

What are the primary drivers of the high cost of health insurance & medical care in Alaska? History & Outlook

Developed for: Alaska Common Ground

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Questions to review:

1. What is the magnitude of the challenge of the high cost of health insurance + medical care in Alaska?
 - How do Alaska costs compare to other Western & Mountain states? (adjust for demographics, PPP)
 - How do U.S. costs & outcomes compare to other countries?
 - What are the primary drivers of health outcomes?
 - What is the opportunity cost of high medical costs without commensurate health benefits?
2. What are the primary drivers of high cost / high cost growth in Alaska?
 - Compare Alaska prices & utilization
 - Alaska medical service utilization is generally low; with notable exceptions
 - Alaska medical prices are high and have continued to grow rapidly (2009-2014 & 2014-2016)
 - Compare Alaska across cost & cost growth quadrants
3. What are the sources of *excess cost* in U.S. / Alaska health care?
4. What is the outlook for cost (price * utilization), access and quality?

Summary

- Alaska has high health care costs PLUS *excessive cost escalation* that significantly exceeds personal income growth -- the cost of health insurance grows while wages stagnate – and this challenge is more severe in Alaska relative to other states
- What factors are driving the high cost of health care in Alaska *above & beyond* the basic factors driving high U.S. health care costs?
 - Technology (-), Income (-), Insurance Coverage (+), Demographics (-/+), **Relative medical price inflation (+/+); medical price inflation in physician and outpatient services in Alaska is running markedly higher than other states (and a significant portion of the excess price inflation is in Anchorage/Railbelt and is driving excess cost growth in health insurance premiums across Alaska’s public and private sectors)**
- So what? Do high U.S. health care expenditures provide better outcomes / access? Do high Alaska health care expenditures provide better access / outcomes?
 - Neither high costs nor high prices correlate with quality / outcomes (U.S. or AK); U.S. correlation tends to run high cost = variable quality while G20 correlation tends to run high cost = higher quality;
- Considerations in the evaluation of health sector initiatives
 - Alaska:
 - Commercial payer segment
 - Alaska Health Care Authority (consolidate public employee health plans and medical service procurement, leverage scale to negotiate improved value, explore allowing small business/non-profits to buy in, accelerate health insurance plan migration toward value based benefit design)
 - Review and remove barriers to enabling private employers to invest in medical travel, e.g., BridgeHealth
 - Medicaid
 - Alaska prices are higher and the relative prices [Mcaid > Mcare] are significantly different from comparison states
 - Medicare
 - Concerns with coverage, access and cost in Alaska may continue to be exacerbated by Mcare>Mcaid pricing
 - Consider whether employer sponsored insurance, which is purported by providers (hospitals, physician groups) to be paying a significant premium due to cost shifting, may benefit from a reset under an All-Payer model, e.g., Maryland, which could also help significantly reduce overhead associated with excessive uncoordinated regulation of providers

HOW DO ALASKA COSTS COMPARE TO OTHER STATES?

1. Raw data – most recent CMS data release (through 2014)
2. Adjust for demographics (age/sex distribution) and BLS regional purchase power parity (PPP)

CMS
Personal
Health Care
Expenditures
AK vs.
Comparison
States –

Nominal \$,
before
adjusting for
cost of living
and
demographics

		CMS nominal Personal Health Expenditures per capita							
		CY					SORT		
Rank	Order	2009	2010	2011	2012	2013	2014	CAGR	
State		(14 v 09)							
1	District of Columbia	10439	10876	11281	11223	11466	11944	2.7%	
2	Alaska	8745	9129	9586	10130	10428	11064	4.8%	
3	Massachusetts	9417	9619	9818	10071	10273	10559	2.3%	
4	Delaware	8405	8822	9213	9433	9766	10254	4.1%	
5	Vermont	8111	8488	8874	9302	9919	10190	4.7%	
6	Connecticut	8740	8863	8950	9300	9517	9859	2.4%	
7	North Dakota	7919	8325	8758	8977	9385	9851	4.5%	
8	New York	8542	8795	9016	9076	9351	9778	2.7%	
9	New Hampshire	8134	8466	8766	9048	9369	9589	3.3%	
10	Rhode Island	8393	8569	8782	8961	9160	9551	2.6%	
11	Maine	8359	8539	8824	9001	9133	9531	2.7%	
12	West Virginia	7772	7960	8268	8764	8969	9462	4.0%	
13	Pennsylvania	7701	8121	8432	8632	8877	9258	3.8%	
14	South Dakota	7335	7704	8065	8335	8547	8933	4.0%	
15	Minnesota	7521	7782	7968	8177	8465	8871	3.4%	
16	New Jersey	7727	7778	7947	8269	8444	8859	2.8%	
17	Ohio	7322	7525	7652	8072	8286	8712	3.5%	
18	Wisconsin	7512	7709	7971	8061	8189	8702	3.0%	
19	Maryland	7507	7748	7937	8115	8250	8602	2.8%	
20	Nebraska	7193	7524	7715	7979	8133	8412	3.2%	
21	Wyoming	6972	7301	7554	7833	7961	8320	3.6%	
22	Indiana	6791	6987	7286	7848	7923	8300	4.1%	
23	Illinois	6917	7253	7429	7665	7911	8262	3.6%	
24	Montana	6701	7034	7301	7645	7994	8221	4.2%	
25	Iowa	6946	7177	7416	7648	7806	8200	3.4%	
26	Missouri	6902	7114	7441	7758	7860	8107	3.3%	
27	Florida	7134	7301	7408	7635	7688	8076	2.5%	
28	Michigan	6816	7121	7406	7637	7745	8055	3.4%	
29	U.S. Avg.	6892	7094	7292	7535	7703	8045	3.1%	
30	Oregon	6484	6729	6971	7119	7467	8044	4.4%	
31	Kentucky	6698	6898	7142	7289	7543	8004	3.6%	
32	Washington	6838	6981	7119	7461	7609	7913	3.0%	
33	Louisiana	6958	7227	7161	7303	7487	7815	2.4%	
34	Kansas	6764	6858	7152	7477	7429	7651	2.5%	
35	Mississippi	6615	6642	6833	7369	7362	7646	2.9%	
36	Oklahoma	6504	6648	6921	7175	7293	7627	3.2%	
37	Virginia	6452	6610	6877	7145	7306	7556	3.2%	
38	California	6210	6480	6737	7018	7256	7549	4.0%	
39	Arkansas	6238	6412	6585	6804	6929	7408	3.5%	
40	Tennessee	6499	6626	6742	7007	7106	7372	2.6%	
41	South Carolina	6363	6554	6707	6853	7020	7311	2.8%	
42	Hawaii	6542	6496	6527	6803	6955	7299	2.2%	
43	Alabama	6325	6421	6541	6821	6996	7281	2.9%	
44	North Carolina	6533	6615	6808	7073	7027	7264	2.1%	
45	New Mexico	6214	6439	6567	6771	6860	7214	3.0%	
46	Texas	6004	6162	6328	6559	6661	6998	3.1%	
47	Idaho	5700	5999	6135	6380	6593	6927	4.0%	
48	Colorado	5882	5979	6129	6306	6472	6804	3.0%	
49	Nevada	5700	5790	5959	6026	6275	6714	3.3%	
50	Georgia	5513	5554	5713	6009	6249	6587	3.6%	
51	Arizona	5874	6027	6076	6183	6262	6452	1.9%	
52	Utah	5101	5171	5341	5543	5658	5982	3.2%	

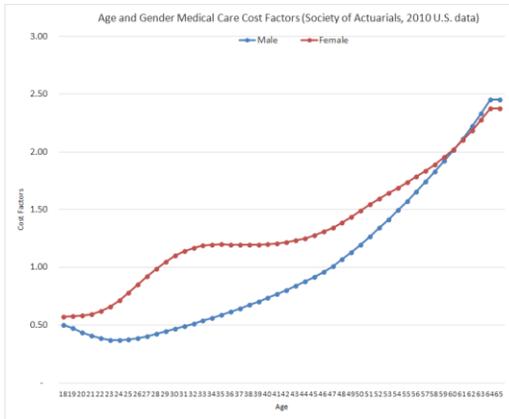
CMS
Personal
Health Care
Expenditures
AK vs.
Comparison
States –

Nominal \$
ratios to US
Average,
before
adjusting for
cost of living
and
demographics

		CMS nominal Personal Health Expenditures per capita						
		Index to U.S.					SORT	
Rank	Order	State	2009	2010	2011	2012	2013	2014
1		District of Columbia	1.51	1.53	1.55	1.49	1.49	1.48
2		Alaska	1.27	1.29	1.31	1.34	1.35	1.38
3		Massachusetts	1.37	1.36	1.35	1.34	1.33	1.31
4		Delaware	1.22	1.24	1.26	1.25	1.27	1.27
5		Vermont	1.18	1.20	1.22	1.23	1.29	1.27
6		Connecticut	1.27	1.25	1.23	1.23	1.24	1.23
7		North Dakota	1.15	1.17	1.20	1.19	1.22	1.22
8		New York	1.24	1.24	1.24	1.20	1.21	1.22
9		New Hampshire	1.18	1.19	1.20	1.20	1.22	1.19
10		Rhode Island	1.22	1.21	1.20	1.19	1.19	1.19
11		Maine	1.21	1.20	1.21	1.19	1.19	1.18
12		West Virginia	1.13	1.12	1.13	1.16	1.16	1.18
13		Pennsylvania	1.12	1.14	1.16	1.15	1.15	1.15
14		South Dakota	1.06	1.09	1.11	1.11	1.11	1.11
15		Minnesota	1.09	1.10	1.09	1.09	1.10	1.10
16		New Jersey	1.12	1.10	1.09	1.10	1.10	1.10
17		Ohio	1.06	1.06	1.05	1.07	1.08	1.08
18		Wisconsin	1.09	1.09	1.09	1.07	1.06	1.08
19		Maryland	1.09	1.09	1.09	1.08	1.07	1.07
20		Nebraska	1.04	1.06	1.06	1.06	1.06	1.05
21		Wyoming	1.01	1.03	1.04	1.04	1.03	1.03
22		Indiana	0.99	0.98	1.00	1.04	1.03	1.03
23		Illinois	1.00	1.02	1.02	1.02	1.03	1.03
24		Montana	0.97	0.99	1.00	1.01	1.04	1.02
25		Iowa	1.01	1.01	1.02	1.01	1.01	1.02
26		Missouri	1.00	1.00	1.02	1.03	1.02	1.01
27		Florida	1.04	1.03	1.02	1.01	1.00	1.00
28		Michigan	0.99	1.00	1.02	1.01	1.01	1.00
29		U.S. Avg.	1.00	1.00	1.00	1.00	1.00	1.00
30		Oregon	0.94	0.95	0.96	0.94	0.97	1.00
31		Kentucky	0.97	0.97	0.98	0.97	0.98	0.99
32		Washington	0.99	0.98	0.98	0.99	0.99	0.98
33		Louisiana	1.01	1.02	0.98	0.97	0.97	0.97
34		Kansas	0.98	0.97	0.98	0.99	0.96	0.95
35		Mississippi	0.96	0.94	0.94	0.98	0.96	0.95
36		Oklahoma	0.94	0.94	0.95	0.95	0.95	0.95
37		Virginia	0.94	0.93	0.94	0.95	0.95	0.94
38		California	0.90	0.91	0.92	0.93	0.94	0.94
39		Arkansas	0.91	0.90	0.90	0.90	0.90	0.92
40		Tennessee	0.94	0.93	0.92	0.93	0.92	0.92
41		South Carolina	0.92	0.92	0.92	0.91	0.91	0.91
42		Hawaii	0.95	0.92	0.90	0.90	0.90	0.91
43		Alabama	0.92	0.91	0.90	0.91	0.91	0.91
44		North Carolina	0.95	0.93	0.93	0.94	0.91	0.90
45		New Mexico	0.90	0.91	0.90	0.90	0.89	0.90
46		Texas	0.87	0.87	0.87	0.87	0.86	0.87
47		Idaho	0.83	0.85	0.84	0.85	0.86	0.86
48		Colorado	0.85	0.84	0.84	0.84	0.84	0.85
49		Nevada	0.83	0.82	0.82	0.80	0.81	0.83
50		Georgia	0.80	0.78	0.78	0.80	0.81	0.82
51		Arizona	0.85	0.85	0.83	0.82	0.81	0.80
52		Utah	0.74	0.73	0.73	0.74	0.73	0.74

Demographic & regional price parity factors

Demographic cost curve



	Regional Price Parity (BLS)					
	2009	2010	2011	2012	2013	2014
North Dakota	89	89.2	89.7	91	91.7	91.6
Alaska	106.9	105.5	105.1	105.4	104.9	106.3
District of Columbia	116.4	118.2	117.8	117.7	117	118
South Dakota	85.8	86.9	87.3	88.9	88	87.9
West Virginia	87.5	88.4	88.5	88.6	88.6	88.4
Delaware	103.2	102.8	101.8	101.2	100.6	101.4
Massachusetts	108	108	107.8	106.6	106.7	106.9
Ohio	89.3	89.8	89.7	89.4	89.5	89.2
Nebraska	89.6	90.3	90.3	90.6	90.7	90.5
Rhode Island	100	99.1	99.4	98.8	98.8	99.1
Indiana	91.4	91.4	91.7	91.4	91.3	91
Vermont	100.6	99.5	99.9	100.8	100.9	101.8
Wisconsin	92.9	92.8	93.3	93.5	93.2	93.3
Minnesota	97.7	97.1	97.2	97.6	97.5	97.5
Iowa	89	89.2	90	90.2	90.6	90.3
Mississippi	85.8	86.7	86.8	86.5	87.2	86.3
Pennsylvania	98.2	98.5	98.4	98.4	98.6	98
Missouri	87.9	88.3	89.1	89.3	89.9	89.5
Kentucky	88.7	88.6	88.6	88.8	89.3	88.3
Wyoming	96.1	95.9	96.7	95.8	96	96.6
Louisiana	91.4	91.2	91	91.4	91.2	91
Oklahoma	89.5	89.6	89.6	89.9	90	89.7
Kansas	89.6	89.9	90.7	90.6	91.3	90.7
Connecticut	110.4	109.4	109	109.2	108.5	108.6
Maine	98.1	96.8	97.4	98.4	98.5	97.4
Arkansas	86.6	87.7	87.6	87.8	87.8	87.1
Montana	94.5	93.9	93.8	93.5	94.6	94.5
New Hampshire	106.4	106.5	105.3	105.6	105.4	105.2
New York	115.3	115.2	115.2	115.3	115.2	115.7
Illinois	100.9	100.9	101.1	100.7	99.7	99.7
Alabama	87.5	87.9	87.7	88.1	87.8	87.2
Michigan	95.2	94.7	94.6	94.5	94.3	93.7
South Carolina	91.5	90.4	90.8	90.8	90.5	90.1
Tennessee	90.5	90.2	90.3	90.8	90.7	89.9
U.S. Avg.	100	100	100	100	100	100
Oregon	98.9	98.5	98.5	98.7	98.9	99.2
North Carolina	92.1	91.3	91.5	91.7	91.8	91.5
Maryland	111.3	111	110.9	110.1	109.9	110.1
New Mexico	94.4	94.6	95.3	95	95.3	95.1
Texas	96.4	96.3	96.2	96.2	96.3	96.5
Idaho	94.8	93.5	93.3	93.4	93.2	93.6
Florida	100	99.1	99.2	99.1	99.2	99.4
Washington	103.7	103	102.9	103.5	104.2	104.8
Virginia	103.5	103.1	103	103	102.8	102.6
Georgia	93.1	92.3	91.9	92.2	92.3	92
Utah	97.8	96.9	97.2	97.1	97.7	97.2
New Jersey	113.3	114.1	114.6	114.4	113.4	114
Nevada	100.7	99.9	99.8	98.7	98.7	98
California	112.9	113.6	113.4	112.9	113.1	113.4
Arizona	100.1	98.6	97.9	97.1	96.5	96.2
Colorado	101.1	100.9	101.4	101.1	102.1	102.5
Hawaii	117.1	117.2	116.9	117.8	118.3	118.3

CMS Personal Health Care Expenditures AK vs. Comparison States (\$/capita) –

Adjusted for demographics & regional price differentials [CPS, BLS Regional Price Parity, 2014]

- Residual cost differential = other local differentials (Δincome, Δinsurance coverage, Δmedical prices, Δtechnology)

per capita Personal Health Expenditures (CMS, June 2017 release)									
normalized for demographic and regional price parity factors									
		CY						SORT	
#	State	2009	2010	2011	2012	2013	2014	CAGR	
1	North Dakota	9101	9414	9851	10117	10653	11206	4.2%	
2	Alaska	8888	9075	9555	10232	10592	11151	4.6%	
3	District of Columbia	8951	9306	9687	9839	10115	10455	3.2%	
4	South Dakota	8594	8783	9298	9582	9928	10396	3.9%	
5	West Virginia	8219	8206	8516	9150	9365	9912	3.8%	
6	Delaware	7991	8283	8713	9104	9476	9878	4.3%	
7	Massachusetts	8399	8566	8760	9223	9401	9650	2.8%	
8	Ohio	8054	8103	8226	8838	9064	9568	3.5%	
9	Nebraska	8159	8352	8562	8959	9122	9465	3.0%	
10	Rhode Island	8081	8311	8454	8813	9010	9373	3.0%	
11	Indiana	7430	7646	7948	8718	8809	9266	4.5%	
12	Vermont	7473	7780	8100	8477	8884	9198	4.2%	
13	Wisconsin	7862	8072	8302	8503	8641	9179	3.1%	
14	Minnesota	7617	7921	8102	8406	8708	9132	3.7%	
15	Iowa	7693	7932	8127	8488	8626	9100	3.4%	
16	Mississippi	7865	7728	7937	8721	8645	9077	2.9%	
17	Pennsylvania	7406	7786	8094	8410	8632	9065	4.1%	
18	Missouri	7721	7918	8210	8670	8724	9045	3.2%	
19	Kentucky	7435	7661	7936	8202	8306	8920	3.7%	
20	Wyoming	7342	7701	7776	8266	8384	8851	3.8%	
21	Louisiana	7790	8017	7963	8203	8425	8820	2.5%	
22	Oklahoma	7378	7431	7846	8230	8352	8771	3.5%	
23	Kansas	7677	7752	8017	8516	8398	8715	2.6%	
24	Connecticut	7636	7648	7754	8162	8406	8707	2.7%	
25	Maine	7697	7842	8056	8045	8156	8611	2.3%	
26	Arkansas	7193	7199	7402	7744	7879	8506	3.4%	
27	Montana	6886	7128	7416	7905	8200	8450	4.2%	
28	New Hampshire	7158	7292	7593	7930	8093	8441	3.4%	
29	New York	7269	7479	7668	7828	8073	8409	3.0%	
30	Illinois	6953	7179	7343	7719	8046	8408	3.9%	
31	Alabama	7195	7161	7312	7700	7922	8309	2.9%	
32	Michigan	7051	7282	7561	7921	7920	8296	3.3%	
33	South Carolina	6929	7114	7246	7514	7720	8082	3.1%	
34	Tennessee	7058	7212	7330	7688	7804	8047	2.7%	
35	U.S. Avg.	6892	7094	7292	7535	7703	8045	3.1%	
36	Oregon	6478	6634	6873	7107	7417	7972	4.2%	
37	North Carolina	7083	7224	7309	7683	7622	7912	2.2%	
38	Maryland	6619	6837	7010	7327	7462	7773	3.3%	
39	New Mexico	6687	6809	6902	7249	7325	7720	2.9%	
40	Texas	6514	6674	6862	7219	7315	7671	3.3%	
41	Idaho	6211	6618	6787	7058	7313	7657	4.3%	
42	Florida	6757	6851	6905	7231	7272	7628	2.5%	
43	Washington	6630	6706	6848	7241	7335	7590	2.7%	
44	Virginia	6236	6314	6576	6932	7103	7366	3.4%	
45	Georgia	6069	6155	6277	6679	6945	7349	3.9%	
46	Utah	6359	6501	6696	6723	6820	7254	2.7%	
47	New Jersey	6585	6568	6683	7070	7284	7204	1.8%	
48	Nevada	5802	5840	6022	6151	6402	6903	3.5%	
49	California	5676	5874	6036	6409	6614	6865	3.9%	
50	Arizona	6064	6211	6315	6481	6605	6829	2.4%	
51	Colorado	5940	5961	6082	6369	6472	6782	2.7%	
52	Hawaii	5636	5401	5427	5792	5917	6215	2.0%	

per capita Personal Health Expenditures (CMS, June 2017 release)
 normalized for demographic and regional price parity factors
 Index to U.S. Avg. SORT

Rank Order	State	2009	2010	2011	2012	2013	2014
1	North Dakota	1.32	1.33	1.35	1.34	1.38	1.39
2	Alaska	1.29	1.28	1.31	1.36	1.38	1.39
3	District of Columbia	1.30	1.31	1.33	1.31	1.31	1.30
4	South Dakota	1.25	1.24	1.28	1.27	1.29	1.29
5	West Virginia	1.19	1.16	1.17	1.21	1.22	1.23
6	Delaware	1.16	1.17	1.19	1.21	1.23	1.23
7	Massachusetts	1.22	1.21	1.20	1.22	1.22	1.20
8	Ohio	1.17	1.14	1.13	1.17	1.18	1.19
9	Nebraska	1.18	1.18	1.17	1.19	1.18	1.18
10	Rhode Island	1.17	1.17	1.16	1.17	1.17	1.17
11	Indiana	1.08	1.08	1.09	1.16	1.14	1.15
12	Vermont	1.08	1.10	1.11	1.12	1.15	1.14
13	Wisconsin	1.14	1.14	1.14	1.13	1.12	1.14
14	Minnesota	1.11	1.12	1.11	1.12	1.13	1.14
15	Iowa	1.12	1.12	1.11	1.13	1.12	1.13
16	Mississippi	1.14	1.09	1.09	1.16	1.12	1.13
17	Pennsylvania	1.07	1.10	1.11	1.12	1.12	1.13
18	Missouri	1.12	1.12	1.13	1.15	1.13	1.12
19	Kentucky	1.08	1.08	1.09	1.09	1.08	1.11
20	Wyoming	1.07	1.09	1.07	1.10	1.09	1.10
21	Louisiana	1.13	1.13	1.09	1.09	1.09	1.10
22	Oklahoma	1.07	1.05	1.08	1.09	1.08	1.09
23	Kansas	1.11	1.09	1.10	1.13	1.09	1.08
24	Connecticut	1.11	1.08	1.06	1.08	1.09	1.08
25	Maine	1.12	1.11	1.10	1.07	1.06	1.07
26	Arkansas	1.04	1.01	1.02	1.03	1.02	1.06
27	Montana	1.00	1.00	1.02	1.05	1.06	1.05
28	New Hampshire	1.04	1.03	1.04	1.05	1.05	1.05
29	New York	1.05	1.05	1.05	1.04	1.05	1.05
30	Illinois	1.01	1.01	1.01	1.02	1.04	1.05
31	Alabama	1.04	1.01	1.00	1.02	1.03	1.03
32	Michigan	1.02	1.03	1.04	1.05	1.03	1.03
33	South Carolina	1.01	1.00	0.99	1.00	1.00	1.00
34	Tennessee	1.02	1.02	1.01	1.02	1.01	1.00
35	U.S. Avg.	1.00	1.00	1.00	1.00	1.00	1.00
36	Oregon	0.94	0.94	0.94	0.94	0.96	0.99
37	North Carolina	1.03	1.02	1.00	1.02	0.99	0.98
38	Maryland	0.96	0.96	0.96	0.97	0.97	0.97
39	New Mexico	0.97	0.96	0.95	0.96	0.95	0.96
40	Texas	0.95	0.94	0.94	0.96	0.95	0.95
41	Idaho	0.90	0.93	0.93	0.94	0.95	0.95
42	Florida	0.98	0.97	0.95	0.96	0.94	0.95
43	Washington	0.96	0.95	0.94	0.96	0.95	0.94
44	Virginia	0.90	0.89	0.90	0.92	0.92	0.92
45	Georgia	0.88	0.87	0.86	0.89	0.90	0.91
46	Utah	0.92	0.92	0.92	0.89	0.89	0.90
47	New Jersey	0.96	0.93	0.92	0.94	0.95	0.90
48	Nevada	0.84	0.82	0.83	0.82	0.83	0.86
49	California	0.82	0.83	0.83	0.85	0.86	0.85
50	Arizona	0.88	0.88	0.87	0.86	0.86	0.85
51	Colorado	0.86	0.84	0.83	0.85	0.84	0.84
52	Hawaii	0.82	0.76	0.74	0.77	0.77	0.77

CMS Personal Health Care Expenditures AK vs. Comparison States \$/capita ratio –

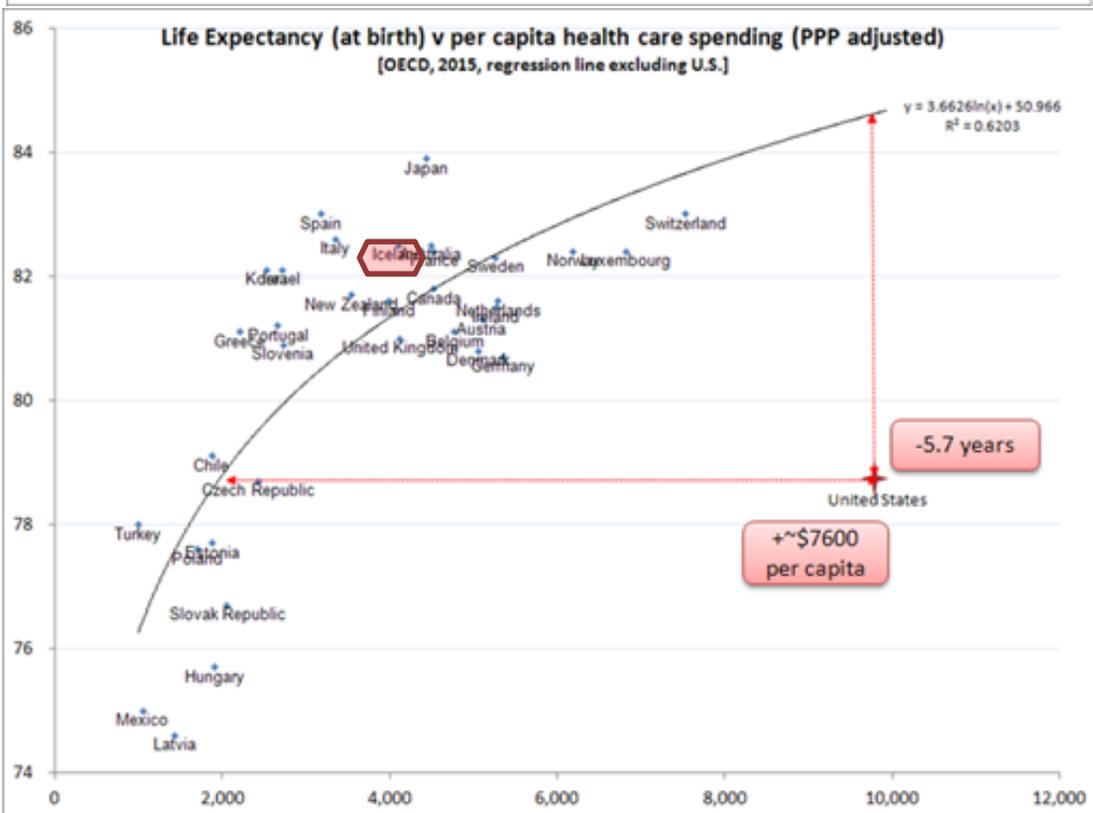
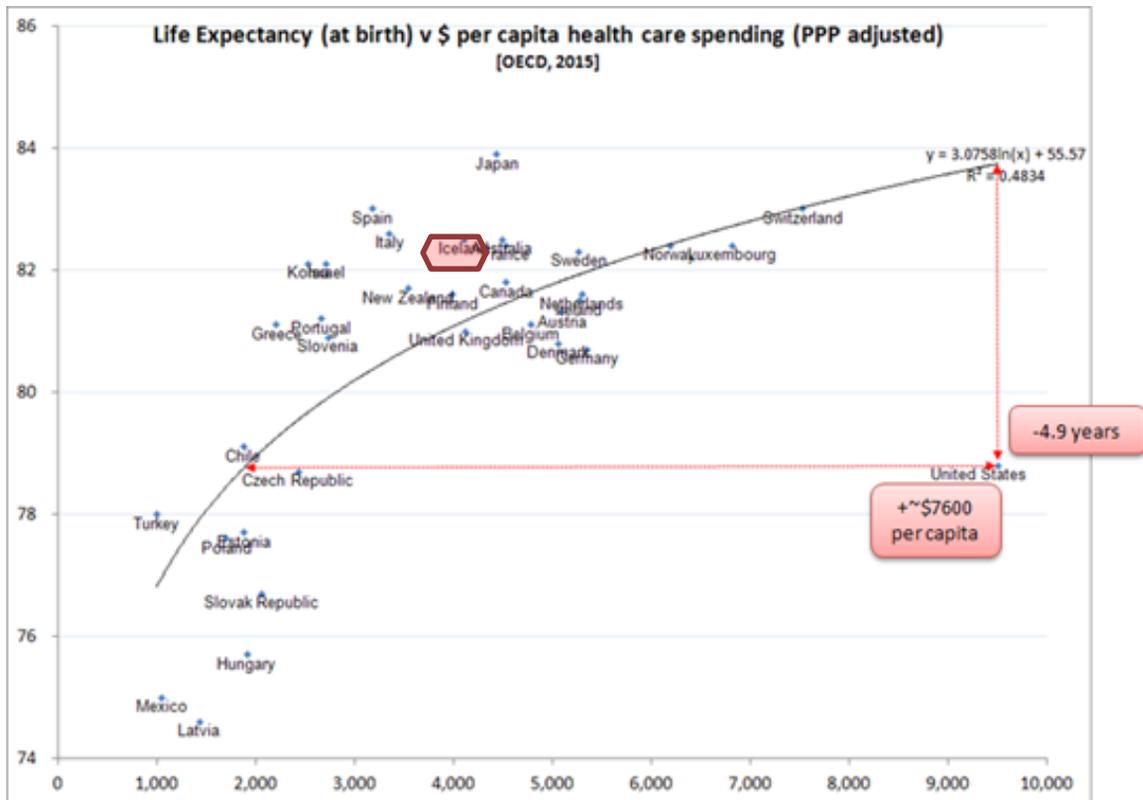
Adjusted for demographics & regional price differentials [CPS, BLS Regional Price Parity, 2014]

Residual cost differential = other local differentials, e.g., Δincome, Δinsurance coverage, Δmedical prices, Δtechnology

HOW DO U.S. COSTS & HEALTH OUTCOMES COMPARE TO OTHER COUNTRIES?

1. Life expectancy at birth vs. health care costs, adjusted for purchase power parity (PPP)
 - With & without U.S. in “developed nations”
 - Quick look at incremental expenditures on health care vs. life years gained over the most recent decade with available data

International Comparisons (OECD)

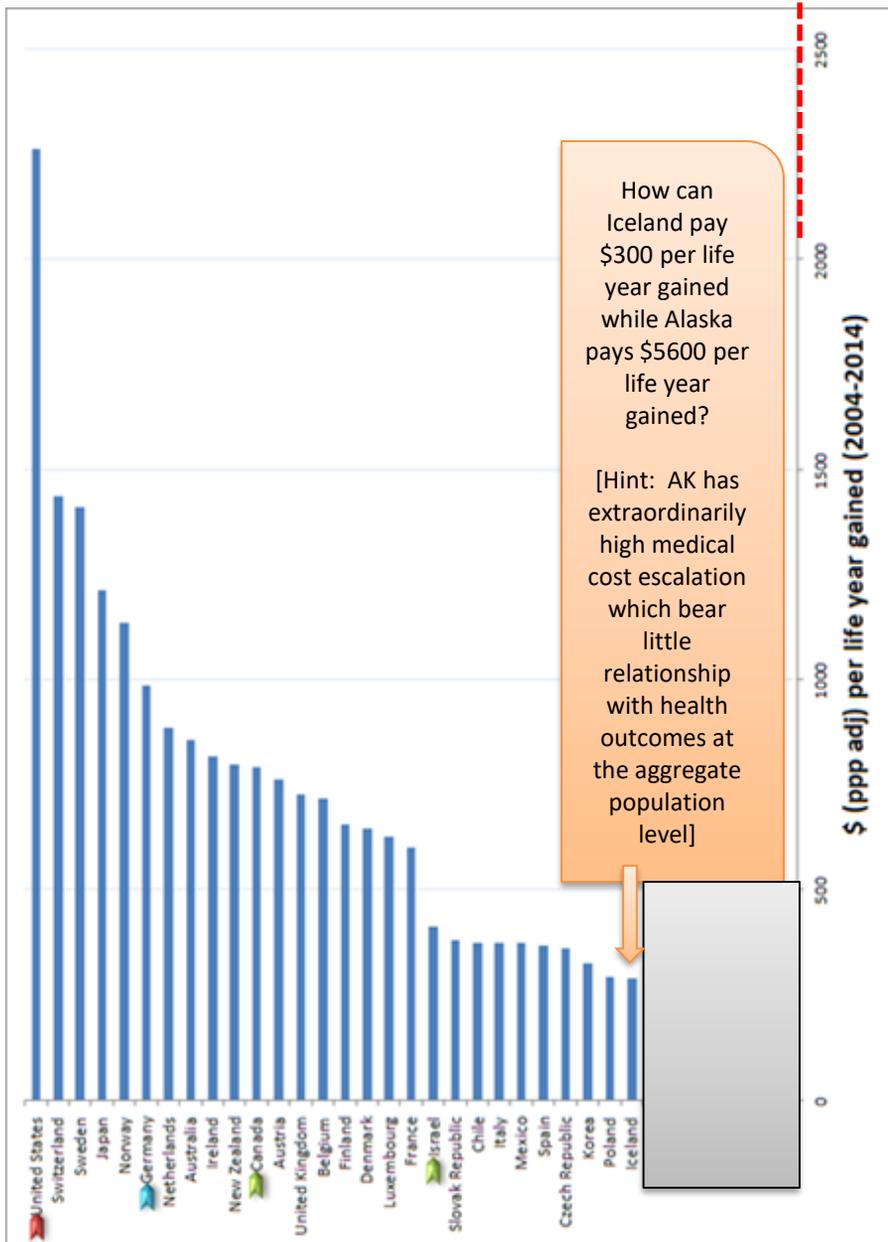


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International Comparisons

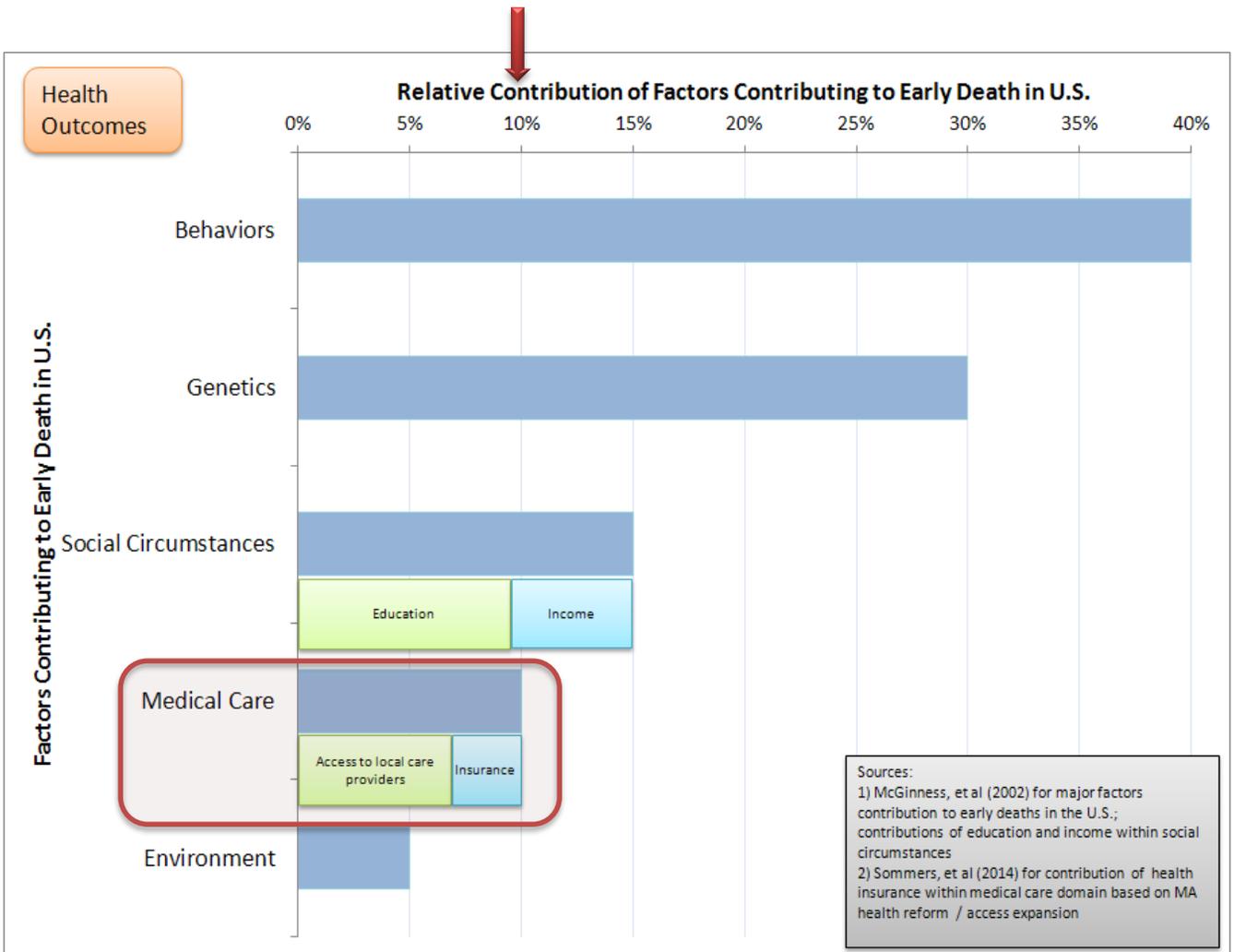
incremental \$ of health care expenditures (PPP adjusted) per incremental life year gained (2004-2014)



WHAT ARE THE PRIMARY DRIVERS OF HEALTH OUTCOMES?

1. Perhaps not surprising given the prior international comparison of health care expenditures and life expectancy with U.S., U.S. studies tend to find relatively low associations / contributions to health outcomes from access to medical services & health insurance coverage – at the total population level.
2. Drilling down into the data on subpopulations within the U.S., access to medical care and health insurance coverage provide substantial benefits – which is often cited as a way to begin to fill the U.S. life expectancy gap in international comparisons

What factors drive health outcomes in the U.S.?



What is the value of access to health insurance coverage for **high risk** populations, e.g., Medicaid expansion?

- Financial protection
 - \$390 average decrease in amount of medical bills sent to collection, virtual elimination of catastrophic out of pocket expenses
 - Reduces risk of large unpredictable medical costs
- Access to care and utilization
 - 15 pct point increase in rate of cholesterol screening
 - 15 – 30 pct point increase in screening for cervical, prostate, breast cancer
 - Emergency department and hospitalizations went up in Oregon study; mixed evidence from other studies
 - Increased access to some timely high-value surgical care
- Chronic disease care and outcomes
 - Significant increase in rate of diagnosis of diabetes
 - Near-doubling of use of diabetes medications
 - Better blood-pressure control among community health center patients
 - 30 pct reduction in rates of depressive symptoms
 - Increased cancer screening; evidence on timely or effective cancer care is mixed
- Well-being and self-reported health
 - 25% increase in patients reporting good, very good or excellent health
- Mortality
 - Mixed; 3 state study from early 2000s found 6% decrease in mortality over 5 year time horizon [associated with heart disease, infection, cancer]
 - MA health insurance expansion study estimated one life saved for every 830 adults gaining coverage
 - State Medicaid Expansions (under the ACA) study estimated one life saved for every 239 to 316 adults

Source: "Health Insurance Coverage and Health - What the Recent Evidence Tells Us", Sommers B, Gawande A, and Baiker K, New England Journal of Medicine, June 21, 2017

What is the potential opportunity cost of high medical care costs in the U.S. / Alaska?

- U.S.

- Better Care At Lower Cost (National Academy Press, 2013) (see slide 37)

- Unnecessary health care costs and waste exceed the budget for the Department of Defense by more than \$100 billion
- Health care waste amounts to more than 1.5X the nation's total infrastructure investment
- The unnecessary costs and waste could be redirected to provide insurance coverage [both employer + employee contributions] for the entire civilian workforce in the U.S.

- Alaska

- Extend Better Care At Lower Cost (NAP, 2013) to Alaska (2016) (see slide 38) → ~\$3.3 billion in “excess cost”

- Could be redirected to increase wages statewide by 18%
- Could be redirected to increase annual PFD to \$5361 (4.9X \$1100)

WHAT ARE THE PRIMARY DRIVERS OF HIGH COST / HIGH COST GROWTH IN ALASKA?

1. Review U.S. cost driver models
2. Estimate Alaska cost drivers relative to U.S. benchmarks

What factors drive health care costs above general inflation?

U.S. Cost Growth Drivers (1960-2007)

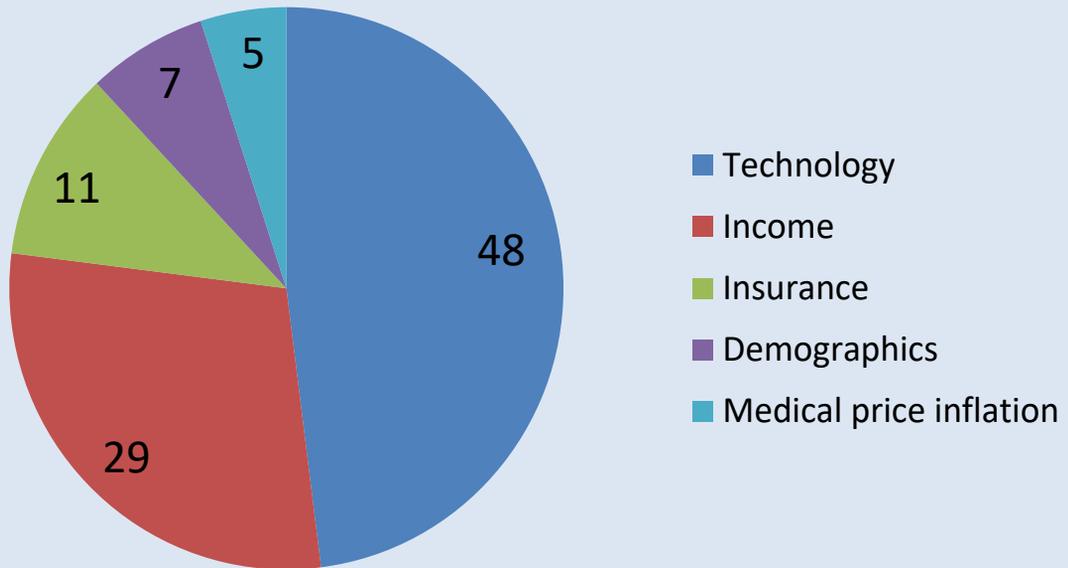


Table 1: Percentage of Average Annual Growth in Real Per Capita Health Spending Attributable to Various Casual Factors, 1960-2007

	Medicare care productivity = economic average		Medicare care productivity = Zero	
	(1) ^a	(2) ^b	(3) ^a	(4) ^b
Income elasticity	0.6	0.9	0.6	0.9
Income effects	28.7	43.1	28.7	43.1
Relative medical price inflation	5.0	5.0	18.8	11.5
Demographic effects	7.2	7.2	7.2	7.2
Change in insurance coverage	10.8	10.8	10.8	10.8
Technology	48.3	33.9	34.6	27.4
Technology-income interaction	27.4	27.4	27.4	27.4
Technology residual	26.4	9.9	12.8	0.0
TOTAL	100.0	100.0	100.0	100.0

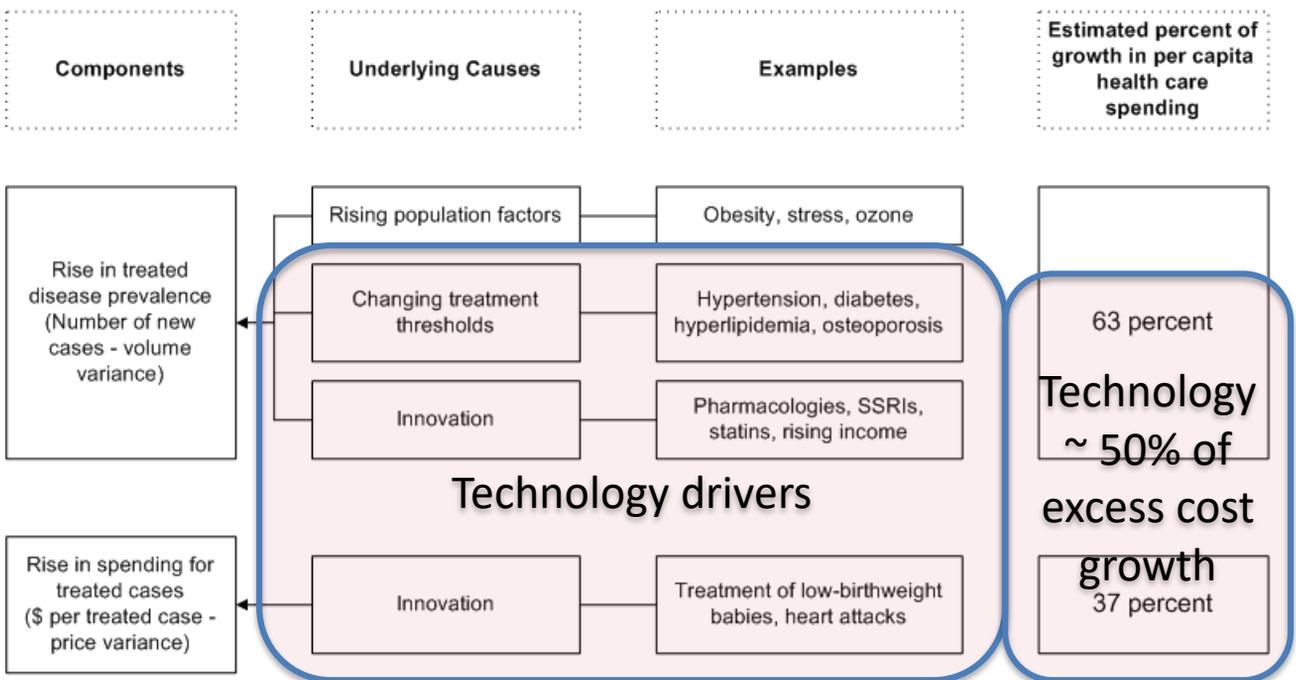
Source: "Income, Insurance, And Technology: Why Does Health Spending Outpace Economic Growth?", Smith, Newhouse and Freeland, Health Affairs 28, No. 5 (2009): 1276-1284, Exhibit 1, please see omitted notes for additional details on estimate of technology residual, technology-income interaction and other factors

^a Expenditure elasticity = 1.6; income elasticity = 0.6; price elasticity = -0.2

^b Expenditure elasticity = 1.6; income elasticity = 0.9; price elasticity = -0.2

How does technology contribute to excess cost growth in health care?

Factors Accounting for the Rise in Real U.S. Per Capita Health Spending



Source: Exhibit 1: Factors Accounting for the Rise in Real U.S. Per Capita Health Spending, "The Rise in Health Care Spending and What To Do About It," Thorpe, Health Affairs, November/December 2005, Volume 24, Number 6

Monday, November 13:

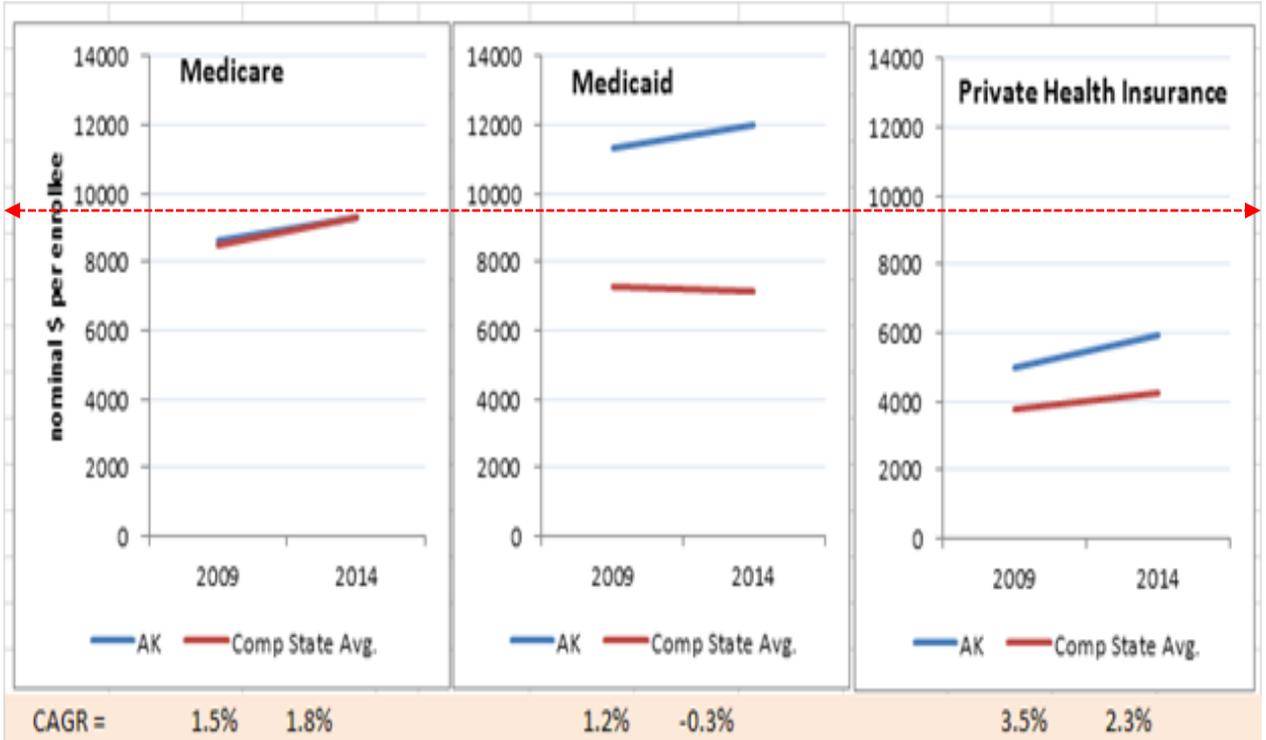
- Example of a rise in the treated disease prevalence: recommendation to reduce "high blood pressure" treatment threshold for at risk patients from 140/90 to 130/80; New England Journal of Medicine Catalyst review suggests that reduced threshold may not be the most effective way to address patient overall health outlooks

HIGH COST / HIGH COST GROWTH QUADRANTS (PAYERS)

1. Alaska Cost Growth by CMS Major Payer Category (Medicare, Medicaid, Commercial)
2. Dartmouth Atlas of Health, High Cost & High Cost Growth Quadrants, Medicare
3. Update Dartmouth Atlas of Health Growth Quadrants
4. Medicaid, high cost & high cost growth quadrants
5. Private / Commercial Insurance, High cost & high cost growth quadrants

CMS Personal Health Care Expenditures

AK vs. Benchmarks, 2009-2014 (most recent CMS state data available), by payer



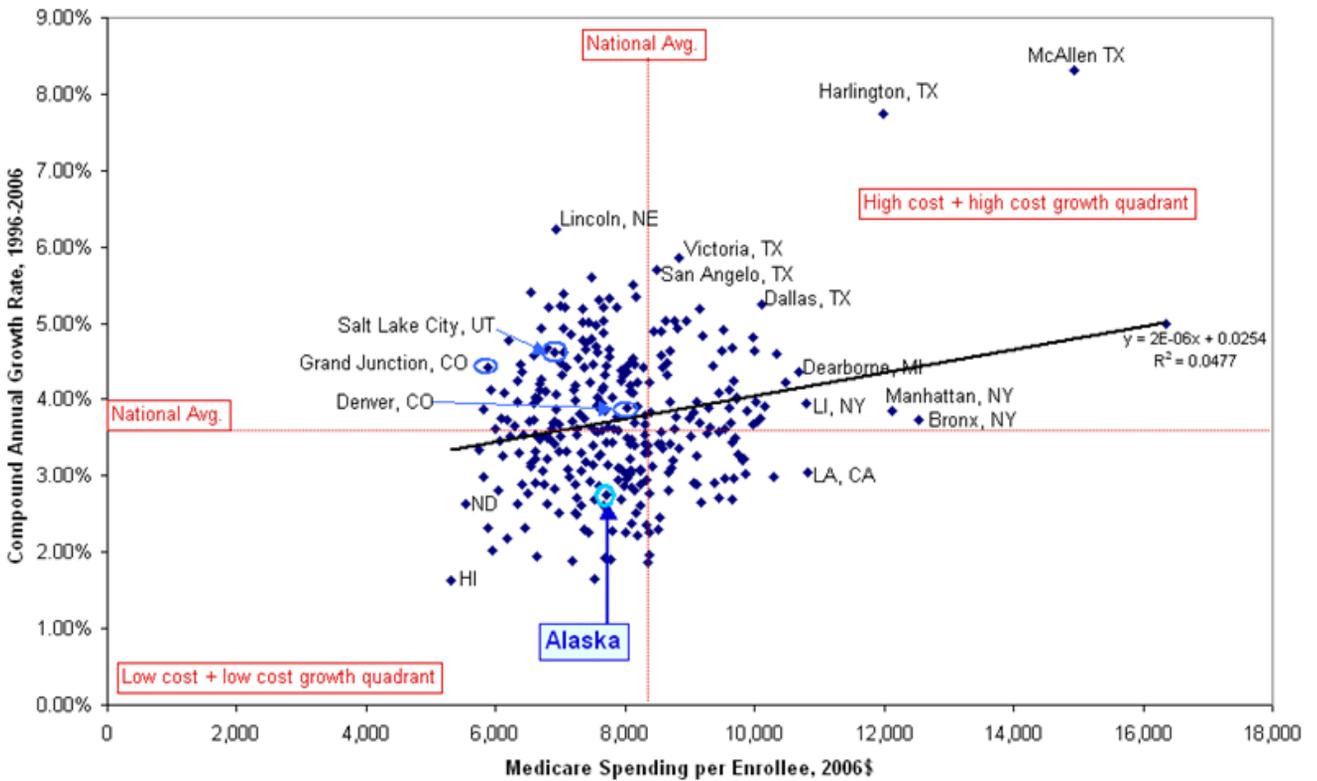
NB: 2014 = Pre AK Medicaid Expansion
 CMS nominal \$/enrollee is "raw data". Demographically normalized & regional price parity adjusted comparisons are under development.

Medicare

Spending per enrollee & annual growth rate (1996-2006)

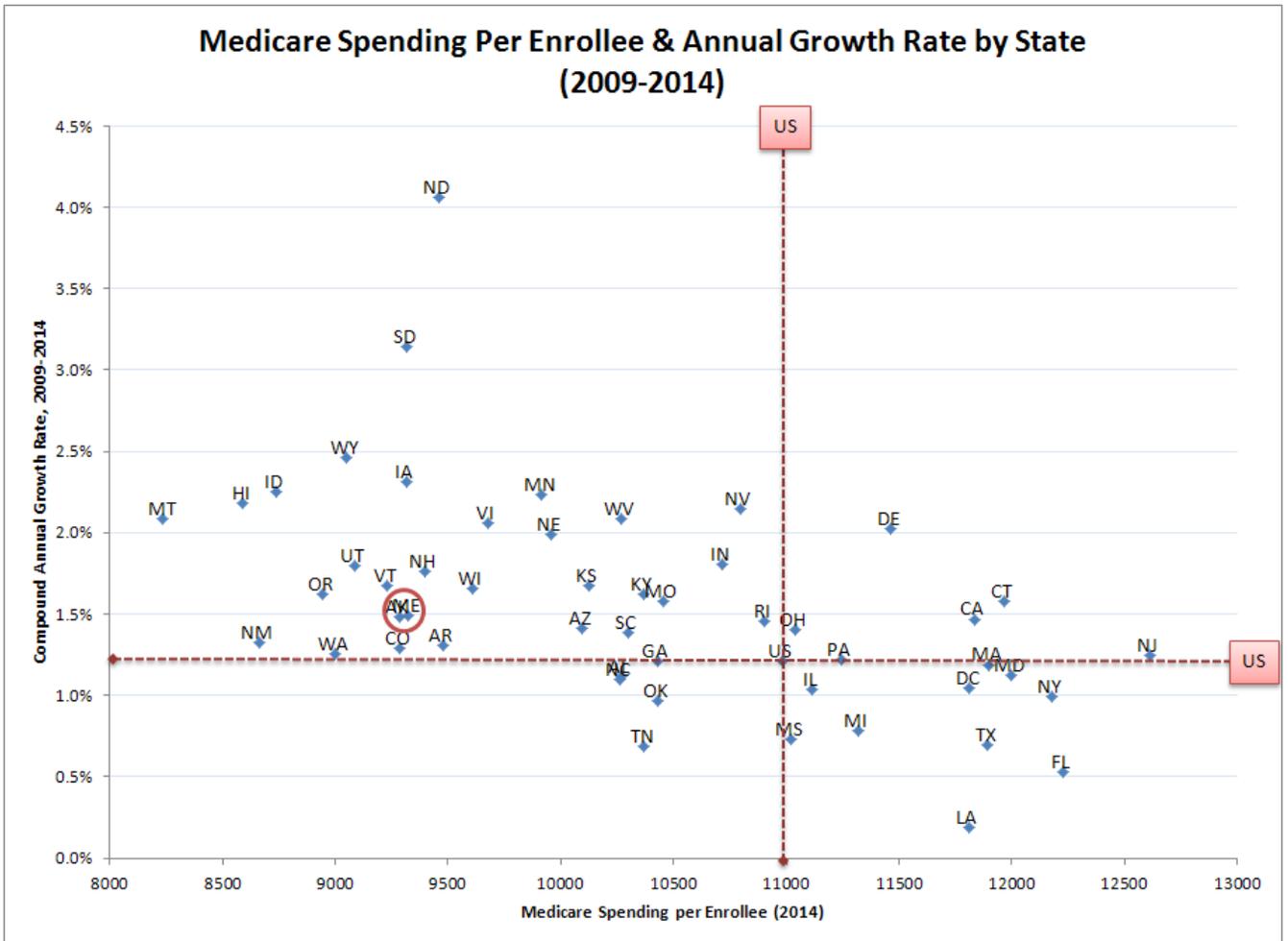
Dartmouth Atlas of Health Care, data and analysis contemporaneous with passage of Affordable Care Act (circa 2010)

Medicare Spending per Enrollee & Annual Growth Rate by Hospital Referral Region
Dartmouth Health Atlas Data (1996-2006, data download 2010)



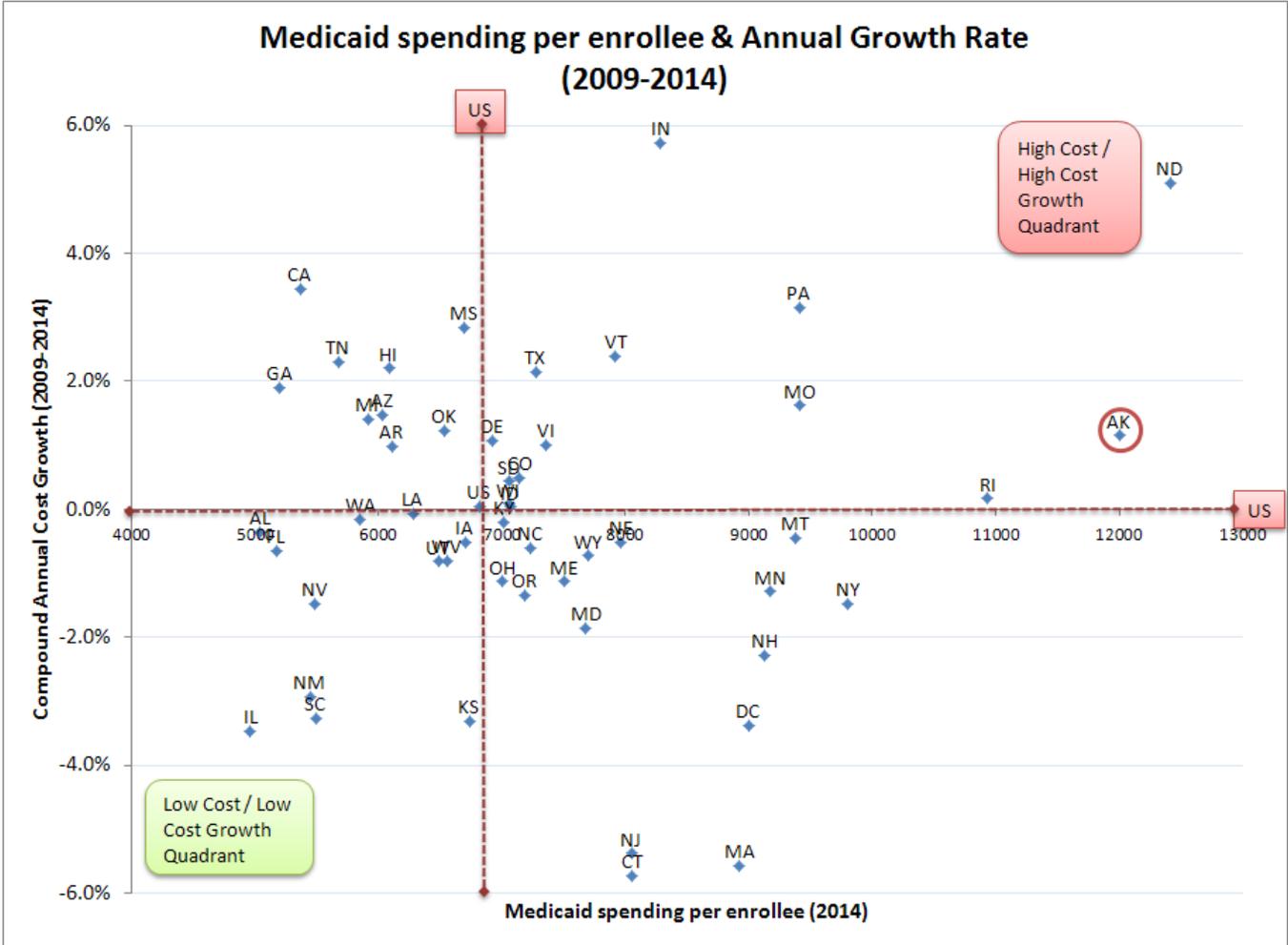
Medicare

Spending per enrollee and cost growth rate (2009-2014)



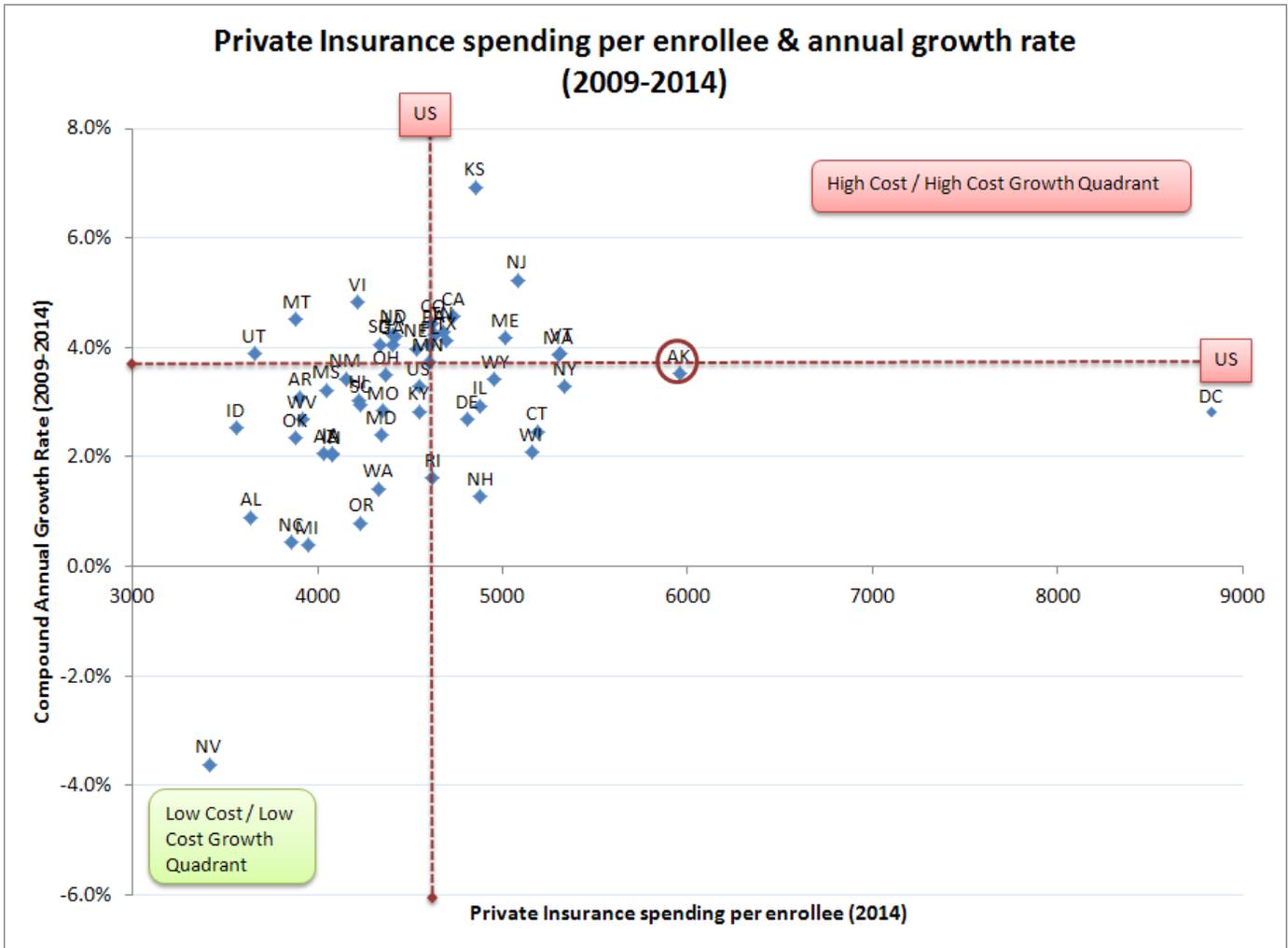
Medicaid

Spending per enrollee & cost growth rate (2009-2014)



Private / Commercial Health Insurance

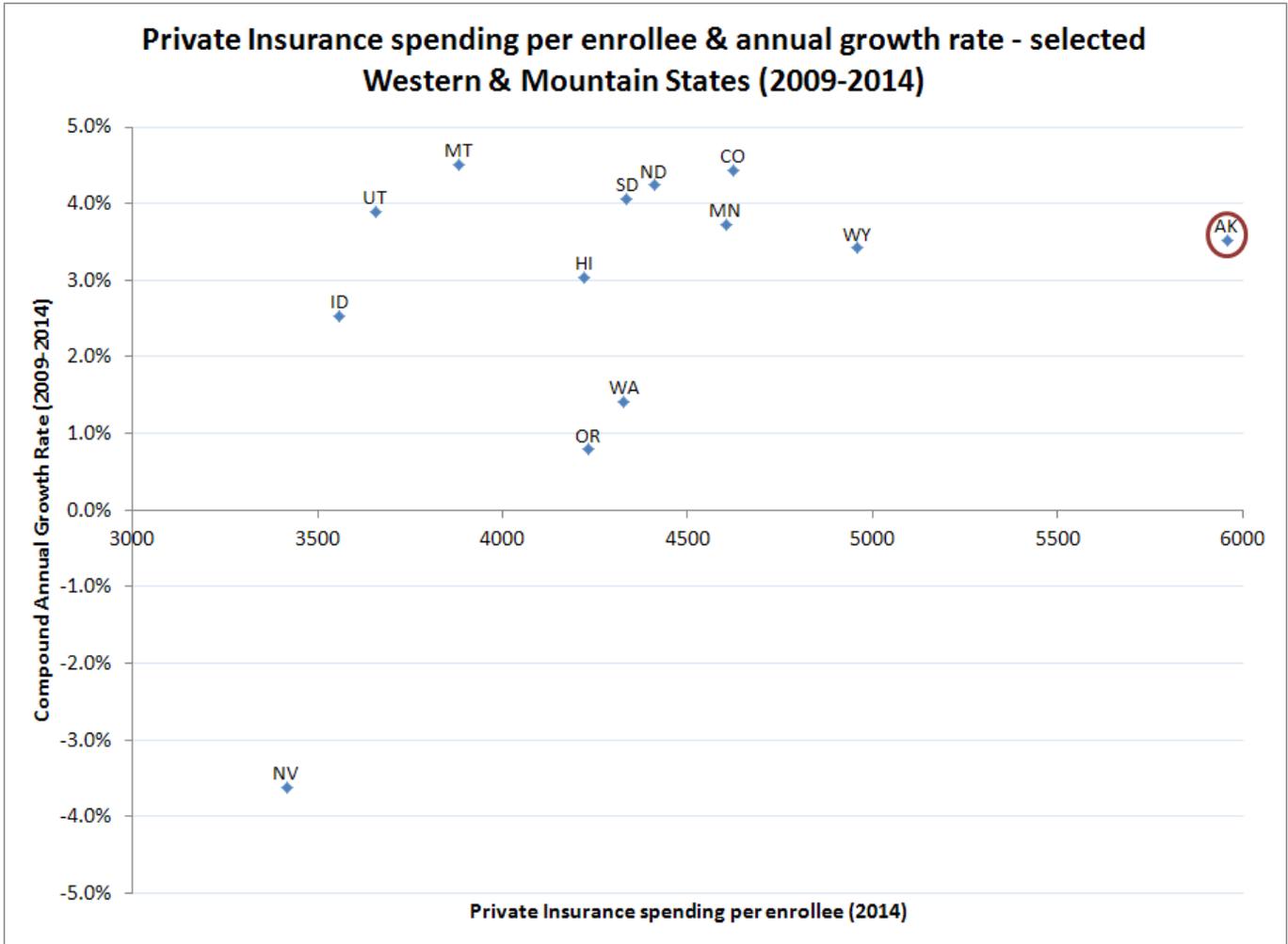
Spending per enrollee & cost growth rate (2009-2014)



Private / Commercial Health Insurance

Spending per enrollee & cost growth rate (2009-2014)

Comparable Western & Mountain States



HIGH COST / HIGH COST GROWTH QUADRANTS (PROVIDERS)

1. Hospitals & Nursing Homes
2. Physicians & Clinical Services
3. Community Services
4. Pharma

CMS Personal Health Care Expenditures

AK vs. Benchmarks, 2014 (most recent CMS state data available), by provider

Per capita personal health care expenditures by type (CMS, 2014)

(normalized for State demographic profiles & BLS Regional Price Parity (2014))

	Hospital + Nursing Home Care (\$)	Physician & Clinical Services (\$)	Other Professional Services (\$)	Dental Services (\$)	Home Health Care (\$)	Prescription Drugs and Other Non-durable Medical Products (\$)	Durable Medical Products (\$)	Other Health, Residential, and Personal Care (\$)
Far West, Rocky Mountains, Northern Plains								
AK	4958	3395	469	546	197	645	140	803
CO	3318	1702	345	445	204	723	183	308
HI	3601	2223	269	398	189	1366	197	201
ID	3106	1209	276	355	162	726	136	349
MN	4152	1722	264	396	513	935	132	573
MT	3817	1483	271	346	135	774	148	377
NV	2603	1860	271	347	232	960	149	248
ND	4671	1513	230	380	64	1038	146	658
OR	3692	1858	326	452	165	872	128	462
SD	5429	1818	285	463	103	1055	140	638
UT	2702	1314	211	375	187	781	160	229
WA	3690	2217	348	535	202	854	157	496
WY	4521	1825	389	427	79	774	133	429
Benchmark Avg.	3775	1729	290	410	186	905	151	414
AK / Benchmark Ratio	1.31	1.96	1.61	1.33	1.06	0.71	0.93	1.94
AK - Benchmark Difference (\$)	1183	1666	178	137	10	(260)	(11)	389
	hospitals	physicians	chiropractors					medicaid home & community based waivers
	inpatient pharmacy	outpatient care centers	podiatrists					residential care facilities
	hospital based nursing, home	lab services	optometrists					ambulance services
	ancillary charges, resident physicians	Clinics Veterans Affairs, Coast Guard, DOD, US IHS.	physical / occupational therapists					school & worksite health, community centers
	total *net* revenue		workers comp as prominent payer					senior citizen centers

Comparison States

2014 = Pre AK Medicaid Expansion. The CMS data has been adjusted for demographic and PPP differences between states.

CMS Personal Health Care Expenditures

AK vs. Benchmarks, 2009-2014 (CMS June 2017 Release)

Per capita personal health care expenditures by type (CMS, 2009-2014)							
<i>(normalized for State demographic profiles & BLS Regional Price Parity (2014))</i>				2009		2014 v 2009 CAGR	
Far West, Rocky Mountains, Northern Plains	Hospital + Nursing Home Care (\$)	Physician & Clinical Services (\$)	TOTAL (\$)	Hospital & Nursing Home Care (\$)	Physician & Clinical Services (\$)	Hospital & Nursing Home Care	Physician & Clinical Services
AK	4958	3395	11152	4050	2507	4.1%	6.2%
CO	3318	1702	7228	2578	1496		
HI	3601	2223	8444	2366	1465		
ID	3106	1209	6319	2703	1376		
MN	4152	1722	8688	3242	1639		
MT	3817	1483	7351	3397	1472		
NV	2603	1860	6671	2157	1676		
ND	4671	1513	8698	4617	1668		
OR	3692	1858	7956	2646	1630		
SD	5429	1818	9931	4622	1774		
UT	2702	1314	5960	2602	1469		
WA	3690	2217	8498	2845	1738		
WY	4521	1825	8576	3557	1648		
Benchmark Avg.	3775	1729	7860	3111	1588	3.9%	1.7%
AK / Benchmark Ratio	1.31	1.96	1.42	1.30	1.58	1.046	3.637
AK - Benchmark Difference (\$)	1183	1666	3292	939	920		
	hospitals	physicians					
	inpatient pharmacy	outpatient care centers					
	hospital based nursing, home	lab services					
	ancillary charges, resident physicians	Clinics Veterans Affairs, Coast Guard, DOD, US IHS.					
	total *net* revenue						

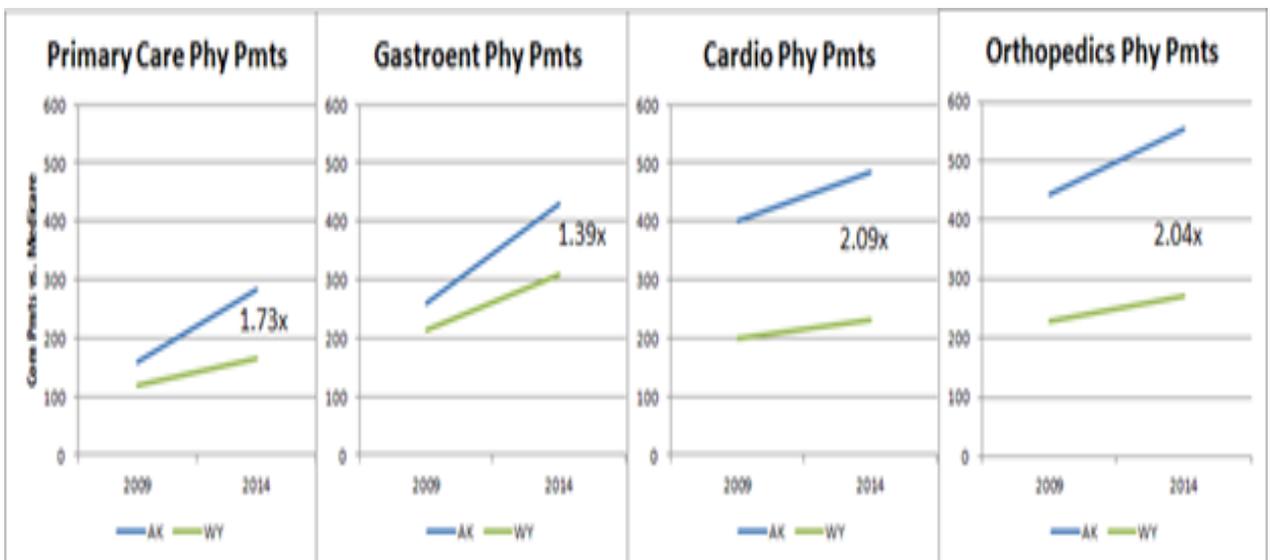
Comparison States

2014 = Pre AK Medicaid Expansion. The CMS data has been adjusted for demographic and PPP differences between states.

Medical care prices

AK & WY Commercial Payments vs. Medicare Benchmarks, **2009-2014**

(most recent robust Truven claims dataset available (2014) as of 1st half of 2017)



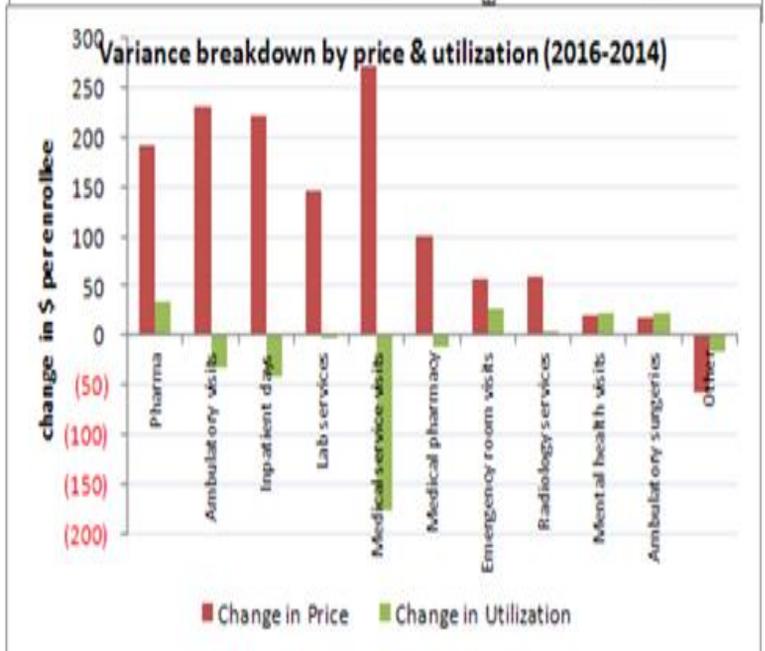
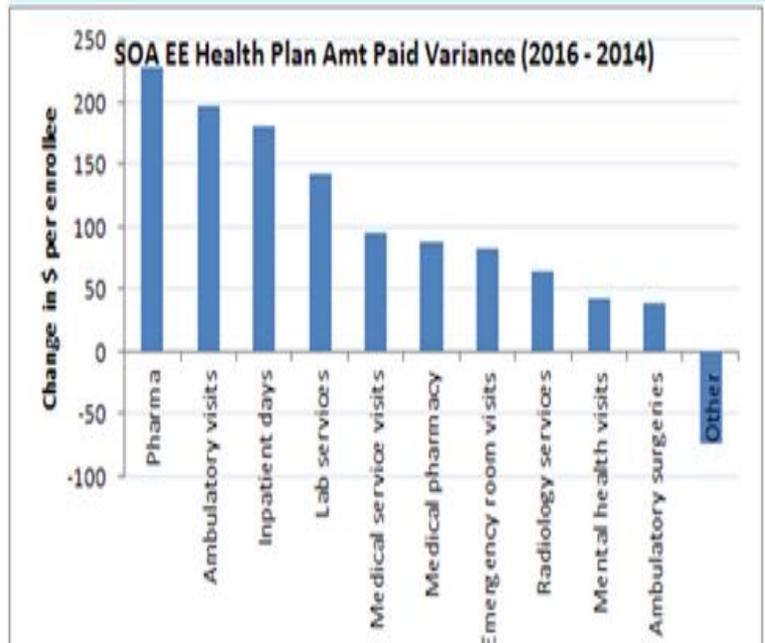
Sources: Milliman Analysis of Truven claims data set (2009) for the Alaska Health Care Commission Cost Driver Reports, (published November 2011).

MAFA extension of Milliman Alaska Health Care Commission Cost Driver Analysis for 2009-2014, based on Truven all commercial payer payments (November, 2016)

Medical care prices & utilization

State of Alaska Employee (EE) Plan Price / Utilization Trends, 2014-2016

SOA EE Health Plan Cost Drivers, 2014 - 2016



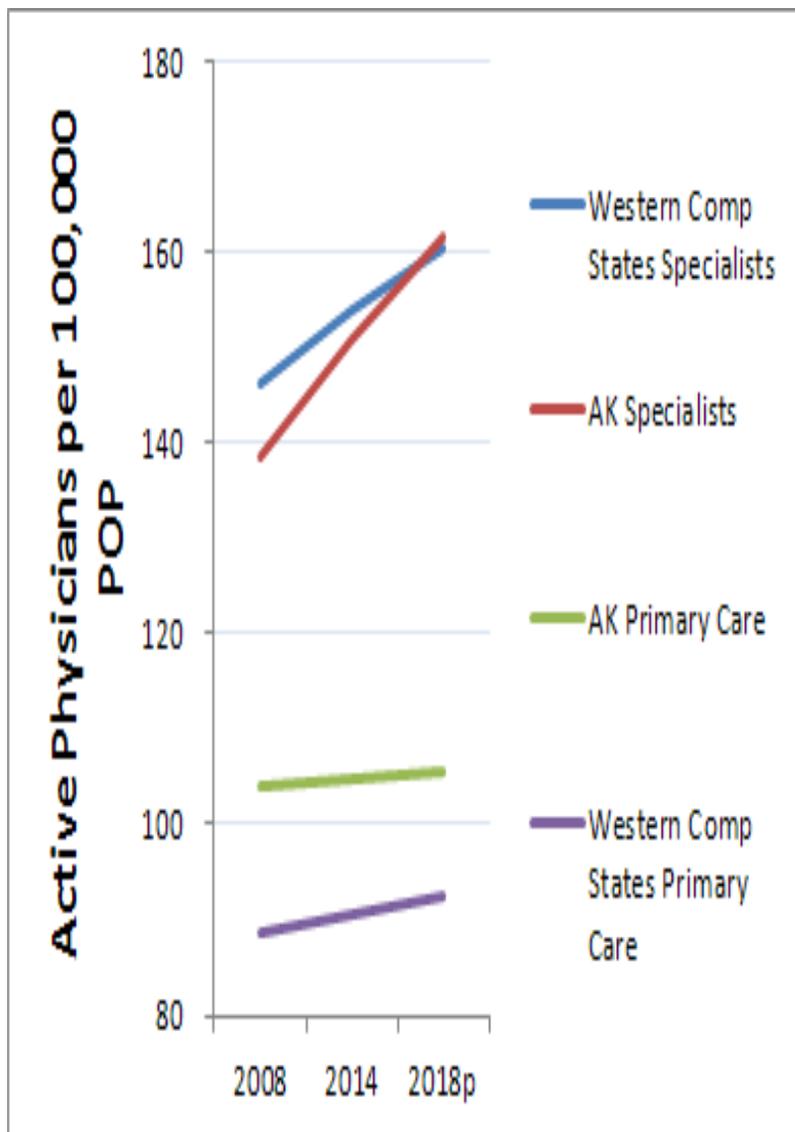
NB: AK Medicaid Expansion in September 2015

Alaska Price / Access Trends

Alaska high price escalation for specialist physician services has attracted more physicians per capita than other states; ACA price support for primary care flowed to states other than Alaska and is associated with increased physician supply in other states

Within Alaska

1. Some moderation in specialty physician price escalation may be possible without a significant impact on local supply of physicians
2. Some physician specialties remain a challenge to attract and retain. Other physician specialties appear to be growing well above average rates of Western states.



WHAT IS THE OUTLOOK FOR HEALTH CARE IN U.S. & ALASKA?

1. Institute of Medicine Study on Sources of Excess Cost in the U.S. Health Care System (2010)
2. Application of excess cost study to Alaska health care market (2016)
3. Emerging systemic change initiatives highlighting potential opportunities to reduce cost and improve the delivery of effective care across the population (2017)

Sources of Excess Cost in U.S. Health Care

Sources of Excess Costs in U.S. Health Care (2009)			
<i>Source: Best Care at Lower Cost: The Path to Continuously Learning Health Care in America. Committee on Learning Health Care Systems in America; Institute of Medicine; Smith M, Saunders R, Stuckhardt L, et al, editors. Washington DC: National Academy Press, 2013 May 10.</i>			
			2452
			billion
		Estimated Excess	
Category	Sources	(billions \$)	Pct of U.S.
Unnecessary Services	Overuse - beyond evidence-established levels	210	8.6%
	Discretionary use beyond benchmarks		
	Unnecessary choice of higher-cost services		
Inefficiently delivered services	Mistakes - errors, preventable complications	130	5.3%
	Care fragmentation		
	Unnecessary use of higher-cost providers		
	Operational inefficiencies at care delivery sites		
Excessive administrative costs	Insurance paperwork costs beyond benchmarks	190	7.7%
	Insurers' administrative inefficiencies		
	Inefficiencies due to care documentation requirements		
Prices that are too high	Service prices beyond competitive benchmarks	105	4.3%
	Product prices beyond competitive benchmarks		
Missed prevention opportunities	Primary prevention	55	2.2%
	Secondary prevention		
	Tertiary prevention		
Fraud	All sources - payers, clinicians, patients	75	3.1%
Total		765	31.2%

Preliminary Estimate of Sources of Excess Cost in Alaska Health Care

Sources of Excess Costs in U.S. Health Care (2009)				MAFA Preliminary Estimate of Excess Costs in Alaska (2016)		
Source: <i>Best Care at Lower Cost: The Path to Continuously Learning Health Care in America</i> . Committee on Learning Health Care Systems in America; Institute of Medicine; Smith M, Saunders R, Stuckhardt L, et al, editors. Washington DC: National Academy Press, 2013 May 10.						
			2452	Alaska vs. U.S. Preliminary Estimate Adjustment		9472
			billion			
Category	Sources	Estimated Excess		Pct Points	Alaska Pct	(millions \$)
		(billions \$)	Pct of U.S.			
Unnecessary Services	Overuse - beyond evidence-established levels	210	8.6%	-0.2%	8.4%	792
	Discretionary use beyond Unnecessary choice of higher-cost services					
Inefficiently delivered services	Mistakes - errors, preventable complications	130	5.3%	0.6%	5.9%	559
	Care fragmentation					
	Unnecessary use of higher-cost providers					
Excessive administrative costs	Operational inefficiencies at care delivery sites					
	Insurance paperwork costs beyond benchmarks	190	7.7%	1.0%	8.7%	829
Prices that are too high	Insurers' administrative inefficiencies					
	Inefficiencies due to care documentation requirements					
Missed prevention opportunities	Service prices beyond competitive benchmarks	105	4.3%	4.0%	8.3%	784
	Product prices beyond competitive benchmarks					
Fraud	Primary prevention	55	2.2%	1.0%	3.2%	307
	Secondary prevention					
	Tertiary prevention					
Total	All sources - payers, clinicians, patients	75	3.1%	0.5%	3.6%	337
		765	31.2%	6.9%	38.1%	3608

Emerging blow back in response to high prices, variable quality and access challenges...

e.g., Jeffrey Sachs, Center for Sustainable Development, Columbia University Professor (“America can save \$1 trillion and get better health care”, CNN, June 27, 2017)

1. Move to capitation for Medicare, Medicaid and *tax-exempt* private health insurance plans
2. Limit compensation of hospital CEOs and top managers
3. Require Medicare and other public providers to negotiate drug prices on a rational basis
4. Set maximum prices on drugs for public health emergencies, e.g., HIV, hep C
5. Radically simplify regulatory procedures for bringing quality generic drugs to the market
6. Facilitate “task shifting” from doctors to lower-cost health workers for routine procedures, especially when new computer applications can support the decision process
7. Cap the annual amount of deductibles and cost-sharing by households to a limited fraction of household income
8. Use part of the savings to expand home visits for community-based health care to combat epidemics of obesity, opioids, mental illness and others.
9. Rein in advertising and other marketing by pharmaceuticals and fast-food industries that has created, alone among the high-income world, a nation of addiction and obesity.
10. Offer a public plan to meet these conditions to compete with private plans. Medicare for all is one such possibility.

Mark A. Foster & Associates (MAFA)

selected cv excerpts

- State of Alaska, Department of Administration, Public Health Care Authority Study, 2017
- Retired, April 2016; Limited consulting engagements April 2016-current
- Anchorage School District, Executive Director, Office of Management & Budget/Chief Financial Officer, 2012-2016
- State of Alaska, Alaska Health Care Commission
 - Impact of ACA on Alaska
 - Alaska Health Care Markets, History & Outlook
- Alaska State Hospital & Nursing Home Association
 - Impact of ACA on Alaska
- Alaska Small Hospital Performance Improvement Network
 - Workforce Studies
 - Telehealth Project Design & Implementation
- UAA ISER
 - Alaska Health Care Markets
 - Impact of Affordable Care Act on Alaska
 - Census of Alaska Physician Medicare Patient Acceptance
 - Medicare Clinic Business Plan Review; Telehealth Business Models
 - Nursing Workforce Supply & Demand Dynamics, Value of UAA Nursing Program
- Alaska Native Tribal Health Consortium
 - Impact of Local Water/Sewer Systems on medical cost and outcomes associated with lower respiratory tract infections in rural Alaska (ANTHC/CDC)
 - Telehealth Business Models (primary care, specialty care including radiology, dermatology, psychology)
- Adjunct Instructor, Danube University, MBA Telematics, 1999-2005
- President/COO, ATU / ACS Long Distance; VP Network Architecture ACS, 1997-1999
- Board Member, Blood Bank of Alaska, 2016-current
- Board Member, Audit Committee Chair, Alaska Power & Telephone, 2004-current