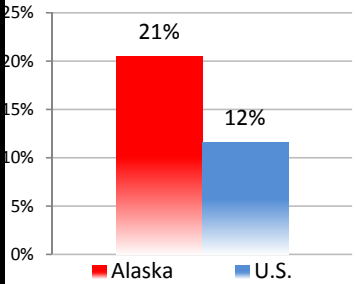


**Key Indicators Influencing Alaska's Cost of Care - Page 1**

ASHNHA

ALASKA STATE HOSPITAL & NURSING HOME ASSOCIATION

**1. Uncompensated Care, 2009**



Uncompensated care in Alaska = \$178M

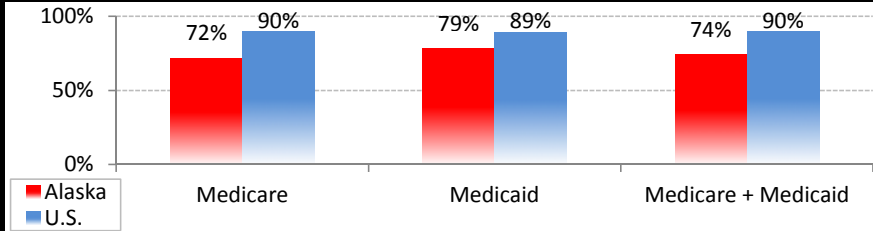
Source: AHA Survey & Fact Sheets, 2009

**2. Occupancy Rate Comparisons**

	Beds	IP Days	Occupancy Rate	Beds/1000
AK	1,944	450,407	63%	2.78
HI	3,703	998,055	74%	2.86
ID	4,030	790,117	54%	2.61
MT	4,574	1,074,113	64%	4.69
ND	3,857	885,036	63%	5.96
OR	7,997	1,893,362	65%	2.09
WA	14,105	3,480,552	67%	2.12
WY	2,661	579,769	60%	4.89

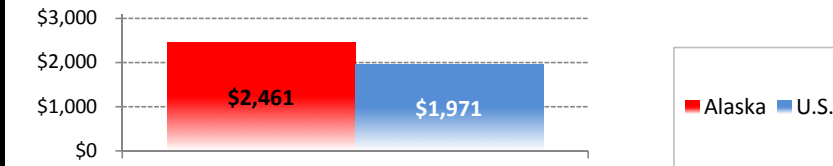
Source: AHA Survey, 2009

**3. Payment as a Percent of Cost, 2009**



Source: AHA Survey and Mark Foster and Associates

**4. Median Expense per Inpatient Day, 2009**



Case-Mix Adjusted

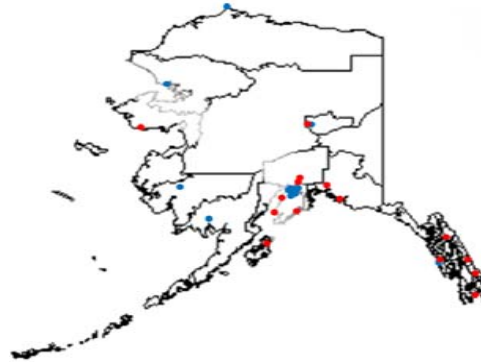
Source: INGENIX Almanac of Hospital Financial & Operating Indicators, 2011; Medicare Cost Reports and Mark Foster and Associates

**5. Population-to-CAH Ratio (thousands)**

	AK	HI	ID	MT	ND	OR	WA	WY
Number of CAHs	13	9	27	48	36	25	38	16
Pop-to-CAH Ratio	55	151	58	21	19	153	177	35
Pop-to-CAH Ratio Rank	8	20	9	2	1	21	25	6

Source: CMS (current as of 3/31/2011); 2010 U.S. Census

**6. Alaska Hospitals, July 2011**

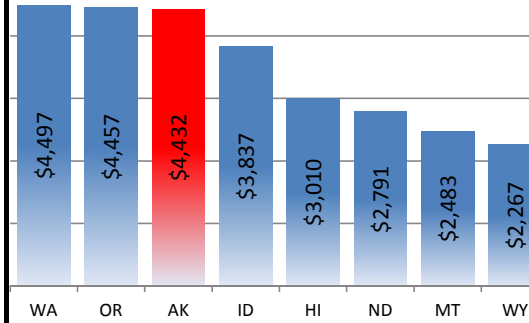


● Sole Community/Critical Access Hospitals  
● Other Community Hospitals

**6.1 Geographic Distribution**

	Land Area (sq mi)	Pop. Density (sq mi)	Bed Density (1000 sq mi)
AK	571,951	1.20	3.40
HI	6,423	211.80	576.52
ID	82,747	18.90	48.70
MT	145,552	6.80	31.43
ND	68,976	9.80	55.92
OR	95,997	39.90	83.30
WA	66,544	101.10	211.97
WY	97,100	5.80	27.40

**7. Total Expense per Inpatient Day**



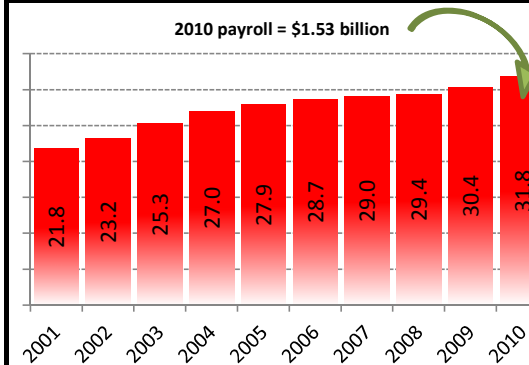
Source: AHA Survey, 2009

**8. Alaska Hospitals**

	Number	Percent
Critical Access Hospitals (CAH)	9	33%
Tribal Hospitals <sup>1</sup>	6	22%
Sole Community Hospitals	4	15%
Military/Veterans Hospitals	2	7%
Subtotal	21	78%
Tertiary Hospitals	3	11%
Psychiatric/BH Hospitals	2	7%
Long Term Acute Hospitals	1	4%
Total Alaska Hospitals	27	
Stand Alone Nursing Homes	3	

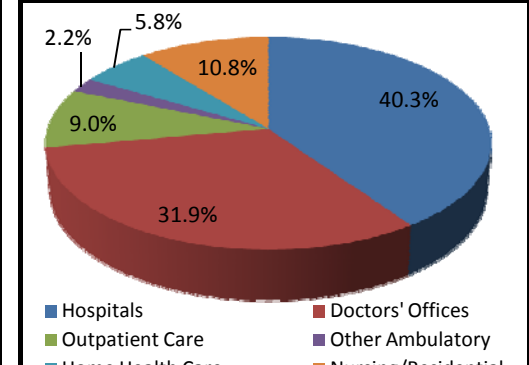
<sup>1</sup>Includes 4 Tribal CAH

**9. AK Health Care Employment (thousands)**



Source: AK Dept. of Labor and Workforce Development

**10. Health Care Employment Settings, 2010**

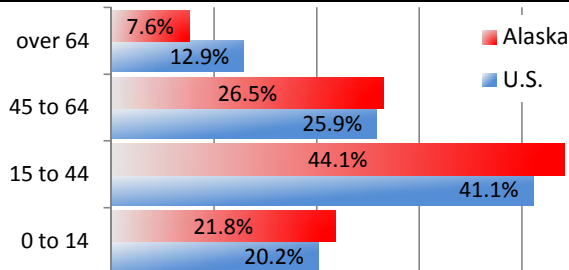


Source: AK Dept. of Labor and Workforce Development



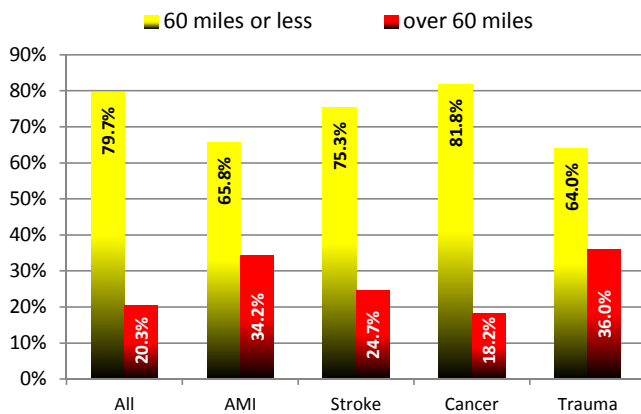
ALASKA STATE HOSPITAL & NURSING HOME ASSOCIATION

### 11. Population Distribution by Age Group, 2009



Source: U.S. Census Bureau, 2009 population estimates

### 12. Distance Traveled by Select Conditions, 2009



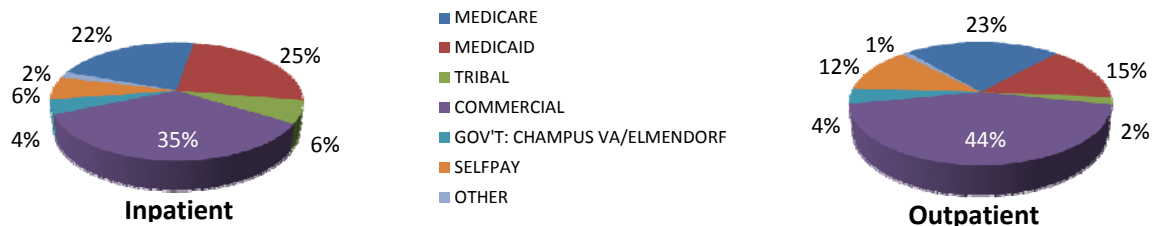
Source: ASHNHA member hospital discharge data files

### 13. Consumer Price Index Comparisons

	2010 CPI-U for Med. Care	% Change 1990-2010	2010 CPI-U for All Items	% Change 1990-2010
Anchorage, AK	419.7	160%	195.1	65%
Seattle, WA	349.6	126%	226.7	79%
Portland, OR	443.6	187%	218.3	71%
Honolulu, HI	320.2	108%	234.9	70%
Denver, CO	446.4	157%	212.4	76%
U.S.	388.4	139%	218.1	67%

Source: Bureau of Labor and Statistics

### 14. ASHNHA Member Hospital Visits, 2009

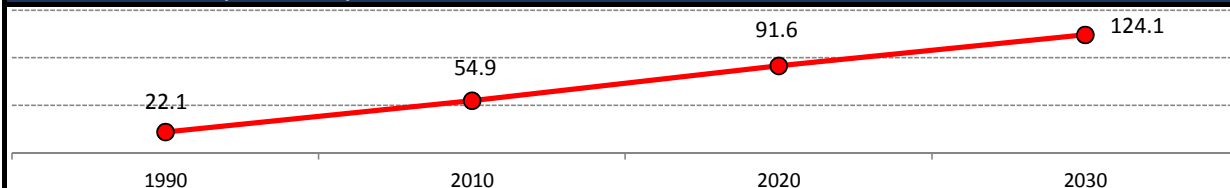


	MCR	MCD	Tribal	Comm.	Gov't/VA	Self-pay	Other
'09 Inpatient	10,965	12,450	3,095	17,350	1,956	3,148	832
'09 Outpatient	193,224	123,430	15,791	369,522	34,185	99,973	9,003

Note: Alaska Native Medical Center is not included in outpatient data.

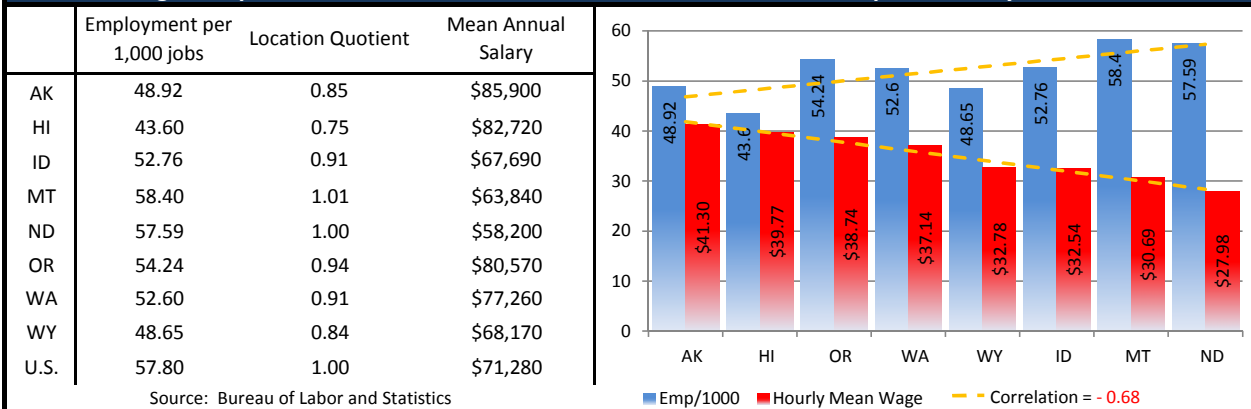
Source: ASHNHA member hospital discharge data files

### 15. Alaska Seniors (thousands)

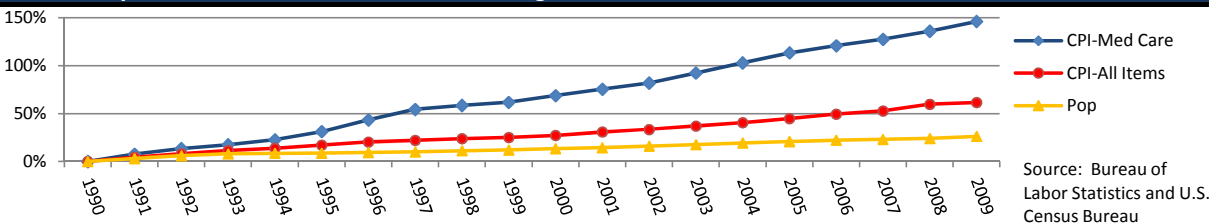


Sources: U.S. Census; Alaska Department of Labor and Workforce Development

### 16. State Wage Comparisons for Health Care Practitioners and Technical Occupations, May 2010

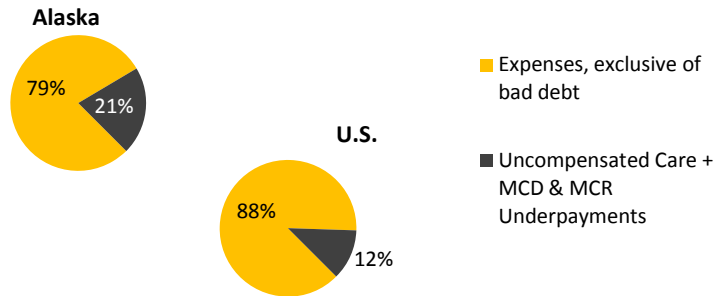


### 17. Alaska Population and Medical Care Price Change: 1990-2009



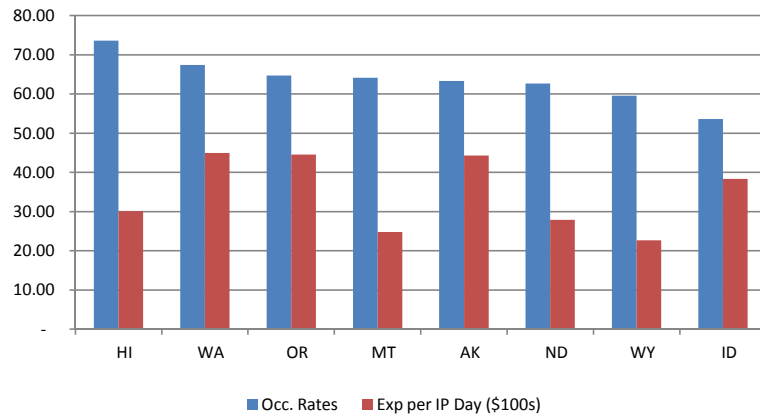
**Key Indicators Influencing Alaska's Cost of Care - Dashboard Description**

**1. Uncompensated Care, 2009**



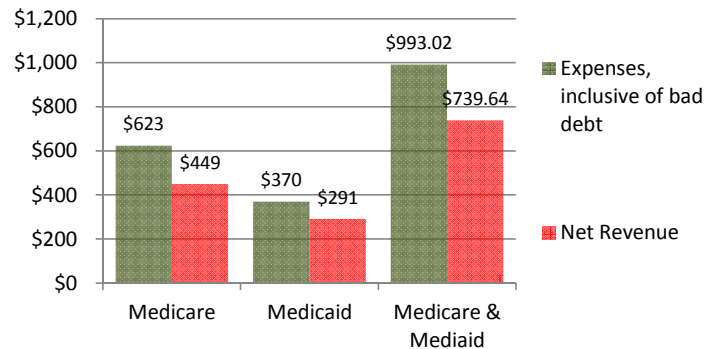
An analysis of AHA 2009 data by ASHNHA consultants indicates that the uncompensated care in Alaska is 9% above the national rate. Expenses being constant, if Alaska's uncompensated care rate was similar to the national rate, Alaska would expect to lessen their shortfall by approximately \$178 million. Source: AHA Survey, 2009; AHA Fact Sheets (Underpayment, 2010; Uncompensated Care, 2010); analysis by ASHNHA consultant, Mark Foster.

**2 & 7. Occupancy Rates and Total Expenses per Inpatient Day**



At 2.78, the overall supply of Beds per 1,000 Alaskans is similar to the bed supplies Hawaii, Washington, Oregon, and Idaho (according to data from the 2009 Annual Survey conducted by the American Hospital Association, covering 27 Alaska hospitals). The demand for those beds (proxied at left by occupancy rates) shares a positive relationship with total expenses for each inpatient day reported. By comparison, North Dakota features a surplus of beds at nearly six per 1,000 residents while total hospital expenses per inpatient day in North Dakota are 63% the going rate in Alaska. Fixed costs are unlikely to be a strong driver in the inequality as the average bed size of the hospitals sampled in the survey was 72 for Alaska and 77 for North Dakota. "Total Expense" was taken from the AHA Survey, which defines "Total Expense" as total facility expenses, excluding bad debt.

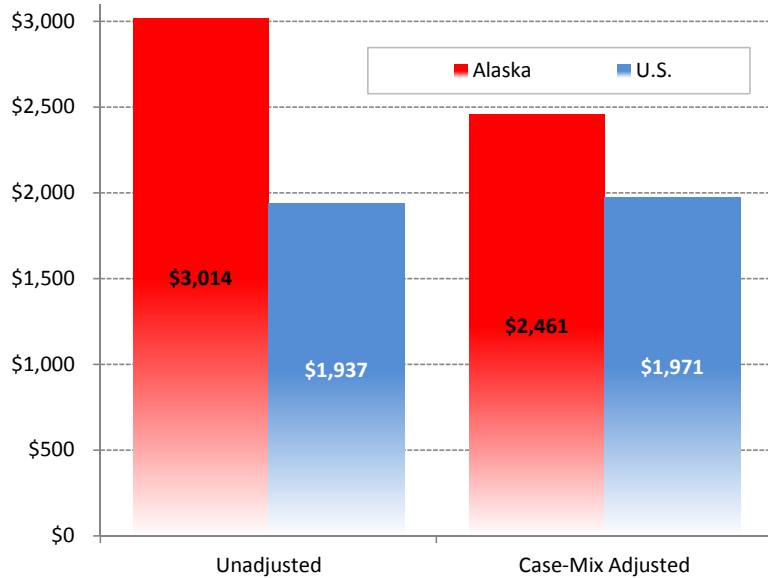
**3. Payment as a Percent of Cost**



Factoring in bad debt as an element of Alaska's 2009 expenses results in combined Medicare and Medicaid payments equaling just 74% of the expense figure, which leaves an associated revenue shortfall of approximately \$253 million. Source: AHA Survey, 2009; AHA Fact Sheets (Underpayment, 2010; Uncompensated Care, 2010); analysis by ASHNHA consultant, Mark Foster.

Key Indicators Influencing Alaska's Cost of Care - Dashboard Description

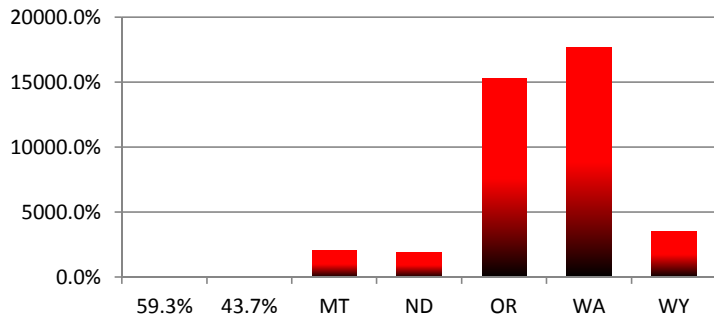
4. Median Expense per Inpatient Day



Alaska demonstrates a dramatic unadjusted median expense per inpatient day that's 1.56 times greater than the national median. When expenses are adjusted for case-mix and wage index, Alaska's per day inpatient median expense narrows to 1.25 times that the national figure. According to *Alaska Economic Trends, August 2011*, per person, Alaska spends more health care dollars than most other states. From 1991 to 2004, Vermont and Maine were the only states to record higher health care spending trends. Sources: INGENIX Almanac of Hospital Financial & Operating Indicators, 2011, Medicare Cost Reports (analysis by ASHNHA consultant, Mark Foster. *Alaska Economic Trends, August 2011*).

An integral component to controlling costs in many healthcare disciplines requires high volumes and proficiency levels that are better achieved in specialty hospitals. In Alaska, there are no such occurrence of specialty hospitals that take advantage of these factors in order to mitigate the impact of high cost procedures. Fixed costs associated with services decreases as the volume of those services increases. In contrast to facilities in the lower 48, Alaska must meet the needs of residents locally. Costly equipment and training are required to provide services that benefit fewer patients than the national average.

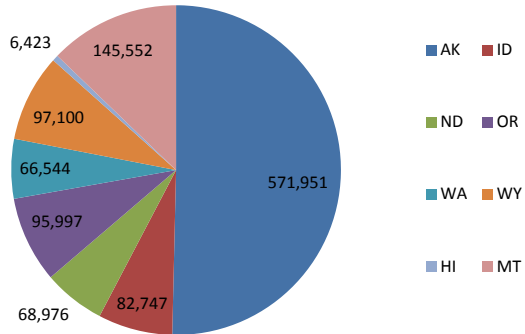
5. Population-to-CAH Ratio (thousands)



With 13 Critical Access Hospitals in a state of a little over 700,000 people, Alaska has the 8th highest state rank of population-to-CAH ratio in the nation. Of the 10 states with the greatest saturation of population-to-CAH (in order, highest to lowest: North Dakota, Montana, South Dakota, Nebraska, Kansas, Wyoming, Iowa, Alaska, Idaho and Minnesota), only one (Minnesota) cracks the top 20 in total population. Source: CMS (2011); U.S. Census, 2010 population.

**Key Indicators Influencing Alaska's Cost of Care - Dashboard Description**

**6.1 Geographic Distribution**



The size of Alaska and relative distance from distribution centers increases the logistical and supply chain cost of delivering health care goods and services in the state. At 571,951 square miles, Alaska alone is 1.02 times the combined geographic size of the seven other states included in this analysis. This results in a distribution of hospital beds at only 3.4 per 1,000 square miles to compliment the distribution of people at 1.2 per square mile. This does not account for the fact that nearly 50% of the hospital beds and 41% of the population in Alaska are in Anchorage.

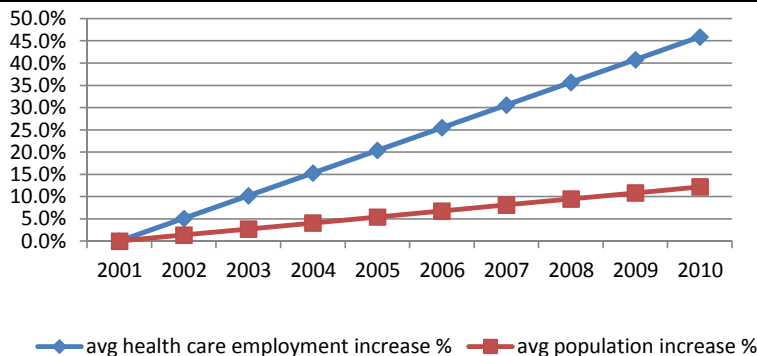
**8. Alaska Hospitals**

8. Alaska Hospitals	Number	Percent
Critical Access Hospitals (CAH)	9	33%
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Tertiary Hospitals	3	11%
Psychiatric/BH Hospitals	2	7%
Long Term Acute Hospitals	1	4%
<b>Total Alaska Hospitals</b>	<b>27</b>	
<b>Stand Alone Nursing Homes</b>	<b>3</b>	

<sup>1</sup>Includes 4 Tribal CAH

79% of Alaska’s hospitals have special designations – CAH, Tribal, Federal or Sole Community Hospitals – and commensurate federal funding that acknowledges the higher cost of providing health care in Alaska. These facilities serve a wide range of needs in the community including inpatient and outpatient care and often provide long term care nursing home beds. Referrals for a higher level of care are made to the three tertiary care hospitals in Anchorage. An integral component to controlling healthcare costs requires high volumes and proficiency levels that are better achieved in specialty hospitals. In Alaska, there are no specialty hospitals available to centralize high cost procedures. Fixed costs associated with services decrease as the volume of services increases. There is rarely enough volume in Alaska to mitigate the impact of high fixed costs. In contrast to facilities in the lower 48, Alaska must meet the needs of residents locally. Costly equipment and training are required to provide services that benefit fewer patients than the national average.

**9 & 10. Alaska Health Care Employment (thousands); and Health Care Employment Settings, 2010**



Indicators 9 and 10 depict Alaska's growth of health care employment and the associated distribution across health care setting. Although health care services usage is not evenly distributed across age and, as we can see from sub-report 8, all Alaska age segments are not increasing at the same rate, health care employment rates are increasing much faster than the over population. This is likely a function of relatively high demand (63% occupancy rates in 2009) coupled with an availability deficiency of health care workers (15% under national levels). Source: Alaska Department of Labor and Workforce Development; Bureau of Labor and Statistics. The 31,800 health care jobs in 2010 represent a payroll of \$1.53 billion.

12. Distance Traveled by Select Conditions, 2009

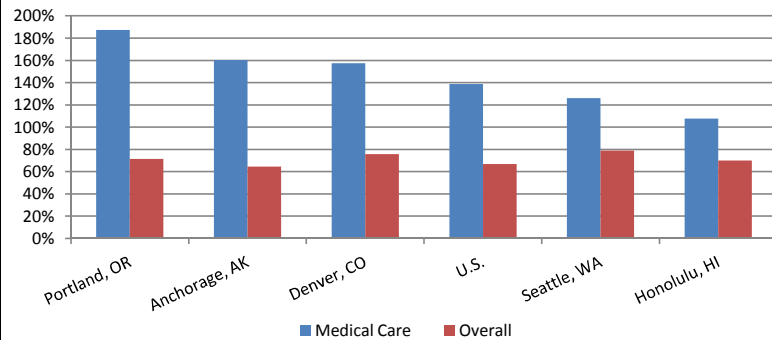
Miles	Select Conditions				
	All	AMI	Stroke	Cancer	Trauma
10	59.3%	43.7%	61.5%	67.3%	46.0%
11-30	16.6%	14.3%	11.1%	10.5%	12.2%
31-60	3.8%	7.8%	2.7%	4.0%	5.8%
61-100	3.1%	4.4%	3.7%	2.2%	3.6%
101-200	2.7%	4.1%	2.2%	3.3%	5.0%
201-400	5.7%	7.2%	6.5%	6.5%	14.4%
401-600	4.7%	7.7%	4.6%	2.9%	4.3%
over 600	4.1%	10.8%	7.6%	3.3%	8.6%

This graphic explores the relationship between a selection of conditions and the average distance traveled to the [eventual] discharge hospital based on patient residence. Around 35% of the time, trauma and AMI cases, on average, travel over 60 miles for hospital care. For the remaining conditions, as well as for all discharges combined, the average distance traveled is greater than or equal to 60 miles from about 18% to nearly 25% of the time. Clearly, significant cost is associated with emergent/non-emergent transportation. Additionally, research suggests that patient distance from hospital care can be positively correlated with costs per discharge and increased risk of patient mortality.

The "distance traveled" is compiled by calculating the distance between the latitude and longitude of the ASHNHA discharge hospital and the latitude and longitude of the centroid of the zip code that contains the residence of the patient discharged. The distance calculation is not restricted to Alaska residents traveling to ASHNHA hospitals, rather, it's restricted only to ASHNHA hospitals, without regard to the discharged individual's residence. Additionally, distances traveled by Alaska residents to hospitals outside of Alaska is not included in the calculation. Source: ASHNHA member hospital discharge data files. Distance and Outcomes relation: <http://emj.bmj.com/content/24/9/665.abstract>; <http://www.lehigh.edu/~incntr/publications/documents/HospRptCards.pdf>.

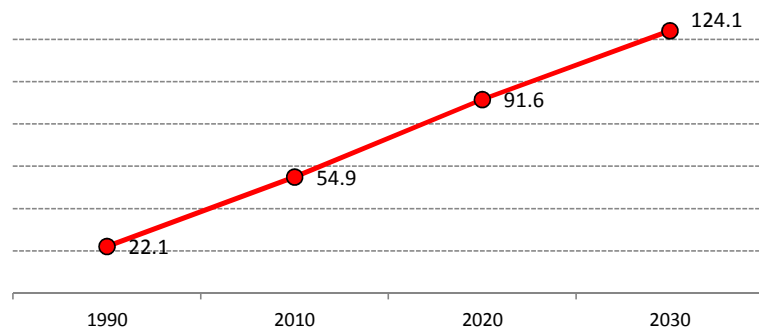
Seventy-five percent (75%) of Alaskan communities are not connected by road to a community with a hospital (Alaska AHEC).

13. Consumer Price Index Comparisons: Overall Inflation Compared to Inflation for Medical Care since 1990



The overall price for medical care in Anchorage has increased 160% since 1990. This rate of growth outpaced that of the U.S. by 16% over the same period while the rate of inflation for all goods and services in the U.S. outstripped Alaska's by two percentage points. Prices for medical care grew 2.5 times the rate of overall prices in Alaska, resulting in a 96 point gap between the two indicators over the past two decades. Of the areas examined, Portland and Anchorage experienced the most growth in prices for medical care and the largest gaps between medical care inflation and overall inflation. Part of the price growth observed in medical care may be explained by population growth in the two cities over the same period (29% and 26% respectively).

15. Alaska Seniors (thousands)

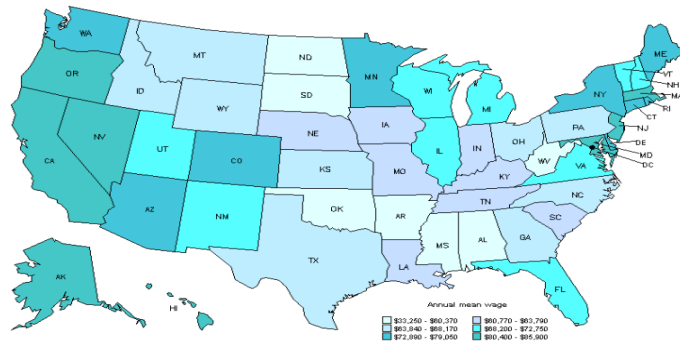


From 1990 to 2010, Alaska observed its age 65+ population increase by nearly 150%; the following decade is predicted to increase its seniors number by just under 70%; and from 2020 to 2030, it's expected that Alaska's senior population will increase 35%, going from about 92,000 to just over 124,000. Not surprisingly, an increase in an aged population will result in an increase in health care costs on a per person basis. Data Sources: U.S. Census (1990, 2000, 2010); 2020 and 2030 projections from *Alaska Population Projection, 2010 to 2034*. Analytic source: Alaska Department of Labor and Workforce Development.

**Key Indicators Influencing Alaska's Cost of Care - Dashboard Description**

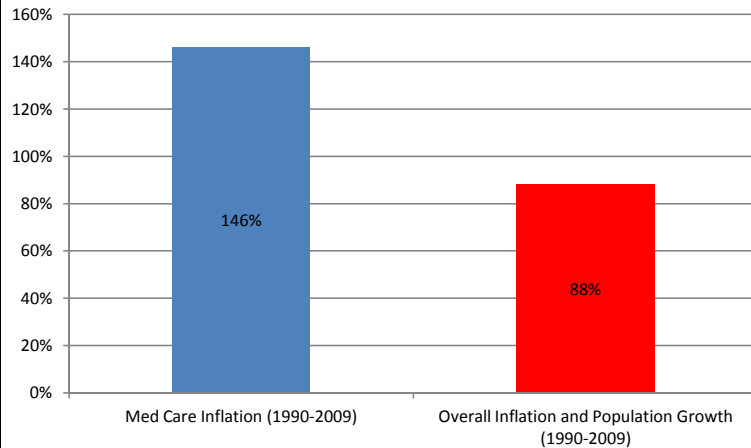
**16. State Wage Comparisons**

Annual mean wage of healthcare practitioners and technical occupations, by state, May 2010



Attributes of the health care labor market contribute significantly to the cost of care. According to the Bureau of Labor Statistics, Alaska faces the highest costs in the nation for Health Care Practitioners and Technical Occupations (Physicians, Nurses, Technicians, etc). The high labor cost of health care in Alaska is due in part to high demand (63% occupancy rate in 2009) coupled with limited supply--The availability of healthcare workers is 15% below national levels (location quotient = 0.85; a value of 1 reflects the national level). Employment in the health care sector as a fraction of employment in the total economy and average wages in the healthcare sector share a strong inverse relationship--wages increase with labor scarcity.

**17. Alaska Population and Medical Care Price Change: 1990-2009**



Approximately 60% of the growth in the price of medical care in Alaska between 1990 and 2009 can be explained by overall inflation and population growth. In relative terms, Alaskan demographics and population health should act to diminish its health care costs. With a median age of 32.8, Alaska is the second youngest state in the U.S. The state also enjoys very low rates of cardiac heart disease, cardiovascular deaths, diabetes, heart attack, high blood pressure and high cholesterol (<http://statehealthstats.americashealthrankings.org/#/state/US/AK/2010>). However, Alaska has high rates of trauma, injuries, suicide and substance abuse that places a burden on its health care system. As the population ages, Alaska also faces an increasing burden on the health care system from chronic diseases.