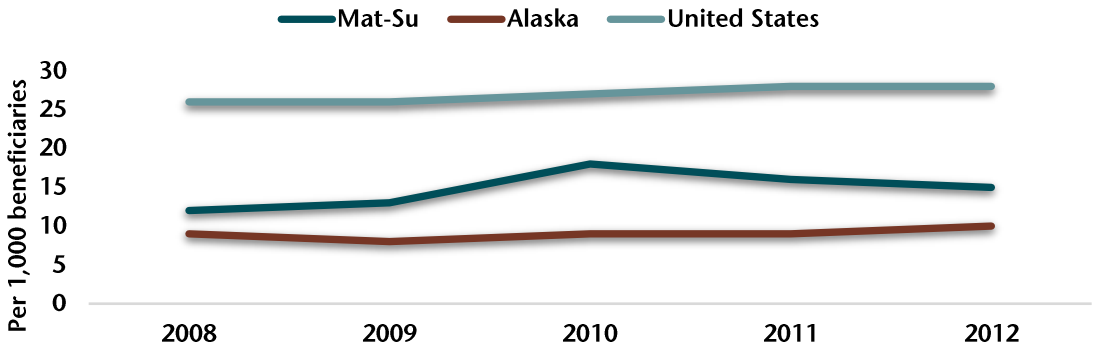
Source: CCS (CMS), MAD (CMS), HIW.

Table 112. Hospice Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
Count					
Mat-Su	75	88	127	127	119
Alaska	459	471	512	545	640
United States	793,917	807,681	852,920	891,037	915,460
Percent					
Mat-Su	1.13%	1.26%	1.71%	1.63%	1.44%
Alaska	0.82%	0.82%	0.85%	0.86%	0.95%
United States	2.43%	2.48%	2.58%	2.64%	2.68%
Admissions Per 1,000 Beneficiaries					
Mat-Su	12	13	18	16	15
Alaska	9	8	9	9	10
United States	26	26	27	28	28
Days Per 1,000 Beneficiaries					
Mat-Su	817	547	909	840	755
Alaska	456	424	452	426	482
United States	1,722	1,771	1,827	1,855	1,928

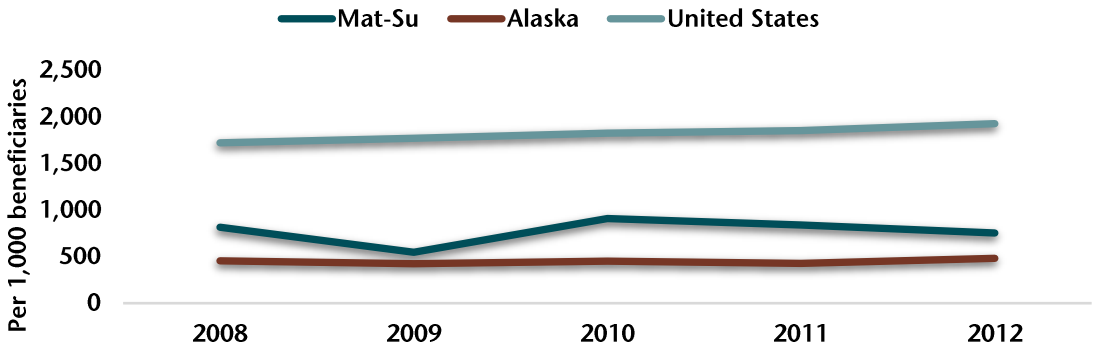
Source: CCS (CMS), MAD (CMS), HIW.

Figure 21. Hospice Medicare, Mat-Su Borough, Alaska, and United States, Admissions Per 1,000 Beneficiaries, 2008-2012



Source: CCS (CMS), MAD (CMS), HIW.

Figure 22. Hospice Medicare, Mat-Su Borough, Alaska, and United States, Days Per 1,000 Beneficiaries, 2008-2012



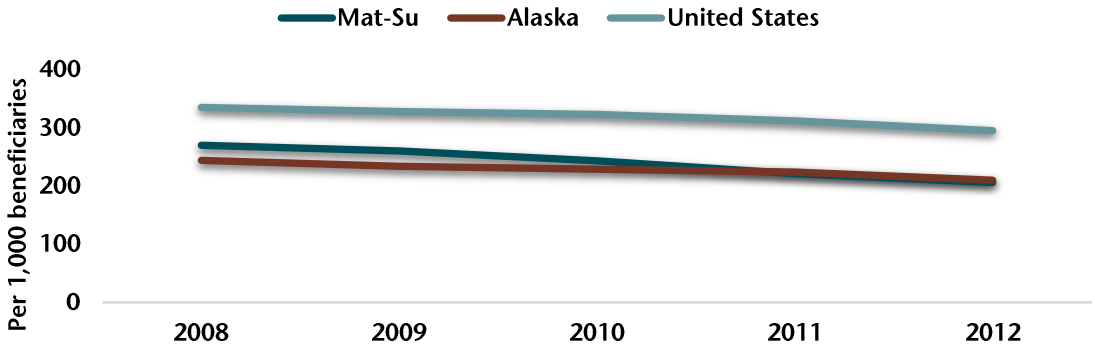
Source: CCS (CMS), MAD (CMS), HIW.

Table 113. Hospital Inpatient Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
Count					
Mat-Su	1,150	1,214	1,222	1,177	1,186
Alaska	9,091	9,152	9,418	9,659	9,656
United States	6,626,537	6,458,887	6,461,198	6,390,189	6,174,844
Percent					
Mat-Su	17.38%	17.37%	16.43%	15.07%	14.32%
Alaska	16.32%	15.87%	15.55%	15.15%	14.37%
United States	20.31%	19.84%	19.55%	18.94%	18.09%
Admissions Per 1,000 Beneficiaries					
Mat-Su	270	260	243	221	206
Alaska	244	234	229	224	210
United States	335	328	323	312	295
Days Per 1,000 Beneficiaries					
Mat-Su	1,289	1,103	981	1,033	967
Alaska	1,332	1,234	1,174	1,184	1,091
United States	1,881	1,797	1,748	1,691	1,597

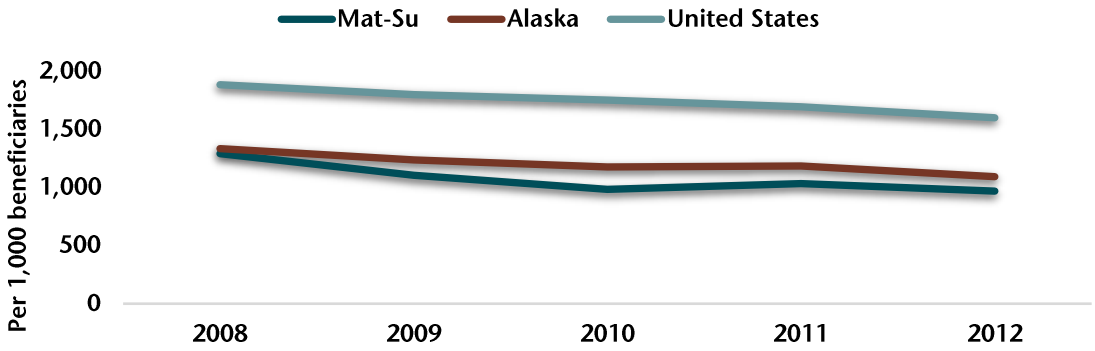
Source: CCS (CMS), MAD (CMS), HIW.

Figure 23. Hospital Inpatient Medicare, Mat-Su Borough, Alaska, and United States, Admissions Per 1,000 Beneficiaries, 2008-2012



Source: CCS (CMS), MAD (CMS), HIW.

Figure 24. Hospital Inpatient Medicare, Mat-Su Borough, Alaska, and United States, Days Per 1,000 Beneficiaries, 2008-2012



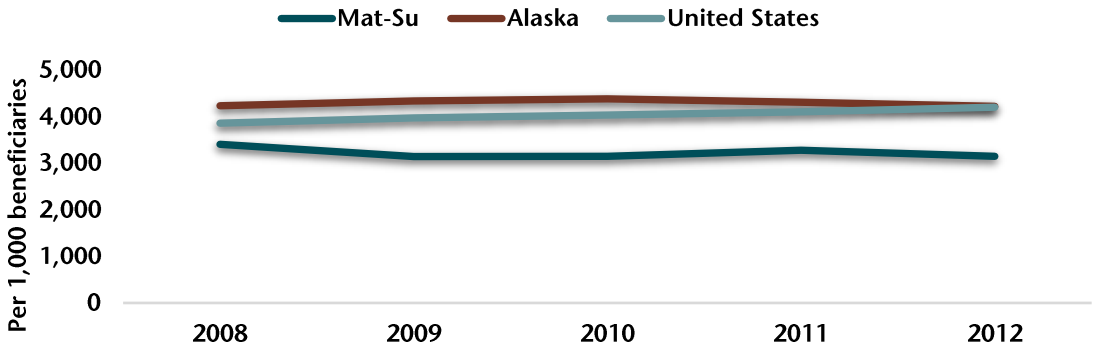
Source: CCS (CMS), MAD (CMS), HIW.

Table 114. Hospital Outpatient Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
User Count					
Mat-Su	4,245	4,328	4,587	4,777	5,044
Alaska	34,473	35,750	37,382	39,158	40,435
United States	20,506,241	20,566,938	20,907,320	21,399,866	21,744,615
Utilizations Percent					
Mat-Su	64.14%	61.93%	61.66%	61.16%	60.91%
Alaska	61.88%	61.98%	61.70%	61.43%	60.17%
United States	62.86%	63.19%	63.28%	63.43%	63.72%
Service Events Per 1,000 Beneficiaries					
Mat-Su	3,407	3,144	3,146	3,282	3,150
Alaska	4,233	4,341	4,383	4,308	4,222
United States	3,861	3,975	4,038	4,106	4,204

Source: CCS (CMS), MAD (CMS), HIW.

Figure 25. Hospital Outpatient Medicare, Mat-Su Borough, Alaska, and United States, Service Events Per 1,000 Beneficiaries, 2008-2012



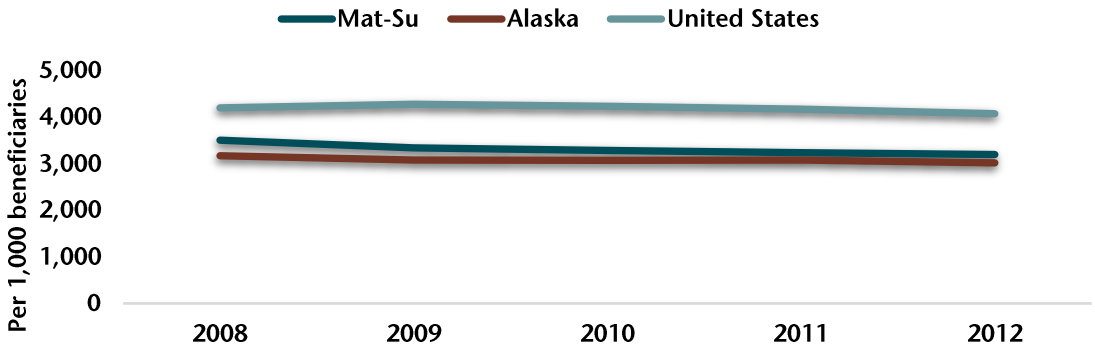
Source: CCS (CMS), MAD (CMS), HIW.

Table 115. Imaging Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
User Count					
Mat-Su	4,230	4,381	4,631	4,851	5,045
Alaska	32,859	33,527	35,066	36,678	38,166
United States	22,725,059	22,701,310	22,845,909	23,159,208	23,223,411
Utilizations Percent					
Mat-Su	63.92%	62.68%	62.25%	62.10%	60.92%
Alaska	58.99%	58.12%	57.88%	57.54%	56.80%
United States	69.66%	69.75%	69.14%	68.65%	68.05%
Service Events Per 1,000 Beneficiaries					
Mat-Su	3,506	3,344	3,284	3,238	3,198
Alaska	3,172	3,078	3,075	3,078	3,019
United States	4,199	4,278	4,234	4,170	4,075

Source: CCS (CMS), MAD (CMS), HIW.

Figure 26. Imaging Medicare, Mat-Su Borough, Alaska, and United States, Service Events Per 1,000 Beneficiaries, 2008-2012



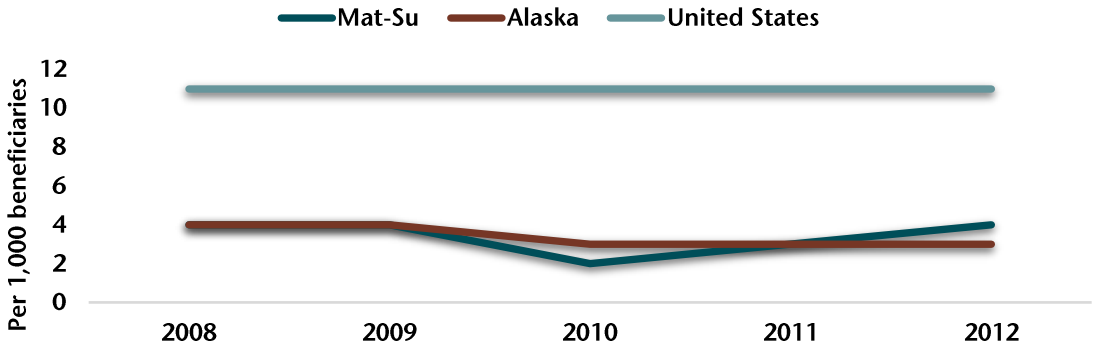
Source: CCS (CMS), MAD (CMS), HIW.

Table 116. Inpatient Rehab Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
Count					
Mat-Su	23	29	16	21	31
Alaska	207	210	201	191	220
United States	314,215	318,166	314,359	324,618	325,993
Percent					
Mat-Su	0.35%	0.41%	0.22%	0.27%	0.37%
Alaska	0.37%	0.36%	0.33%	0.30%	0.33%
United States	0.96%	0.98%	0.95%	0.96%	0.96%
Admissions Per 1,000 Beneficiaries					
Mat-Su	4	4	2	3	4
Alaska	4	4	3	3	3
United States	11	11	11	11	11
Days Per 1,000 Beneficiaries					
Mat-Su	52	59	39	38	55
Alaska	50	56	52	42	45
United States	140	141	136	137	135

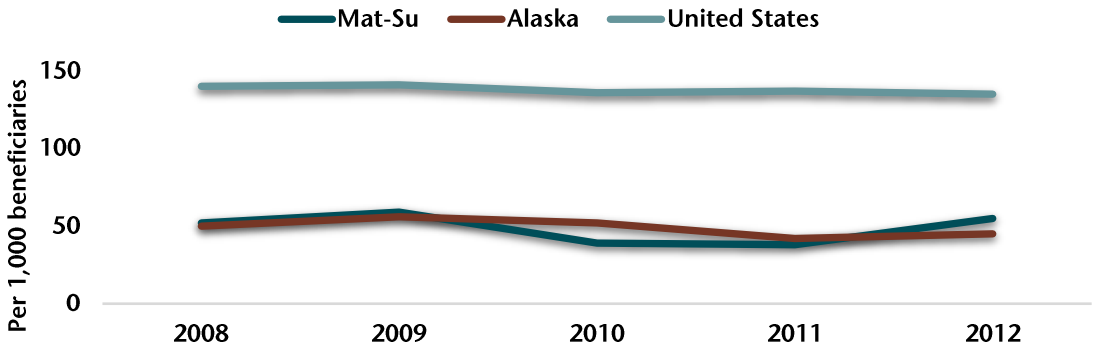
Source: CCS (CMS), MAD (CMS), HIW.

Figure 27. Inpatient Rehab Medicare, Mat-Su Borough, Alaska, and United States, Admissions Per 1,000 Beneficiaries, 2008-2012



Source: CCS (CMS), MAD (CMS), HIW.

Figure 28. Inpatient Rehab Medicare, Mat-Su Borough, Alaska, and United States, Days Per 1,000 Beneficiaries, 2008-2012



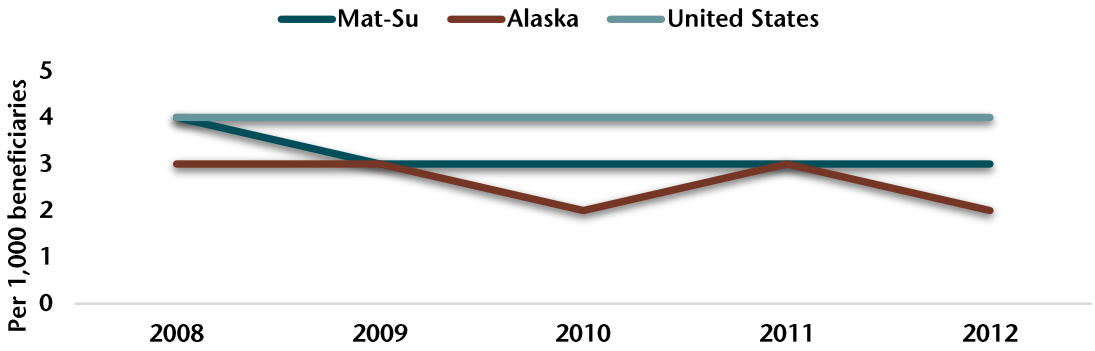
Source: CCS (CMS), MAD (CMS), HIW.

Table 117. Long Term Care Hospital Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
Count					
Mat-Su	26	22	19	20	21
Alaska	134	140	141	166	154
United States	113,987	115,148	118,249	121,635	121,308
Percent					
Mat-Su	0.39%	0.31%	0.26%	0.26%	0.25%
Alaska	0.24%	0.24%	0.23%	0.26%	0.23%
United States	0.35%	0.35%	0.36%	0.36%	0.36%
Admissions Per 1,000 Beneficiaries					
Mat-Su	4	3	3	3	3
Alaska	3	3	2	3	2
United States	4	4	4	4	4
Days Per 1,000 Beneficiaries					
Mat-Su	135	115	101	133	80
Alaska	73	88	92	98	81
United States	107	107	109	108	107

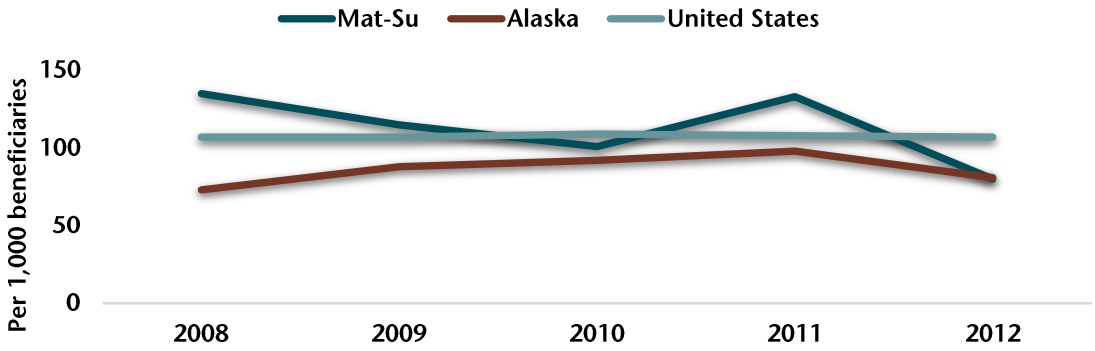
Source: CCS (CMS), MAD (CMS), HIW.

Figure 29. Long Term Care Hospital Medicare, Mat-Su Borough, Alaska, and United States, Admissions Per 1,000 Beneficiaries, 2008-2012



Source: CCS (CMS), MAD (CMS), HIW.

Figure 30. Long Term Care Hospital Medicare, Mat-Su Borough, Alaska, and United States, Days Per 1,000 Beneficiaries, 2008-2012



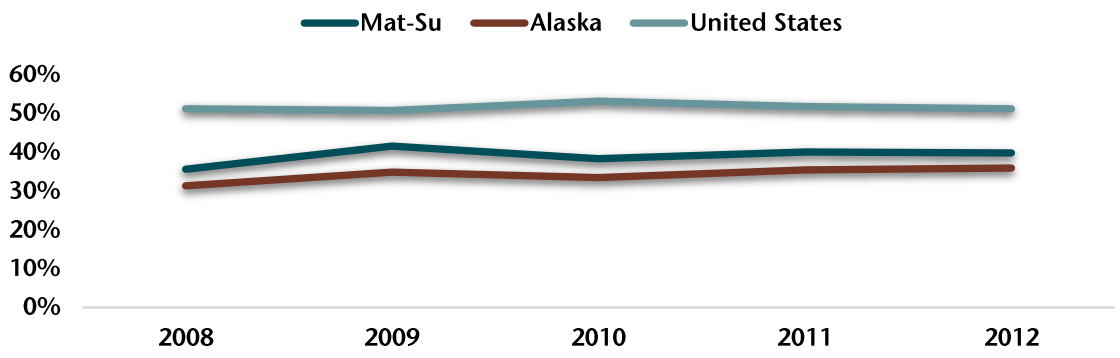
Source: CCS (CMS), MAD (CMS), HIW.

Table 118. Part B Drug Medicare, Mat-Su Borough, Alaska, and United States, Count and Percent, 2008-2012

	2008	2009	2010	2011	2012
Count					
Mat-Su	2,358	2,907	2,852	3,131	3,302
Alaska	17,467	20,128	20,283	22,607	24,150
United States	16,705,343	16,525,426	17,566,351	17,465,407	17,489,568
Percent					
Mat-Su	35.63%	41.59%	38.34%	40.08%	39.87%
Alaska	31.36%	34.89%	33.48%	35.47%	35.94%
United States	51.21%	50.77%	53.16%	51.77%	51.25%

Source: CCS (CMS), MAD (CMS), HIW.

Figure 31. Part B Drug Medicare, Mat-Su Borough, Alaska, and United States, Percent, 2008-2012



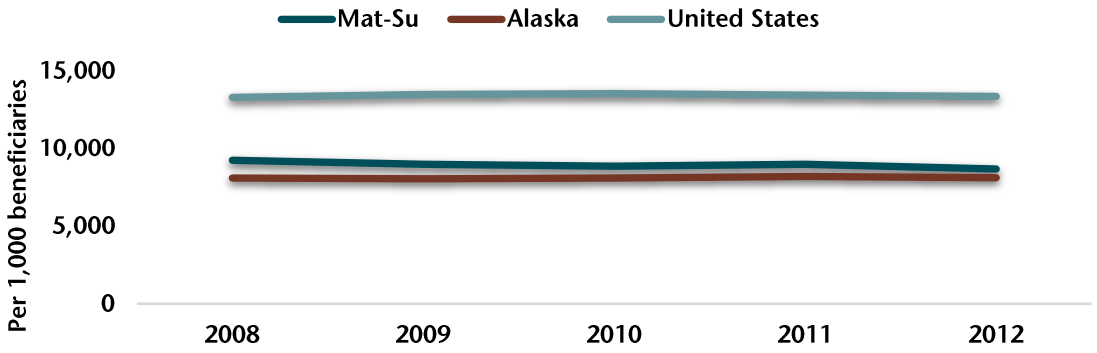
Source: CCS (CMS), MAD (CMS), HIW.

Table 119. Physicians Evaluation and Management Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
User Count					
Mat-Su	5,593	5,893	6,261	6,541	6,868
Alaska	45,287	46,946	49,680	52,110	54,477
United States	29,035,513	28,976,191	29,342,211	29,795,707	30,035,124
Utilizations Percent					
Mat-Su	84.51%	84.32%	84.16%	83.74%	82.94%
Alaska	81.30%	81.39%	82.00%	81.75%	81.07%
United States	89.00%	89.02%	88.80%	88.32%	88.01%
Service Events Per 1,000 Beneficiaries					
Mat-Su	9,244	8,994	8,866	8,978	8,683
Alaska	8,101	8,053	8,109	8,201	8,123
United States	13,296	13,489	13,540	13,438	13,354

Source: CCS (CMS), MAD (CMS), HIW.

Figure 32. Physicians Evaluation and Management Medicare, Mat-Su Borough, Alaska, and United States, Service Events Per 1,000 Beneficiaries, 2008-2012



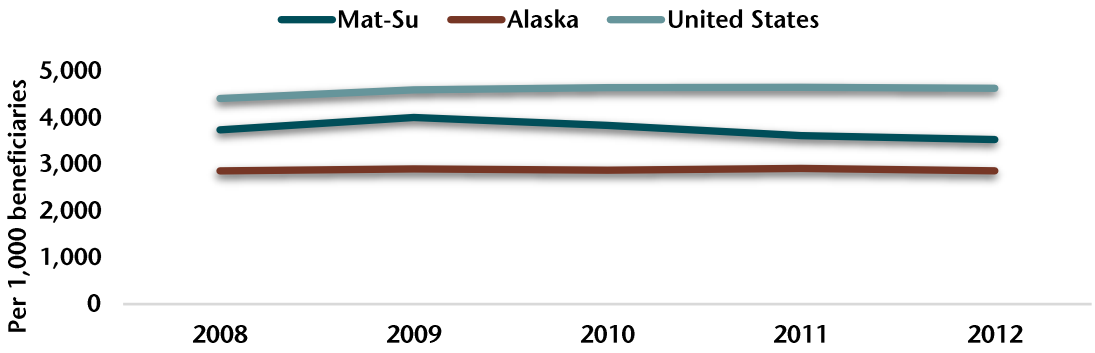
Source: CCS (CMS), MAD (CMS), HIW.

Table 120. Physician Procedures Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
User Count					
Mat-Su	3,410	3,602	3,845	3,963	4,131
Alaska	25,935	26,691	28,121	29,630	31,007
United States	19,995,395	20,106,166	20,421,766	20,709,252	20,879,137
Utilizations Percent					
Mat-Su	51.53%	51.54%	51.69%	50.74%	49.89%
Alaska	46.56%	46.27%	46.42%	46.48%	46.14%
United States	61.29%	61.77%	61.81%	61.38%	61.18%
Service Events Per 1,000 Beneficiaries					
Mat-Su	3,743	4,008	3,841	3,618	3,534
Alaska	2,861	2,901	2,879	2,914	2,865
United States	4,415	4,601	4,652	4,656	4,636

Source: CCS (CMS), MAD (CMS), HIW.

Figure 33. Physician Procedures Medicare, Mat-Su Borough, Alaska, and United States, Service Events Per 1,000 Beneficiaries, 2008-2012



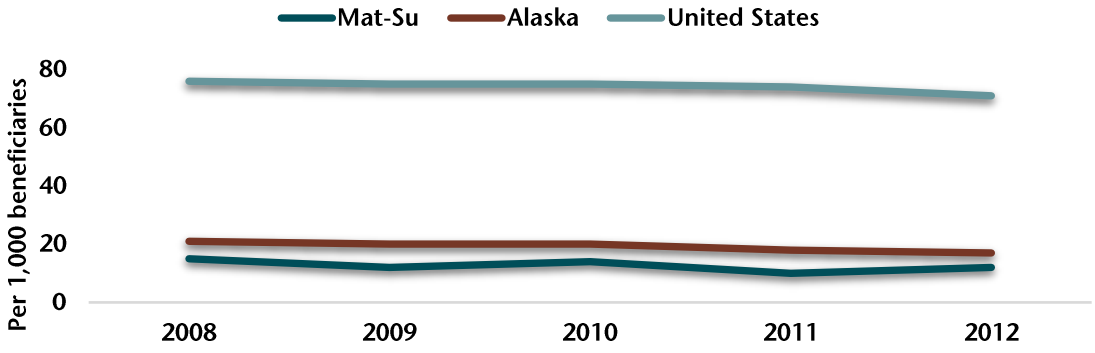
Source: CCS (CMS), MAD (CMS), HIW.

Table 121. Skilled Nursing Facility Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
Count					
Mat-Su	81	73	87	66	90
Alaska	952	985	1,034	984	942
United States	1,751,507	1,725,601	1,751,294	1,773,294	1,744,038
Percent					
Mat-Su	1.22%	1.04%	1.17%	0.84%	1.09%
Alaska	1.71%	1.71%	1.71%	1.54%	1.40%
United States	5.37%	5.30%	5.30%	5.26%	5.11%
Admissions Per 1,000 Beneficiaries					
Mat-Su	15	12	14	10	12
Alaska	21	20	20	18	17
United States	76	75	75	74	71
Days Per 1,000 Beneficiaries					
Mat-Su	321	267	301	207	272
Alaska	526	491	506	461	412
United States	2,023	2,013	1,999	1,980	1,917

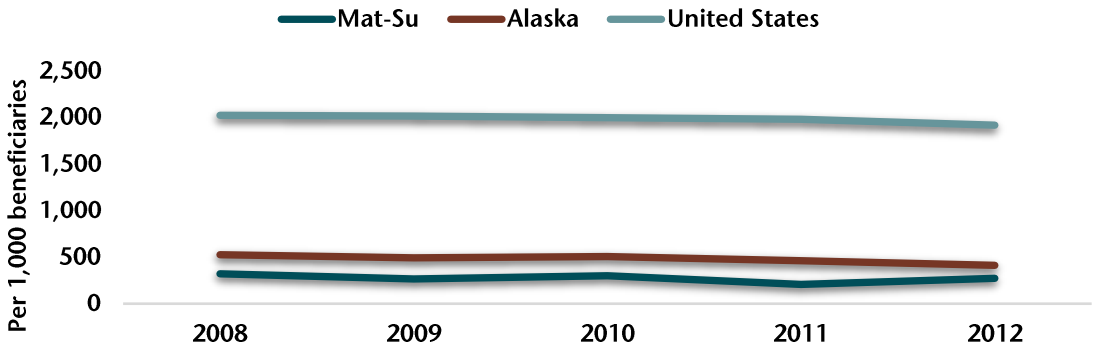
Source: CCS (CMS), MAD (CMS), HIW.

Figure 34. Skilled Nursing Facility Medicare, Mat-Su Borough, Alaska, and United States, Admissions Per 1,000 Beneficiaries, 2008-2012



Source: CCS (CMS), MAD (CMS), HIW.

Figure 35. Skilled Nursing Facility Medicare, Mat-Su Borough, Alaska, and United States, Days Per 1,000 Beneficiaries, 2008-2012



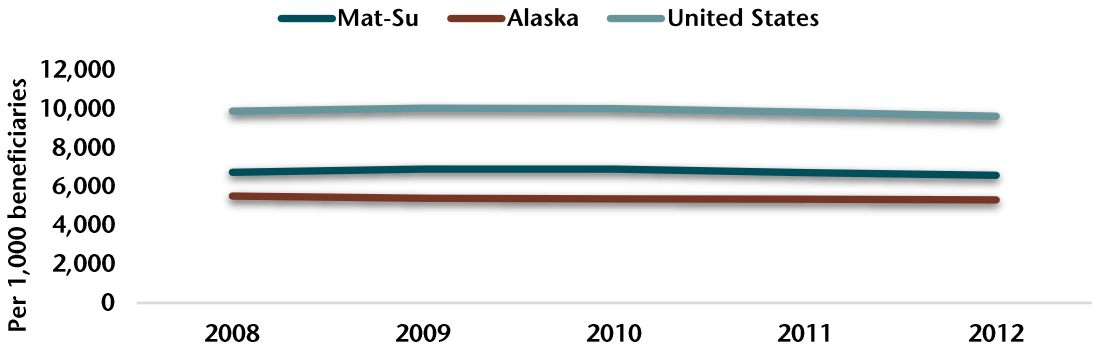
Source: CCS (CMS), MAD (CMS), HIW.

Table 122. Test Medicare, Mat-Su Borough, Alaska, and United States, Count, Percent, and Per 1,000 Beneficiaries, 2008-2012

	2008	2009	2010	2011	2012
User Count					
Mat-Su	4,692	4,971	5,263	5,633	5,865
Alaska	34,809	35,138	36,831	40,070	42,116
United States	25,107,851	25,137,444	25,451,778	26,151,605	26,341,936
Utilizations Percent					
Mat-Su	70.90%	71.13%	70.75%	72.12%	70.82%
Alaska	62.49%	60.92%	60.79%	62.86%	62.67%
United States	76.96%	77.23%	77.03%	77.51%	77.19%
Service Events Per 1,000 Beneficiaries					
Mat-Su	6,728	6,899	6,895	6,716	6,579
Alaska	5,509	5,395	5,369	5,340	5,312
United States	9,878	10,038	10,014	9,840	9,624

Source: CCS (CMS), MAD (CMS), HIW.

Figure 36. Test Medicare, Mat-Su Borough, Alaska, and United States, Service Events Per 1,000 Beneficiaries, 2008-2012



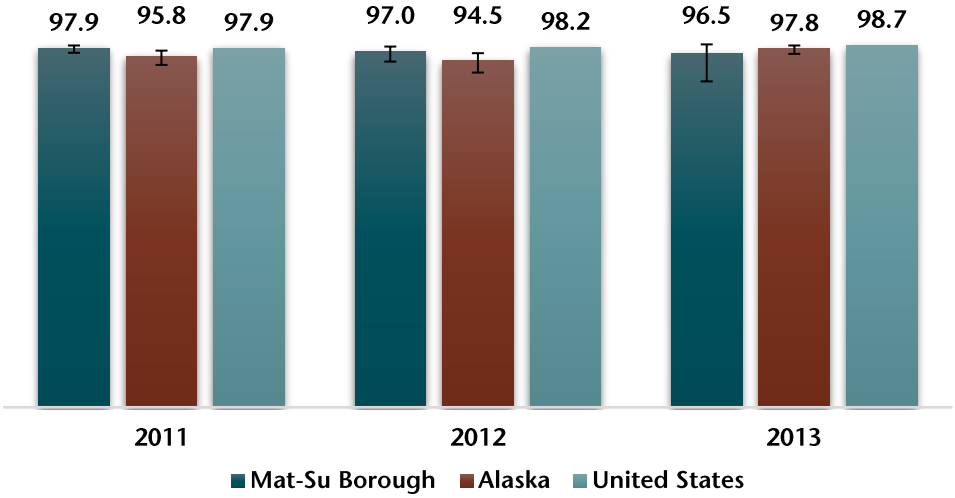
Source: CCS (CMS), MAD (CMS), HIW.

BRFSS Indicators

Medical Insurance

In 2013, 96.5 percent of Mat-Su seniors reported they had some form of medical insurance. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide.

Figure 37. Medical Insurance, by Percent, Seniors 65+, Mat-Su, Alaska, and United States, 2011-2013

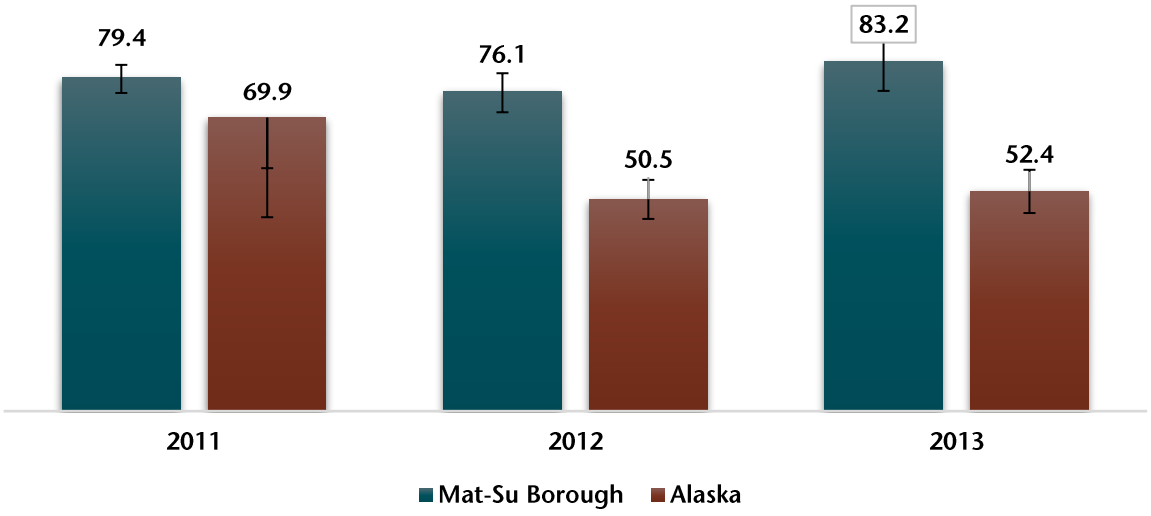


Note: Brackets indicate 95 percent confidence intervals
Source: BRFSS.

General Health

In 2013, 83.2 percent of Mat-Su seniors thought their health was good, very good, or excellent. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide.

Figure 38. General Health, by Percent, Seniors 65+, Mat-Su, and Alaska, 2011-2013

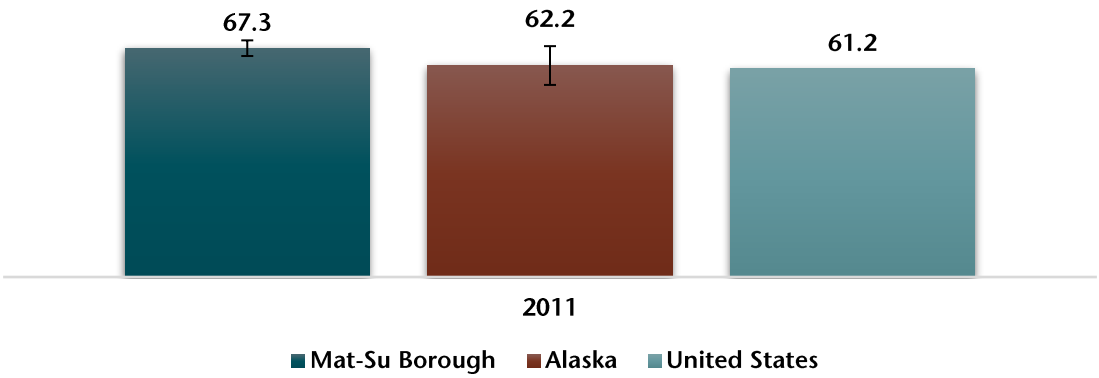


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

High Blood Pressure

In 2011, 67.3 percent of Mat-Su seniors reported having ever had high blood pressure.

Figure 39. High Blood Pressure, by Percent, Seniors 65+, Mat-Su, Alaska, and United States, 2011

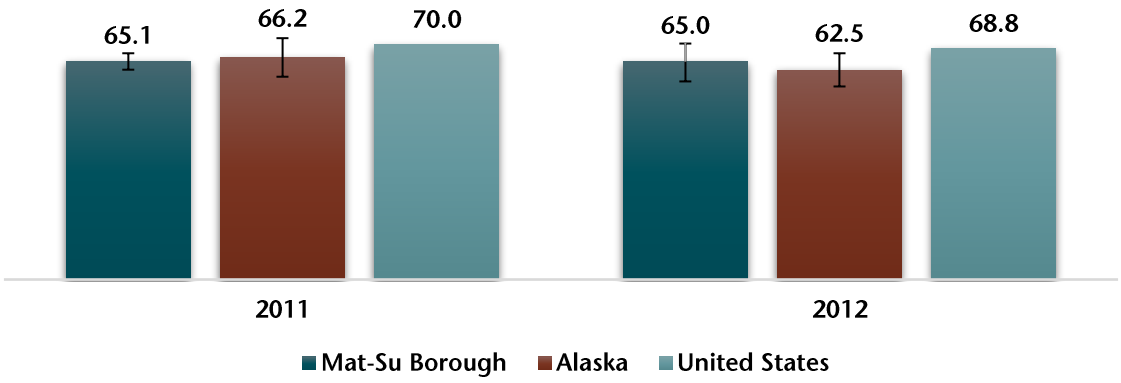


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

Pneumonia Vaccine

In 2012, 65.0 percent of Mat-Su seniors reported receiving the pneumonia vaccination during their lifetime. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide. The Mat-Su did not achieve the Healthy People Goal (90 percent) in 2011 or 2012.

Figure 40. Ever Received Pneumonia Vaccination, by Percent, Seniors 65+, Mat-Su, Alaska, and United States, 2011-2012

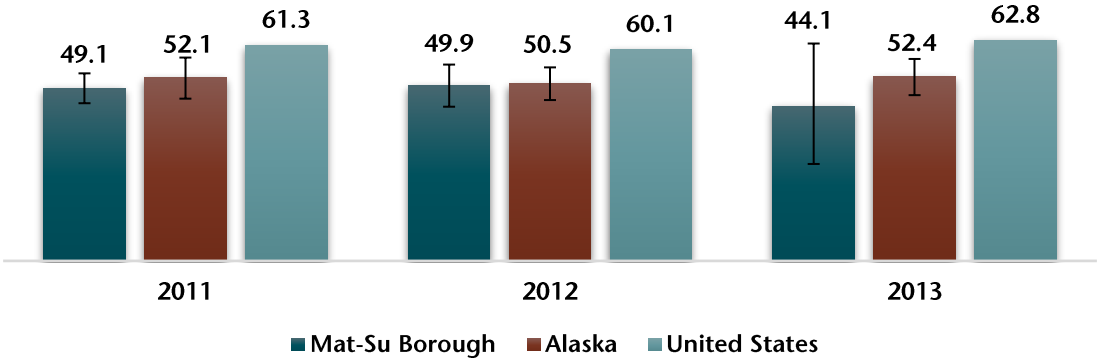


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

Flu Vaccine

In 2013, 44.1 percent of Mat-Su seniors reported receiving a flu vaccine in the past 12 months. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide. The Mat-Su was consistently lower than the national percentage for all years presented. The Mat-Su did not achieve the Healthy People Goal (90 percent) in 2011 through 2013.

Figure 41. Received Flu Vaccine in Past 12 Months, by Percent, Seniors 65+, Mat-Su, Alaska, and United States, 2011-2013

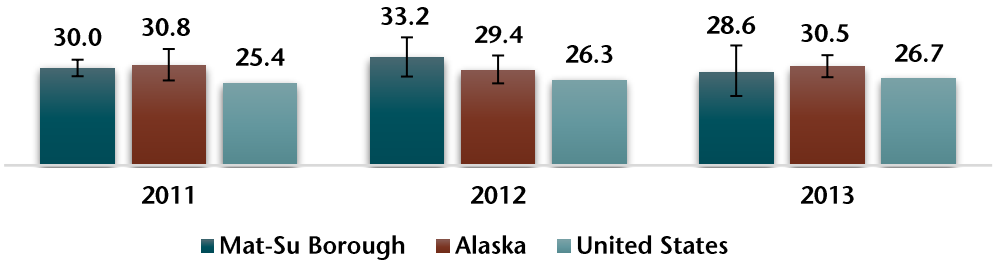


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

Obesity

In 2013, 28.6 percent of Mat-Su seniors were considered obese based on self-reported data. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide.

Figure 42. Obesity, by Percent, Seniors 65+, Mat-Su, Alaska, and United States, 2011-2013

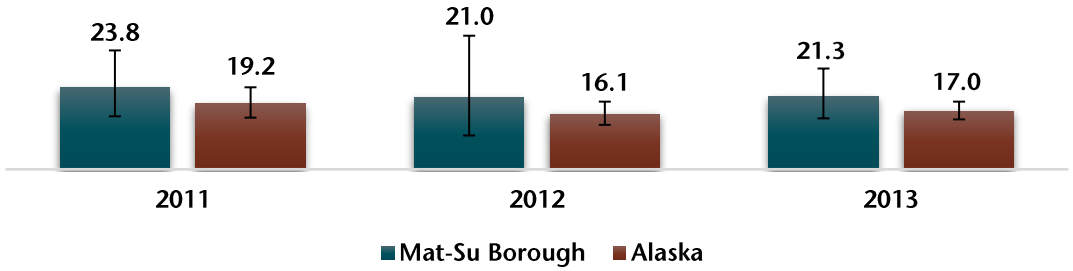


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

Diabetes

In 2013, 21.3 percent of Mat-Su seniors reported having ever had diabetes. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide.

Figure 43. Ever Had Diabetes, by Percent, Seniors 65+, Mat-Su, and Alaska, 2011-2013

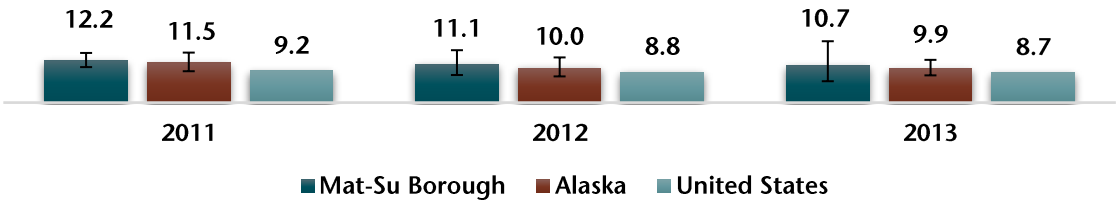


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

Smoking

In 2013, 10.8 percent of Mat-Su seniors reported they currently smoked cigarettes. During 2011-2013, Mat-Su seniors reported higher percentages of smoking than U.S. seniors. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide.

Figure 44. Currently Smoking Cigarettes, by Percent, Seniors 65+, Mat-Su, Alaska, and United States, 2011-2013

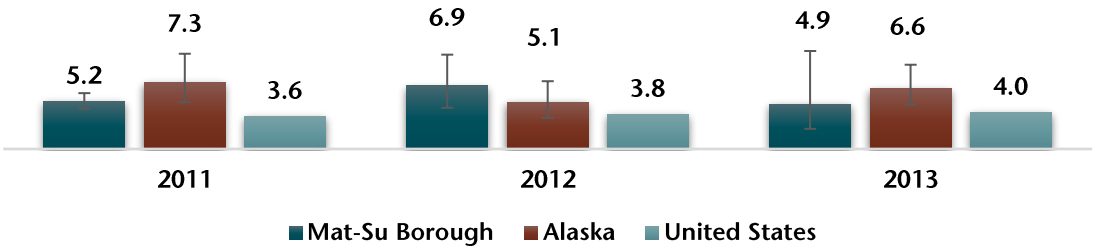


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

Heavy Drinking

In 2013, 4.9 percent of Mat-Su seniors reported drinking heavily during the past 30 days. During 2011-2013, Mat-Su seniors consistently reported a higher percentage of heavy drinking than seniors nationwide. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide.

Figure 45. Heavy Drinking During the Past 30 Days, by Percent, Seniors 65+, Mat-Su, Alaska, and United States, 2011-2013

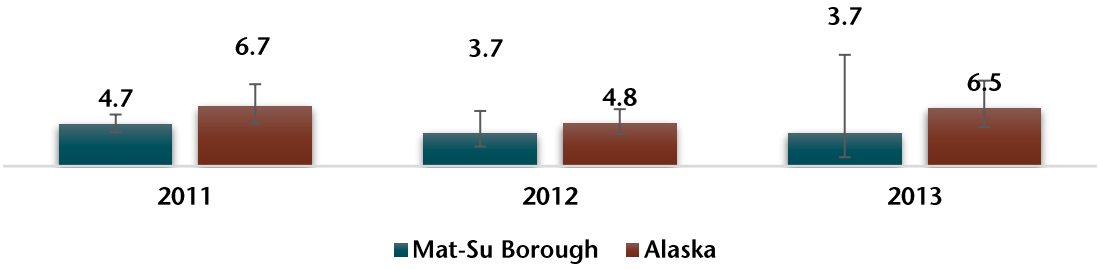


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

No Doctor Due to Doctor Cost

In 2013, 3.7 percent of Mat-Su seniors reported they did not see a doctor because of doctor cost in the previous 12 months. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide.

Figure 46. No Doctor Seen in the Past 12 Months Due to Doctor Cost, by Percent, Seniors 65+, Mat-Su and Alaska, 2011-2013

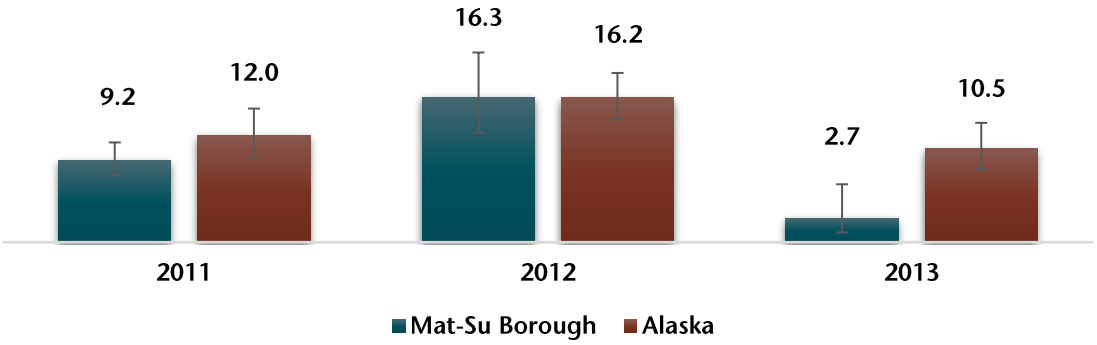


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

No Usual Primary Care Giver

In 2013, 2.7 percent of Mat-Su seniors did not have a usual primary care provider.

Figure 47. No Usual Primary Care Giver, by Percent, Seniors 65+, Mat-Su and Alaska, 2011-2013

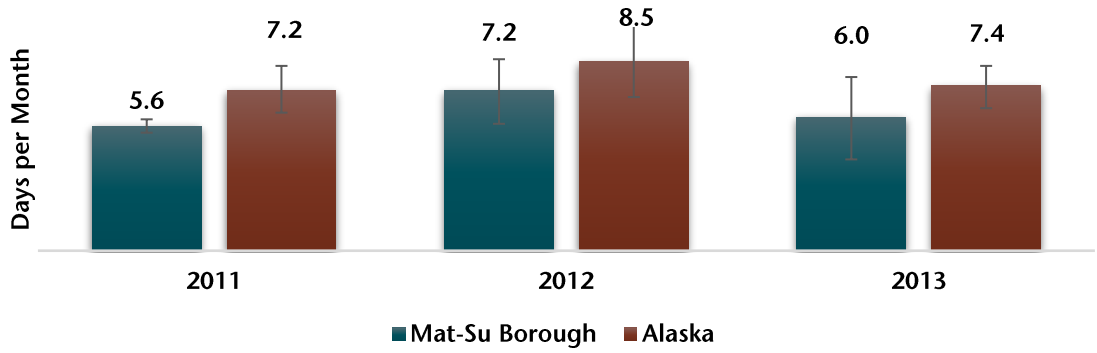


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

Poor Physical and Mental Health Days

In 2013, Mat-Su seniors reported an average of 6 unhealthy physical and mental days during the past 30 days. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide.

Figure 48. Poor Physical and Mental Health Days in the Past 30 Days, Days Per Month, Seniors 65+, Mat-Su and Alaska, 2011-2013

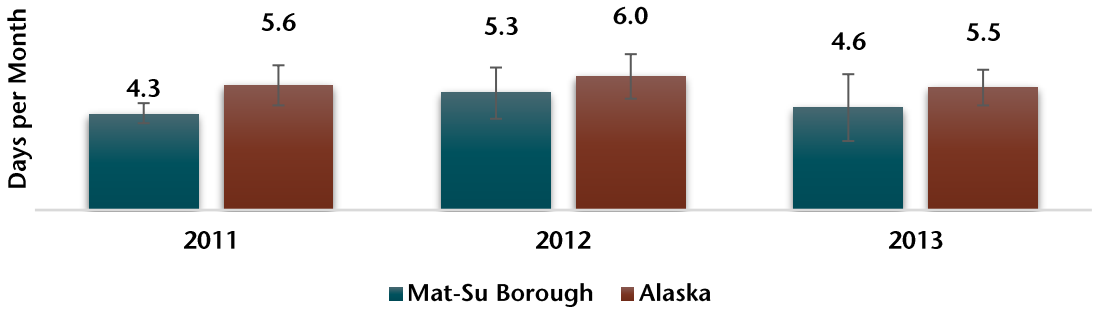


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

Poor Physical Health Days

In 2013, Mat-Su seniors reported an average of 4.6 physically unhealthy days during the past 30 days. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide.

Figure 49. Poor Physical Health Days in the Past 30 Days, Days Per Month, Seniors 65+, Mat-Su and Alaska, 2011-2013

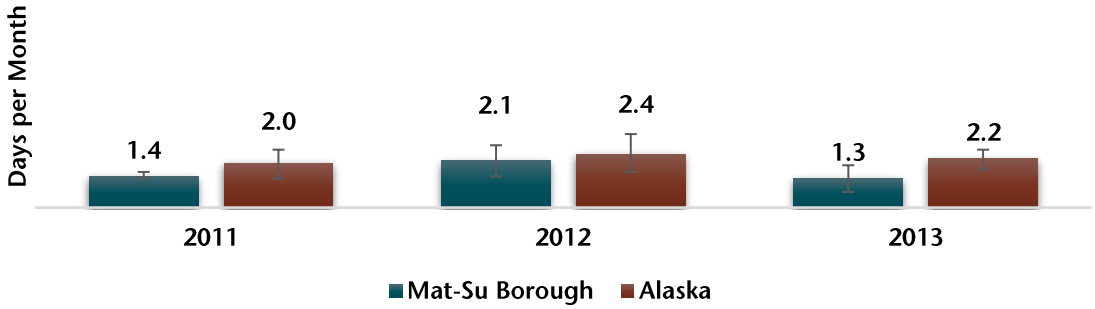


Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

Poor Mental Health Days

In 2013, Mat-Su seniors reported having 1.3 poor mental health days within the past 30 days. During 2011-2013, the trend showed no statistically significant changes in the Mat-Su or statewide.

Figure 50. Poor Mental Health Days in the Past 30 Days, Days Per Month, Seniors 65+, Mat-Su and Alaska, 2011-2013



Note: Brackets indicate 95 percent confidence intervals.
Source: BRFSS.

Alaska Trauma Registry

Characteristics of Senior Trauma Injuries

Number of Injuries and Rate of Injuries per 100,000 Person-years at Risk

Table 123. Injury Counts and Rates, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of Injuries		Rate per 100,000 PY* at Risk
Mat-Su		**% of Total**	
<65	1,637	74%	391
65+	**561**	**26%**	**1,455**
All Ages	2,198	100%	481
Anchorage		**% of Total**	
<65	4,952	77%	364
65+	**1,483**	**23%**	**1,293**
All Ages	6,435	100%	435
Other Alaska		**% of Total**	
<65	7,986	79%	525
65+	**2,098**	**21%**	**1,455**
All Ages	10,084	100%	**605**
All Alaska		**% of Total**	
<65	14,575	78%	441
65+	**4,142**	**22%**	**1,392**
All Ages	18,717	100%	520

* PY indicates Person-years
Source: Alaska Trauma Registry.

Gender

Table 124. Injury Counts and Rates, by Gender, Seniors 65+, Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of All Injuries		Rate per 100,000 PY* at Risk
Mat-Su		**% of Total**	
Male	236	42%	1,214
Female	325	58%	1,699
Total	561	100%	1,455
Anchorage		**% of Total**	
Male	511	34%	961
Female	972	66%	1,580
Total	1,483	100%	1,293
Other Alaska		**% of Total**	
Male	829	40%	1,130
Female	1,269	60%	1,792
Total	2,098	100%	1,455
All Alaska		**% of Total**	
Male	1,576	38%	1,079
Female	2,566	62%	1,694
Total	4,152	100%	1,392

* PY indicates Person-Years
Source: Alaska Trauma Registry.

INJURY INTENT

Table 125. Unintentional Injuries, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of Unintentional Injuries		Number of All Injuries	% of all Injuries that are Unintentional
Mat-Su		**% of Total**		
<65	1,411	72%	1,637	86%
65+	**553**	**28%**	**561**	**99%**
All Ages	1,964	100%	2,198	89%
Anchorage		**% of Total**		
<65	3,794	72%	4,952	77%
65+	**1,455**	**28%**	**1,483**	**98%**
All Ages	5,249	100%	6,435	82%
Other Alaska		**% of Total**		
<65	6,002	75%	7,986	75%
65+	**2,048**	**25%**	**2,098**	**98%**
All Ages	8,050	100%	10,084	80%
All Alaska		**% of Total**		
<65	11,207	73%	14,575	77%
65+	**4,056**	**27%**	**4,142**	**98%**
All Ages	15,263	100%	18,717	82%

Source: Alaska Trauma Registry.

INJURY SEVERITY

Table 126. Injury Percent by Injury Severity Score, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	0-5 (lowest)	6-10	11-20	21-35	36-75 (highest)
Mat-Su					
<65	62%	21%	12%	4%	0%
65+	**48%**	**37%**	**11%**	**3%**	**0%**
Anchorage					
<65	65%	20%	10%	4%	1%
65+	**42%**	**47%**	**9%**	**2%**	**0%**
Other Alaska					
<65	72%	17%	8%	3%	0%
65+	**44%**	**46%**	**8%**	**2%**	**0%**
All Alaska					
<65	69%	18%	9%	3%	0%
65+	**44%**	**45%**	**9%**	**2%**	**0%**

Note: Due to rounding, some rows may not total 100 percent.
Source: Alaska Trauma Registry.

Table 127. Number of Major Traumas, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of Major Traumas		Number of All Injuries	% Injuries that are Major Traumas
Mat-Su		**% of Total**		
<65	191	74%	1,637	12%
65+	**66**	**26%**	**561**	**12%**
All Ages	257	100%	2,198	12%
Anchorage		**% of Total**		
<65	532	82%	4,952	11%
65+	**117**	**18%**	**1,483**	**8%**
All Ages	649	100%	6,435	10%
Other Alaska		**% of Total**		
<65	597	79%	7,986	7%
65+	**159**	**21%**	**2,098**	**8%**
All Ages	756	100%	10,084	7%
All Alaska		**% of Total**		
<65	1,320	79%	14,575	9%
65+	**342**	**21%**	**4,142**	**8%**
All Ages	1,662	100%	18,717	9%

Source: Alaska Trauma Registry.

INJURY LOCATION

Table 128. Injuries by Injury Location, By Percent, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Home (%)	Residential Institutions (%)	Unspecified (%)	Other (%)	Number of All Injuries
Mat-Su					
<65	42%	1%	12%	46%	1,637
65+	**68%**	**9%**	**4%**	**20%**	**561**
Anchorage					
<65	32%	1%	12%	54%	4,952
65+	**66%**	**8%**	**4%**	**22%**	**1,483**
Other Alaska					
<65	32%	1%	20%	46%	7,986
65+	**60%**	**7%**	**6%**	**27%**	**2,098**
All Alaska					
<65	33%	1%	17%	49%	14,575
65+	**63%**	**8%**	**5%**	**24%**	**4,142**

Note: Due to rounding, some rows may not total 100 percent.
Source: Alaska Trauma Registry.

Table 129. Estimated Hospital Charges, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of All Injuries		Total Charges ($) (All 2009-2013)		Average Annual Total Charges ($)	Median Hospital Charges per Injury ($)
Mat-Su		**% of Total**		**% of Total**		
<65	1,637	74%	$78,686,749	71%	$15,737,350	$26,887
65+	**561**	**26%**	**$32,646,410**	**29%**	**$6,529,282**	**$39,137**
All Ages	2,198	100%	$111,472,659	100%	$22,294,532	$29,256
Anchorage		**% of Total**		**% of Total**		
<65	4,952	77%	$261,866,092	74%	$52,373,218	$28,799
65+	**1,483**	**23%**	**$93,645,763**	**26%**	**$18,729,153**	**$47,449**
All Ages	6,435	100%	$355,891,179	100%	$71,178,236	$32,386
Other Alaska		**% of Total**		**% of Total**		
<65	7,986	79%	$201,483,650	73%	$40,296,730	$12,994
65+	**2,098**	**21%**	**$72,528,613**	**26%**	**$14,505,723**	**$18,411**
All Ages	10,084	100%	$275,052,228	100	$55,010,446	$13,811
All Alaska		**% of Total**		**% of Total**		
<65	14,575	78%	$534,247,707	73%	$106,849,541	$25,105
65+	**4,142**	**22%**	**$195,680,465**	**27%**	**$39,136,093**	**$40,111**
All Ages I	18,717	100%	$731,645,695	100%	$146,329,139	$27,911

Note: The total charges for all ages are estimated for the total population; they are not the sum of the under age 65 and 65+ age group totals.
Source: Alaska Trauma Registry.

Alcohol-Related Injuries

Table 130. Alcohol Injury Counts, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	# of Alcohol-Related Injuries		# of All Injuries	% of All Injuries Alcohol-Related
Mat-Su		**% of Total**		
<65	273	94%	1,637	17%
65+	**16**	**6%**	**561**	**3**
All Ages	289	100%	2,198	13
Anchorage		**% of Total**		
<65	1,371	95%	4,952	28
65+	**79**	**5%**	**1,483**	**5**
All Ages	1,450	100%	6,435	23
Other Alaska		**% of Total**		
<65	2,402	94%	7,986	30
65+	**155**	**6%**	**2,098**	**7**
All Ages	2,557	100%	10,084	25
All Alaska		**% of Total**		
<65	4,046	94%	14,575	28
65+	**250**	**6%**	**4,142**	**6**
All Ages	4,296	100%	18,717	23

Source: Alaska Trauma Registry.

Drug-Related Injuries

Table 131. Drug Injury Counts, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	# of Drug-Related Injuries		# of All Injuries	% of All Injuries Drug-Related
Mat-Su		**% of Total**		
<65	263	93%	1,637	16%
65+	**20**	**7%**	**561**	**4**
All Ages	283	100%	2,198	13
Anchorage		**% of Total**		
<65	808	97%	4,952	16
65+	**26**	**3%**	**1,483**	**2**
All Ages	834	100%	6,435	13
Other Alaska		**% of Total**		
<65	1,459	98%	7,986	18
65+	**34**	**2%**	**2,098**	**2**
All Ages	1,493	100%	10,084	15
All Alaska		**% of Total**		
<65	2,530	97%	14,575	17
65+	**80**	**3%**	**4,142**	**2**
All Ages	2,610	100%	18,717	14

Source: Alaska Trauma Registry.

ALCOHOL AND/OR DRUG-RELATED INJURIES

Table 132. Alcohol and/or Drug Injury Counts, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of Alcohol and/or Drug-Related Injuries		Number of All Injuries	% of All Injuries Alcohol and/or Drug-Related
Mat-Su		**% of Total**		
<65	422	93%	1,637	26%
65+	**34**	**7**	**561**	**6**
All Ages	456	100	2,198	21
Anchorage				
<65	1,793	95	4,952	36
65+	**96**	**5**	**1,483**	**6**
All Ages	1,889	100	6,435	29
Other Alaska				
<65	3,030	94	7,986	38
65+	**181**	**6**	**2,098**	**9**
All Ages	3,211	100	10,084	32
All Alaska				
<65	5,245	94	14,575	36
65+	**311**	**6**	**4,142**	**8**
All Ages	5,556	100	18,717	30

Source: Alaska Trauma Registry.

CAUSE OF INJURY

Table 133. Injuries by Injury Cause, Mat-Su Seniors 65+, 2009-2013

	Number of Injuries	% of All Injuries
Falls	461	82%
Motor Vehicle Traffic	31	6%
Other*	69	12%
Total	561	100%

* indicates other causes in which fewer than nine injuries occurred in any other category of injury.
Source: Alaska Trauma Registry.

Falls

Table 134. Injuries Caused by Falls, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of Fall Injuries	Number of All Injuries	% of All Injuries Fall-Related	Rate per 100,000 PY* at Risk
Mat-Su				
<65	542	1,637	33%	130
65+	**461**	**561**	**82%**	**1,195**
All Ages	1,003	2,198	46%	220
Anchorage				
<65	1,732	4,952	35%	127
65+	**1,295**	**1,483**	**87%**	**1,129**
All Ages	3,027	6,435	47%	205
Other Alaska				
<65	2,429	7,986	30%	160
65+	**1,649**	**2,098**	**79%**	**1,144**
All Ages	4,078	10,084	40%	245
All Alaska				
<65	4,703	14,575	32%	142
65+	**3,405**	**4,142**	**82%**	**1,145**
All Ages	8,108	18,717	43%	**225**

* PY indicates Person-Years
Source: Alaska Trauma Registry.

Fall Location

Table 135. Location of Fall Occurrence, by Percent, Seniors 65+, Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Home	Public Building	Residential Institution	Unspecified or Other
Percent				
Mat-Su	74%	10%	7%	10%
Anchorage	70%	8%	10%	12%
Other Alaska	66%	9%	8%	17%
All Alaska	**69%**	**9%**	**8%**	**14%**
Number				
Mat-Su	341	44	30	46
Anchorage	909	110	125	151
Other Alaska	1,094	145	133	277
All Alaska	**2,344**	**299**	**288**	**474**

Note: Due to rounding, some rows may not total 100 percent.
Source: Alaska Trauma Registry.

Table 136. Estimated Hospital Charges Due to Fall injuries, Seniors 65+, Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of Fall Injuries	Total Charges	Average Annual Total Charges	Median Hospital Charges per Fall
Mat-Su	461	$26,219,227	$5,243,845	$41,279
Anchorage	1,295	81,614,231	16,322,846	48,926
Other Alaska	1,649	58,677,659	11,735,532	21,255
All Alaska	**3,405**	**163,847,965**	**32,769,593**	**34,043**

Source: Alaska Trauma Registry.

Motor Vehicle Traffic Accidents

Table 137. Injuries Caused by Motor Vehicle Traffic, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of Motor Vehicle Traffic Injuries		% All Injuries Motor Vehicle-Related	Rate per 100,000 PY* at Risk
Mat-Su				
<65	203	1,637	12%	49
65+	**31**	**561**	**6%**	**80**
All Ages	234	2,198	11%	51
Anchorage				
<65	406	4,952	8%	30
65+	**53**	**1,483**	**4%**	**46**
All Ages	459	6,435	7%	31
Other Alaska				
<65	572	7,986	7%	38
65+	**91**	**2,098**	**4%**	**63**
All Ages	663	10,084	7%	40
All Alaska				
<65	1,181	14,575	8%	36
65+	**175**	**4,142**	**4%**	**59**
All Ages	1,356	18,717	7%	38

* PY indicates Person-Years
Source: Alaska Trauma Registry.

Characteristics of Senior Fatalities

Table 138. Senior Counts and Rates for Fatalities from Injury, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of Fatalities from Injury	Rate per 100,000 PY* at Risk
Mat-Su		
<65	31	3
65+	**17**	**22**
All Ages	48	4
Anchorage		
<65	127	3
65+	**80**	**35**
All Ages	207	5
Other Alaska		
<65	126	3
65+	**80**	**19**
All Ages	206	4
All Alaska		
<65	284	3
65+	**177**	**24**
All Ages	461	4

* PY indicates Person-Years
Source: Alaska Trauma Registry.

Fatal Injury Location

Table 139. Total Fatalities by Injury Location, By Percent, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Home (%)	Residential Institutions (%)	Unspecified (%)	Other (%)	Number of All Fatalities
Mat-Su					
<65	29%	3%	3%	65%	31
65+	**53%**	**24%**	**0%**	**24%**	**17**
Anchorage					
<65	38%	3%	2%	57%	127
65+	**78%**	**6%**	**0%**	**16%**	**80**
Other Alaska					
<65	32%	2%	8%	58%	126
65+	**56%**	**8%**	**3%**	**34%**	**80**
All Alaska					
<65	34%	3%	5%	58%	284
65+	**66%**	**8%**	**1%**	**25%**	**177**

Source: Alaska Trauma Registry.

Table 140. Total Fatalities by Injury Location, By Count, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Home	Residential Institutions	Unspecified	Other	Number of All Fatalities
Mat-Su					
<65	9	1	1	20	31
65+	**9**	**4**	**0**	**4**	**17**
All Ages	18	5	1	24	48
Anchorage					
<65	48	4	2	73	127
65+	**62**	**5**	**0**	**13**	**80**
All Ages	110	9	2	86	207
Other Alaska					
<65	40	3	10	73	126
65+	**45**	**6**	**2**	**27**	**80**
All Ages	85	9	12	100	206
All Alaska					
<65	97	8	13	166	284
65+	**116**	**15**	**2**	**44**	**177**
All Ages	213	23	15	210	461

Source: Alaska Trauma Registry.

FATAL INJURY CAUSE

Table 141. Fatalities by Injury Cause, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Fall Fatalities		Motor Vehicle Fatalities		Other Fatalities		
	Number of Fatalities	% of all Fatalities	Number of Fatalities	% of all Fatalities	Number of Fatalities	% of all Fatalities	Total Fatalities
Mat-Su							
<65	4	13%	14	45%	13	42%	31
65+	**13**	**76%**	**3**	**18%**	**1**	6%	**17**
All Ages	17	35%	17	35%	4	29%	48
Anchorage							
<65	19	15%	27	21%	81	64%	127
65+	**65**	**81%**	**5**	**6%**	**10**	**13%**	**80**
All Ages	84	41%	32	15%	91	44%	207
Other Alaska							
<65	18	14%	27	21%	81	64%	126
65+	**57**	**71%**	**11**	**14%**	**12**	**15%**	**80**
All Ages	75	36%	38	18%	93	45%	206
All Alaska							
<65	41	14%	68	24%	175	62%	284
65+	**135**	**76%**	**19**	**11%**	23	13%	**177**
All Ages	176	38%	87	19%	198	43%	461

Source: Alaska Trauma Registry.

Fall Fatalities

Table 142. Fall Counts and Deaths, Seniors 65+ and Non-Seniors (<65), Alaska, Mat-Su, Anchorage, and Other Alaska, 2009-2013

	Number of Fall Injuries	Fall Rate per 100,000 PY* at Risk	Number of Fall Fatalities	% Falls Resulting in Death	Number of All Injury Fatalities	Fall Fatalities as % of All Injury Fatalities
Mat-Su						
<65	542	130	4	0.7%	31	13%
65+	**461**	**1,195**	**13**	**2.8%**	**17**	**76%**
All Ages	1,003	220	17	1.7%	48	35%
Anchorage						
<65	1,732	127	19	1.1%	127	15%
65+	**1,295**	**1,129**	**65**	**5.0%**	**80**	**81%**
All Ages	3,027	205	84	2.8%	207	41%
Other Alaska						
<65	2,429	160	18	0.7%	126	14%
65+	**1,649**	**1,144**	**57**	**3.5%**	**80**	**71%**
All Ages	4,078	245	75	1.8%	206	36%
All Alaska						
<65	4,703	142	41	0.9%	284	14%
65+	**3,405**	**1,145**	**135**	**4.0%**	**177**	**76%**
All Ages	8,108	225	176	2.2%	461	38%

* PY indicates Person-Years
Source: Alaska Trauma Registry.