COLORADO ACA GEOGRAPHIC RATING AREA STUDY

Prepared by Lewis & Ellis, Inc.

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Credentials

- Michael Brown has a Master's Degree in Applied Mathematics and is a Fellow of the Society of Actuaries (FSA) and Member of the American Academy of Actuaries (MAAA). Michael's former career was as a college mathematics professor. Michael has 14 years of Actuarial experience including managing actuarial duties at Coventry Health Care (now Aetna) and as an actuarial consultant. Michael focuses on health insurance and works with insurance companies, self-insured trusts, state departments, provider associations, PBMs, and auditing companies. Michael's work includes: determining and reviewing health insurance rates and factors, health claims data experience and APCD data analysis, stop-loss analysis, financial projections and feasibility studies, examinations of insurance companies, litigation support, reviewing health insurance rates and factors, and risk score modeling.
- Andrea Huckaba has a Bachelor's Degree in Mathematics and is an Associate of the Society of Actuaries (ASA), a Chartered Enterprise Risk Analyst (CERA), and a member of the American Academy of Actuaries (MAAA). Andrea spent 5 years at a Blue Cross and Blue Shield plan before joining Lewis & Ellis, Inc. in 2015. She has worked with insurance companies, self-insured trusts, state departments, and consumer advocate groups. Her expertise is in APCD data analysis, enterprise risk management, building actuarial models, pricing, reserving, experience studies, and all things related to the Affordable Care Act.
- Spencer Loudon has a Bachelor's degree in Actuarial Science. He has over ten years of life and health insurance experience. Spencer's work includes all technical work required to set-up, manage and maintain L&E data warehouses for multiple clients of varying complexities and sizes. This includes managing medical claims, pharmacy claims, eligibility data and provider data sets using various software platforms. Spencer is an expert in data validation, scrubbing, merging data sets, summarizing and generating reports from these data sets.
- Lewis & Ellis, Inc. was recognized by A.M. Best in Best's Review Magazine as one of the leading actuarial firms in the U.S. and Canada. L&E was ranked fourth among health actuarial firms in 2014 and 2015, accounting for more than 13% of the total health insurance industry with respect to client reserves and count of the firms reviewed by A.M. Best. Lewis & Ellis was established in 1968 and currently employs over 40 credentialed actuaries.

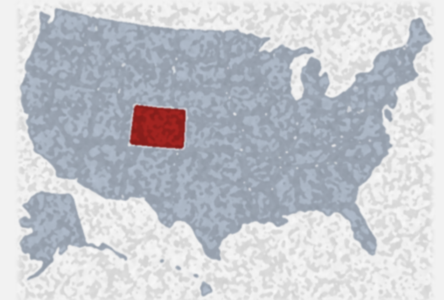
Purpose

- Requested by the State of Colorado Department of Regulatory Agencies: Division of Insurance
- Review current costs by ACA geographic rating region
- Determine appropriateness of current geographic regions
- Consider a move to One Geographic Rating Area

Source of Information

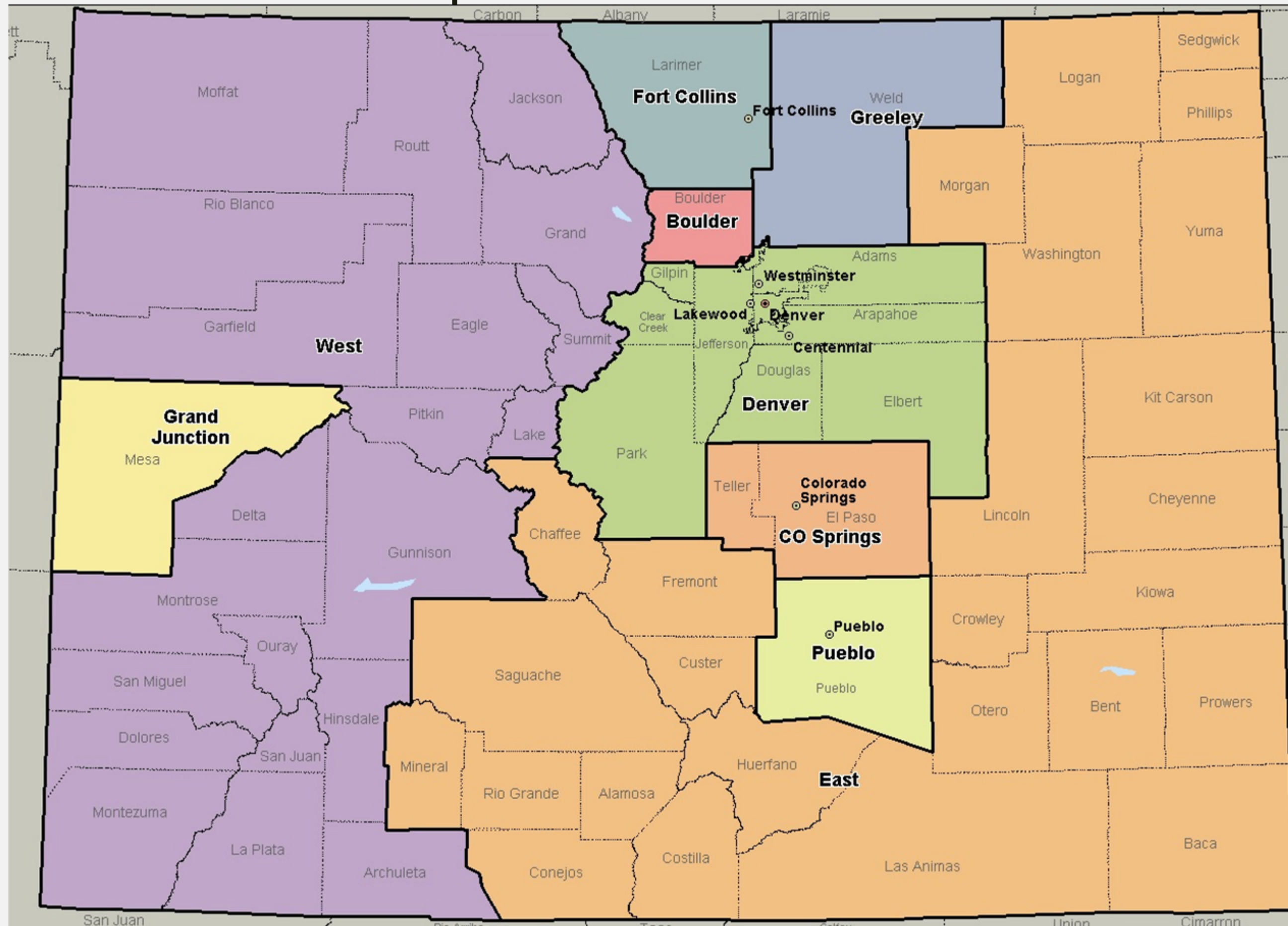
- Data from Colorado All Payer Claims Database (APCD), Commercial market data was used.
- Data from commercial carrier health rate filings for plan years 2014, 2015, 2016 and 2017.
  - *2017 data from initial rate filings is preliminary. It is anticipated that some of this information could change.*
- All information and charts presented here are based on information from Lewis & Ellis' Actuarial Report, provided to the Division of Insurance. This report will be made available.

Current Landscape



- Geographic factor and region determination
  - *Contractual cost and provider charge differences by region*
  - *Utilization differences by region: Provider availability, regional practice patterns (morbidity and age/gender differences should not be considered)*
  - *More regions allow for competitive pricing*
- What if a state uses more than MSA + 1?
  - *Must be actuarially justified*
  - *Must reflect significant differences in health care unit costs*

Current Landscape: 7 MSA + East + West



Rating Regions by State

Individual Market

Number of Rating Regions[1]	Number of States (Including DC)[1]	Average Number of Regions per State	Average Number of MSAs per State[2]	Average Population of States, 2015[3]
1 Rating Region	7	1.0	2.4	2,145,818
2-5 Rating Regions	12	4.1	4.3	2,438,537
6-10 Rating Regions	18	7.7	8.2	5,734,640
11-15 Rating Regions	4	12.3	12.0	6,986,524
16 + Rating Regions	10	25.6	17.4	14,596,603
All States	51	9.8	8.6	6,302,330
Colorado falls in the 6-10 segment (9 regions, population of 5.5 Million, 7 MSAs)				

1) CMS, www.cms.gov/cciio/programs-and-initiatives/health-insurance-market-reforms/state-gra.html

2) Derived from US Census Bureau, www.census.gov/population/metro/

3) US Census Bureau, www.census.gov/popest/data/state/totals/2015/index.html

Rating Regions by State

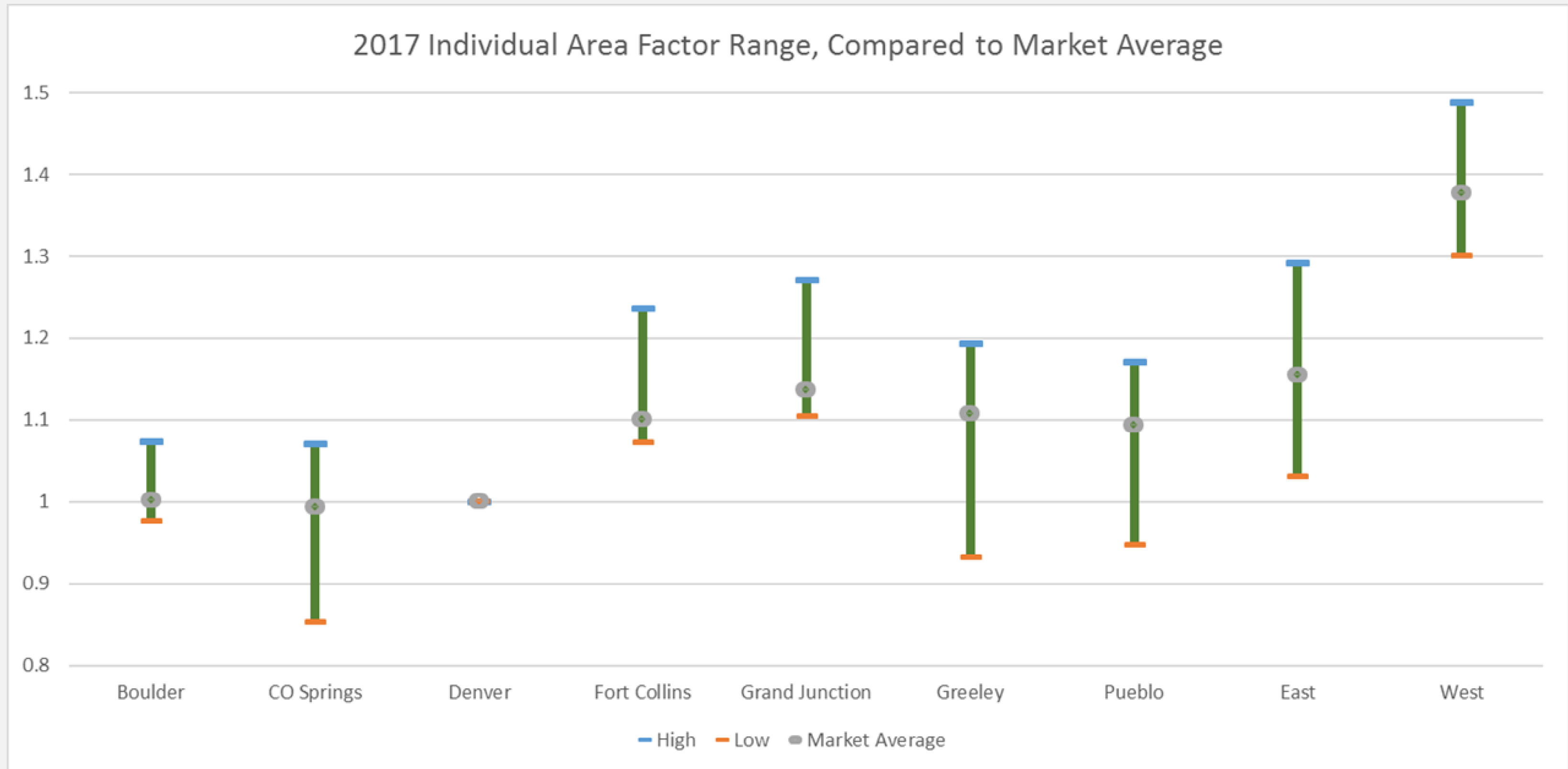
Small Group Market

Number of Rating Regions[1]	Number of States (Including DC)[1]	Average Number of Regions per State	Average Number of MSAs per State[2]	Average Population of States, 2015[3]
1 Rating Region	6	1.0	1.7	1,010,452
2-5 Rating Regions	12	4.1	4.3	2,438,537
6-10 Rating Regions	19	7.6	8.2	5,904,291
11-15 Rating Regions	4	12.3	12.0	6,986,524
16 + Rating Regions	10	25.6	17.4	14,596,603
All States	51	9.9	8.6	6,302,330
Colorado falls in the 6-10 segment (9 regions, population of 5.5 Million, 7 MSAs)				

Common Cost Patterns by Region

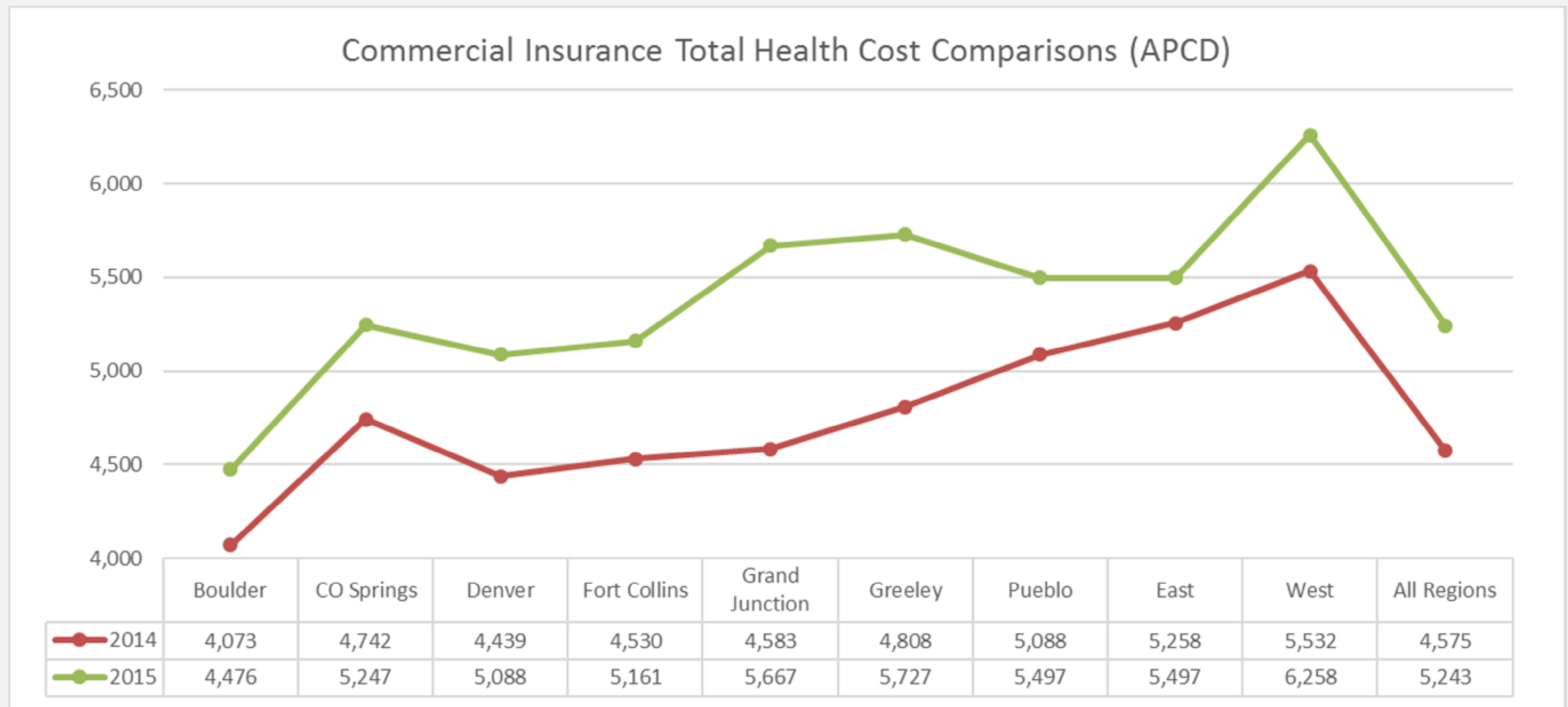
- Significant difference in most cost metrics - typical 20% to 50%+ differentials
- Substantial differences in cost per service for inpatient, outpatient and professional
- Denver and Boulder lower cost in most segments.
  West is highest in most segments.
- In a one region scenario, many regional premiums would be lowered (West more substantially)
- Insureds in Denver, Boulder and Colorado Springs would cover most of the needed revenue increase

Individual Market Area Factor Range for Insurers by Region, 2017



All areas factors are calculated in relation to the Denver factor. The Denver factor is therefore set at 1.00.
Two carriers have a 61.5% differential between their highest and lowest area factors.
For example, one carrier has 0.852 factor in Colorado Springs and 1.376 in the West.

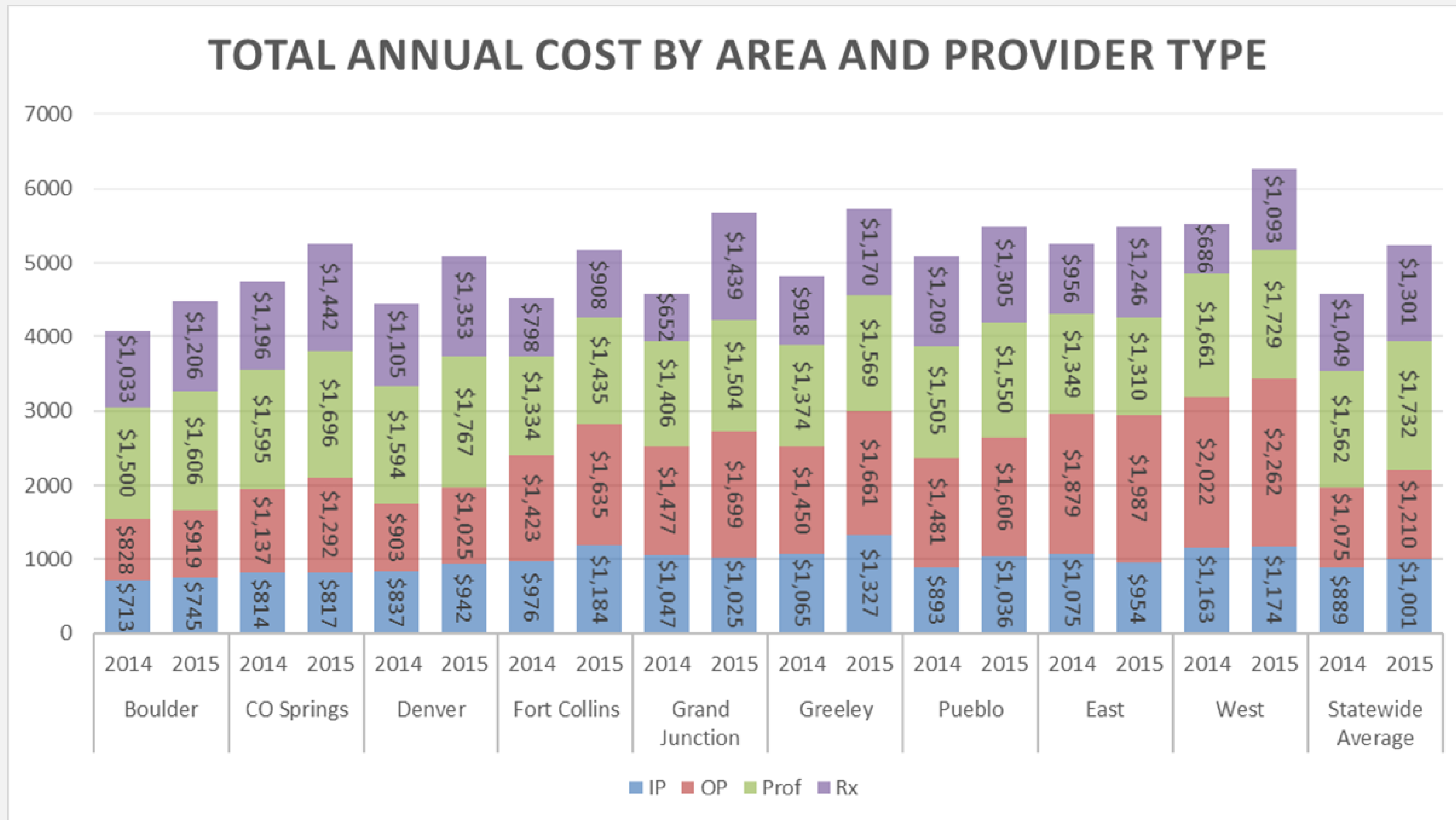
Total Cost of Care (Annual), 2014-15



	Boulder	CO Springs	Denver	Fort Collins	Grand Junction	Greeley	Pueblo	East	West	All Regions
2014	4,073	4,742	4,439	4,530	4,583	4,808	5,088	5,258	5,532	4,575
2015	4,476	5,247	5,088	5,161	5,667	5,727	5,497	5,497	6,258	5,243

2014 claims cost ranges from $4,073 to $5,532, a difference of 36%.

Total Cost by Area and Provider Type



Total Cost vs Cost per Service

Total cost is per capita

Example

- 20 people are insured for a full year
- Only 1 of these 20 people has an inpatient stay, costing $30,000
- Cost per Service = $30,000
- Total Cost = $1,500 ($30,000 ÷ 20 people)

2014 Cost per Service, Difference by Region

Inpatient Admits		Outpatient Visits		Professional Visits		Pharmacy Scripts	
Region	**Cost**	**Region**	**Cost**	**Region**	**Cost**	**Region**	**Cost**
CO. Springs	$17,247	Grand Junction	$1,131	Greeley	$416	Greeley	$78
Denver	$18,029	Boulder	$1,235	Denver	$439	Denver	$80
Boulder	$18,328	East	$1,487	Boulder	$450	Grand Junction	$83
Pueblo	$20,765	CO. Springs	$1,542	Fort Collins	$459	Fort Collins	$83
East	$20,989	Denver	$1,667	CO. Springs	$466	West	$86
Greeley	$22,246	Fort Collins	$1,668	Pueblo	$536	East	$87
Grand Junction	$22,980	Pueblo	$1,750	Grand Junction	$567	Pueblo	$88
Fort Collins	$23,165	Greeley	$1,760	East	$588	Boulder	$90
West	$23,653	West	$1,766	West	$630	CO. Springs	$96
Low/High Diffference	$6,406		$636		$214		$18
Low/High % Difference	37%		56%		51%		23%

Important Note: Many components can lead to variation in cost between regions such as: severity of services; morbidity of members; age and gender of members; contractual arrangements with providers; type of providers available; degree of medical management; and credibility of segments analyzed.

One Rating Region - Key Impact Scenarios

Cost Shifting: High cost premium areas decrease
Low cost premium areas increase

Membership: Increase in high cost areas - drives up overall cost
Decrease in low cost areas - drives up overall cost

Network Factor: Carriers build similar products in different regions,
but vary by allowable ACA rating Network Factor

Administrative cost: Increase for carriers

Band: Keep current regions in place, but use rating band
Must be actuarially justified, based on unit cost

One Rating Region - Key Impact Scenario Results

Rate Impact NOT including standard healthcare trend

Scenario # and Description	Boulder	Colorado Springs	Denver	Fort Collins	Grand Junction	Greeley	Pueblo	East	West	Net
#2: Shift, Mem (Low)	8.1%	9.0%	8.3%	-1.6%	-4.7%	-2.2%	-1.0%	-6.2%	-21.3%	0.6%
#3: Shift, Mem (High), Admin	10.5%	11.4%	10.7%	0.6%	-2.6%	0.0%	1.2%	-4.1%	-19.6%	2.2%
#4: Shift, Mem (Low), Net, Admin	4.9%	5.4%	5.0%	0.1%	-1.5%	-0.2%	0.3%	-2.3%	-9.9%	1.3%
#5: Band, Shift (Very Low), Admin (Very Low)	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	-5.2%	0.5%
#7: Shift, Mem (Medium), Top Carrier Only	11.4%	16.7%	8.7%	0.7%	-14.4%	0.7%	8.6%	-5.7%	-26.9%	1.3%
#8: Shift, 2014 APCD	12.3%	-3.5%	3.1%	1.0%	-0.2%	-4.8%	-10.1%	-13.0%	-17.3%	0.0%
#9: Shift, 2015 APCD	17.2%	-0.1%	3.1%	1.6%	-7.5%	-8.5%	-4.6%	-4.6%	-16.2%	0.0%

Important Note: Rating is a complex determination for insurance companies and we do not assume rating is this simplistic, however, the chart does illustrate some directionally correct impacts that would most likely occur.

All scenarios and a sample rate calculation are provided in the Appendix.

Impact of Move to One Rating Region

Impact to Consumers

- All consumers pay the same, or close to the same premium, by age
- Consumers in low-cost areas subsidize those in high-cost areas

Impact to Carriers

- Carriers drop out or are forced out if not competitive
- Carriers use allowable network rating factor to price products in different areas
- Carriers choose to offer plans only in the low-cost regions
- Administrative costs will increase to cover implementation

Impact to Market

- Market growth in HMO and narrow network products may be accelerated
- Possible market growth in self-insured plans or uninsured

Regulatory Considerations

<u>If Colorado continues with 9 Rating Regions:</u>

- Make no other changes
- Consider introducing an area factor rating band
- Consider subsidizing the underinsured
- Continue to promote healthcare understanding and transparency

<u>If Colorado shifts to 1 Rating Region</u>

- Consider carrier participation rules
- Consider network rating rules
- Continue to promote healthcare understanding and transparency

Recommendations

Recommended Option: Keep the current regions, but introduce a rating band.

Alternate Option: Keep the geographic structure as is.

Recommended Option: Keep the current regions, but introduce a rating band

Currently, carriers in the market have geographic factors that differ by as much as 62% when comparing the lowest factor to the highest (this can be described as a 1.62:1 band). A sample 1.4:1 band and its impact is illustrated on slide 16.

The key factors leading to this decision are:

1. Provides a balance between paying for actual cost of services (which benefits low cost areas) and sharing in statewide average cost (which benefits high cost areas);
2. Lessens the probability of plan choice and carrier choice diminishing as compared to a 1 region scenario;
3. Will most likely have a minor overall rate impact to state wide premiums and a reasonably low impact to the low cost regions;
4. The current rating regions fall within industry standards;
5. The current rating regions are actuarially justified;
6. There is minimal disruption for carriers administratively and competitively
7. The band must be actuarially justified based on unit cost- yet to be determined!

L&E does not recommend moving to one rating area.

The key factors leading to this decision are:

1. Carriers may drop out of the market. We have already seen a decrease in the number of carriers as they face the challenges of competing in the ACA compliant market. Some carriers may have to increase prices in low cost areas too much and cannot compete.
2. The market may continue to trend towards a complete HMO and/or narrow network market in order to compete on price and maintain lower rate increases. Customer choice may become limited.
3. Carriers may offer very similar products in different regions, but distinguish the products using the allowable network rating factor. This in effect, would be rating by region in a one region state.
4. The market may find other methods to offer insurance, such as self-insured plans, Trusts, or Multiple Employer Welfare Arrangements (MEWAs). These alternate methods could lead to higher morbidity levels in the ACA market.
5. Customers may begin to pay the same healthcare premiums for similar products regardless of healthcare cost in their regions. This would benefit customers in high cost regions and but negatively impact customers in low cost regions.
6. Some carriers may drop out of the higher cost regions. This would allow them to offer lower prices in the low cost regions due to having lower overall cost. This may lead to a disadvantage for carriers offering rates in all regions. This can also prompt very limited products in high cost regions.
7. Administrative cost will increase. Carrier implementation of major regulatory changes increases administrative cost and overall healthcare premiums.

Questions?

Appendix: Single Rating Region Scenarios

Scenario Number and Description
Scenario 1) Individual, Area Factor, Simple: Impact based on how to impact 2017 area factor so that area factor is set to state average (all area factors are equal). No carrier or member movement implied.
Scenario 2) Individual with population movement, low: Scenario 1 with 5% decrease in Boulder, Colorado Springs and Denver enrollment. 5% increase in Grand Junction and East, 10% increase in West.
Scenario 3) Individual with population movement, high with admin increase: Scenario 1 with 10% decrease in Boulder, Colorado Springs and Denver enrollment. 10% increase in Grand Junction and East, 20% increase in West. 1% increase in admin.
Scenario 4) Individual, half of carriers use Network rating to split areas, admin increase: Scenario 1 with 2.5% decrease in Boulder, Colorado Springs and Denver enrollment. 2.5% increase in Grand Junction and East, 5% increase in West. 1% increase in admin. Half of carriers use Network factor to rate by region
Scenario 5) Individual - Use multiple regions with Rating Band: Allow rating regions but with 1.4 :1 band limit, 5% increase in West. 0.5% increase in admin.
Scenario 6) Individual 2017 - Top Carrier: Similar to Scenario 1, but with top carrier that sells in every region
Scenario 7) Individual 2017 - Top Carrier - With Population Movement: Scenario 6 with 5% decrease in Boulder and Denver, 10% decrease Colorado Springs 20% increase in Grand Junction and East, 10% increase in West.
Scenario 8) 2014 Commercial Market (APCD): Impact based on how to impact 2014 commercial experience (small group, large group, individual, all products (PPO, EPO, HMO, etc.) would need to be adjusted so claims charge by area is equal and revenue neutral
Scenario 9) 2015 Commercial Market (APCD): Impact based on how to impact 2015 commercial experience (small group, large group, individual, all products (PPO, EPO, HMO, etc.) would need to be adjusted so claims charge by area is equal and revenue neutral

Appendix: Sample One Area Impact Calculation

Statewide Average Rate= $300

Boulder Area Factor= 0.936
Boulder Rate = (Boulder Area Factor) x (Statewide Average Rate) = $281

West Area Factor= 1.286
West Rate = (West Area Factor) x (Statewide Average Rate) = $386

Area Factors change because of enrollment shifts
New Boulder Area Factor = 0.931
New West Area Factor = 1.279

Appendix: Sample One Area Impact Calculation

New Boulder Area Factor= 0.931
New Boulder Rate = (Boulder Area Factor) x (Statewide Average Rate) = $279

New West Area Factor= 1.279
West Rate = (West Area Factor) x (Statewide Average Rate) = $384

New Statewide Average Rate= $300 x 0.6% = $302 (enrollment shifts)

Increase for Boulder when moving to One Rating Area=
(New Statewide Average Rate / Boulder Rate) - 1= ($302 /$279) – 1 = 8.1%

Decrease for West when moving to One Rating Area=
(New Statewide Average Rate / West Rate) - 1= ($302 /$384) – 1 = -21.3%

Appendix: Common Cost Patterns by Region

Cost Indicators

- 2017 insurance company geographic factors
- Total Cost – Annual insurer paid claims plus member deductibles, copays and coinsurance
- Cost per Service – cost per inpatient admit, outpatient visit, professional visit, pharmacy script

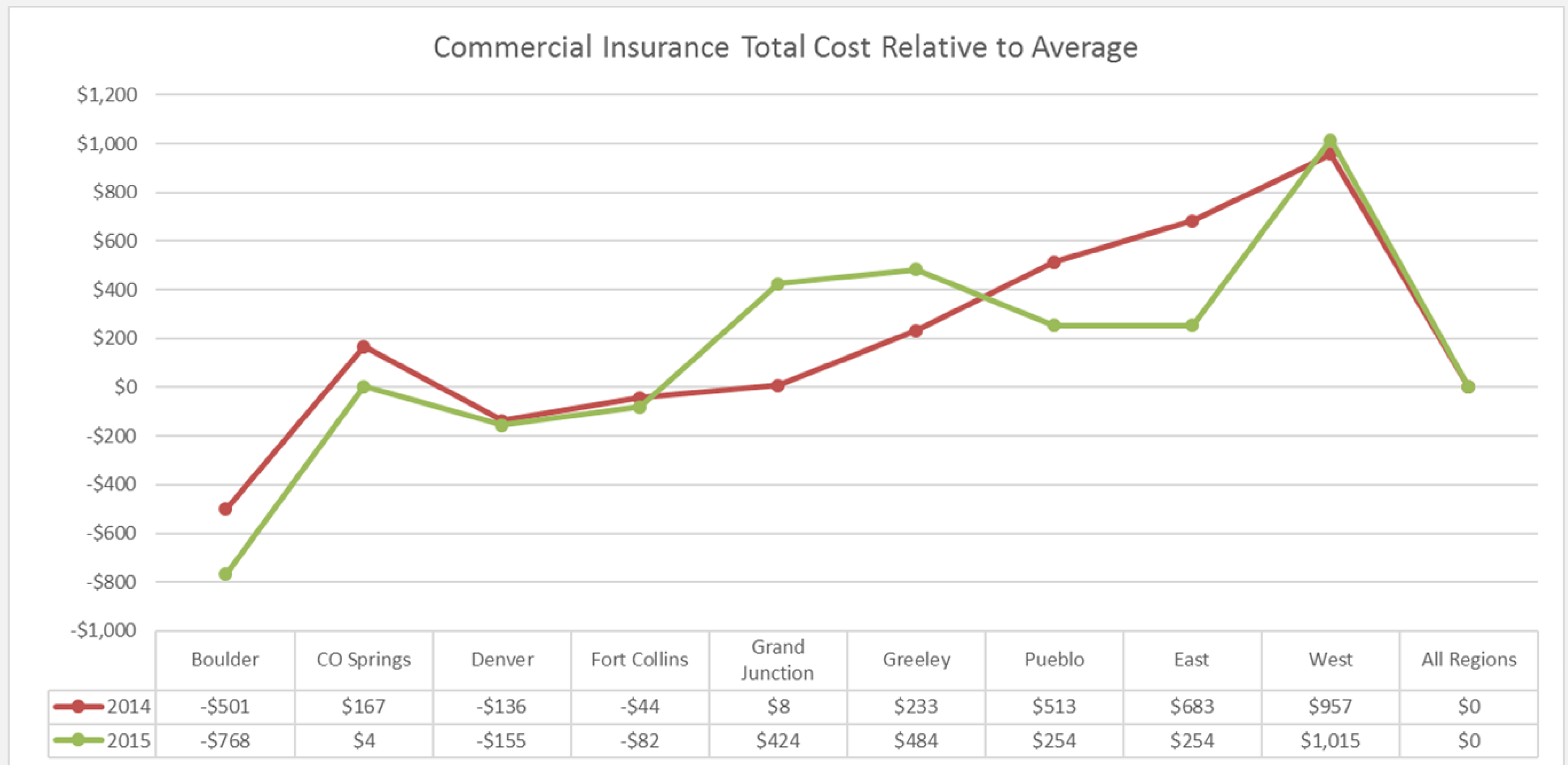
Source

- 2017 area factors from carrier filings submitted to DOI (Individual and Small Group Market)
- Total Cost and Cost per Service are actuarially calculated using APCD data
- APCD results represent majority of commercial insurance market (Including Groups over 50)
- APCD is 2014 and 2015 claims cost, 2015 is early estimate (January through May 2015)

Patterns

- Significant difference in all measurements (ranges from 20% to 50%+ differentials)
- Substantial differences in cost per service for inpatient, outpatient and professional
- Denver and Boulder lower cost in most segments
- In a one region scenario, in general, the East and West Premiums would be lowered and Denver, Boulder and Colorado Springs would cover the most of the needed revenue increase

Appendix: Annual Cost, Relative to Average

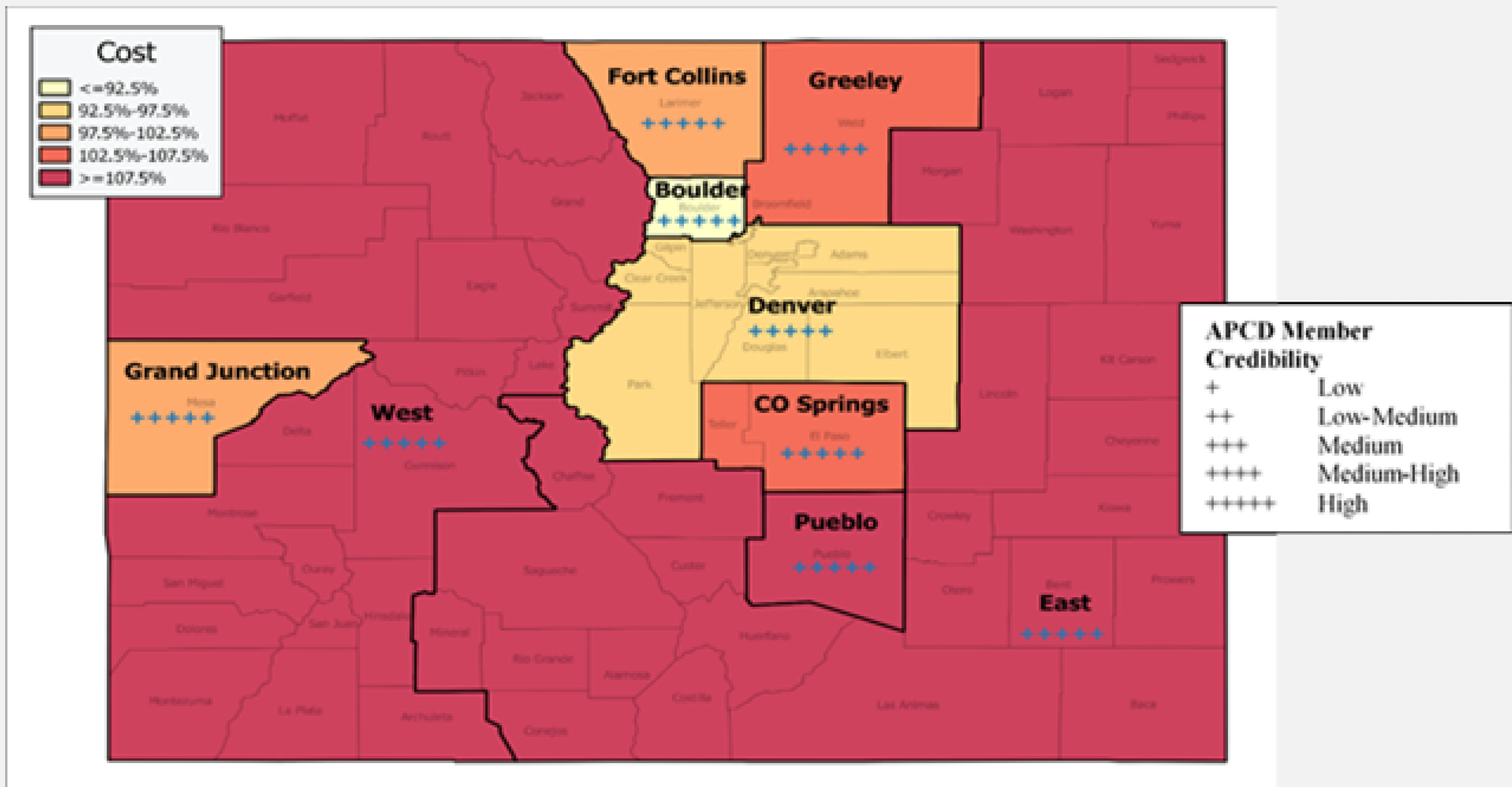


	Boulder	CO Springs	Denver	Fort Collins	Grand Junction	Greeley	Pueblo	East	West	All Regions
2014	-$501	$167	-$136	-$44	$8	$233	$513	$683	$957	$0
2015	-$768	$4	-$155	-$82	$424	$484	$254	$254	$1,015	$0

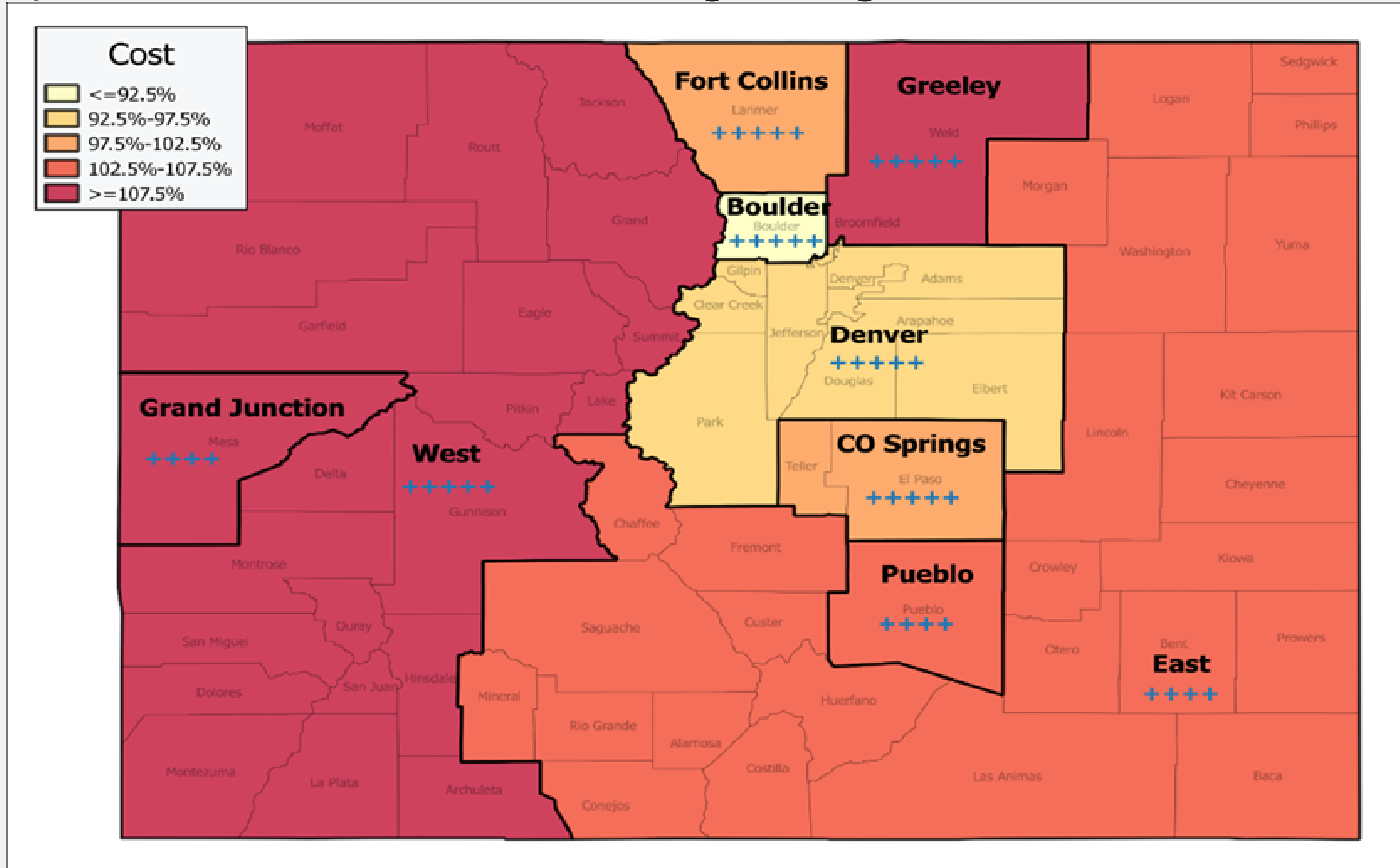
Appendix: 2014 Cost and Use, L&E/APCD Model Snapshot

		2014					
		Total Cost per Member per Year		Units per 1,000 Members per Year		Cost per Unit	
		All Regions	Region Rating Area 9	All Regions	Region Rating Area 9	All Regions	Region Rating Area 9
OP	Emergency Room	$326	$306	149.7	134.1	$2,179	$2,284
OP	Outpatient Surgery	$409	$852	96.7	124.7	$4,226	$6,834
OP	Observation	$15	$32	6.9	11.4	$2,155	$2,792
OP	Advanced Imaging	$47	$185	20.6	65.3	$2,302	$2,833
OP	Imaging	$87	$203	129.4	278.0	$676	$731
OP	Lab/Pathology	$66	$195	115.0	371.2	$573	$526
OP	Therapy (PT/OT/ST)	$19	$49	43.5	67.6	$443	$718
OP	DME/Prosthetics/Supplies (OP)	$2	$3	0.8	1.3	$2,274	$2,001
OP	Mental Health Outpatient	$5	$3	6.7	1.5	$746	$1,651
OP	Other Outpatient	$98	$194	99.9	89.4	$985	$2,174
OP Total	**Total**	$1,075	$2,022	669.2	1,144.6	$1,606	$1,766

Appendix: 2014 Rating Region Cost & Credibility



Appendix: 2015 Rating Region Cost & Credibility



Appendix: 2014 County Cost & Credibility

Cost
<=92.5%
92.5%-97.5%
97.5%-102.5%
102.5%-107.5%
>=107.5%

Fort Collins
Greeley
Boulder
Denver
Grand Junction
West
CO Springs
Pueblo
East

APCD Member Credibility

+	Low
++	Low-Medium
+++	Medium
++++	Medium-High
+++++	High

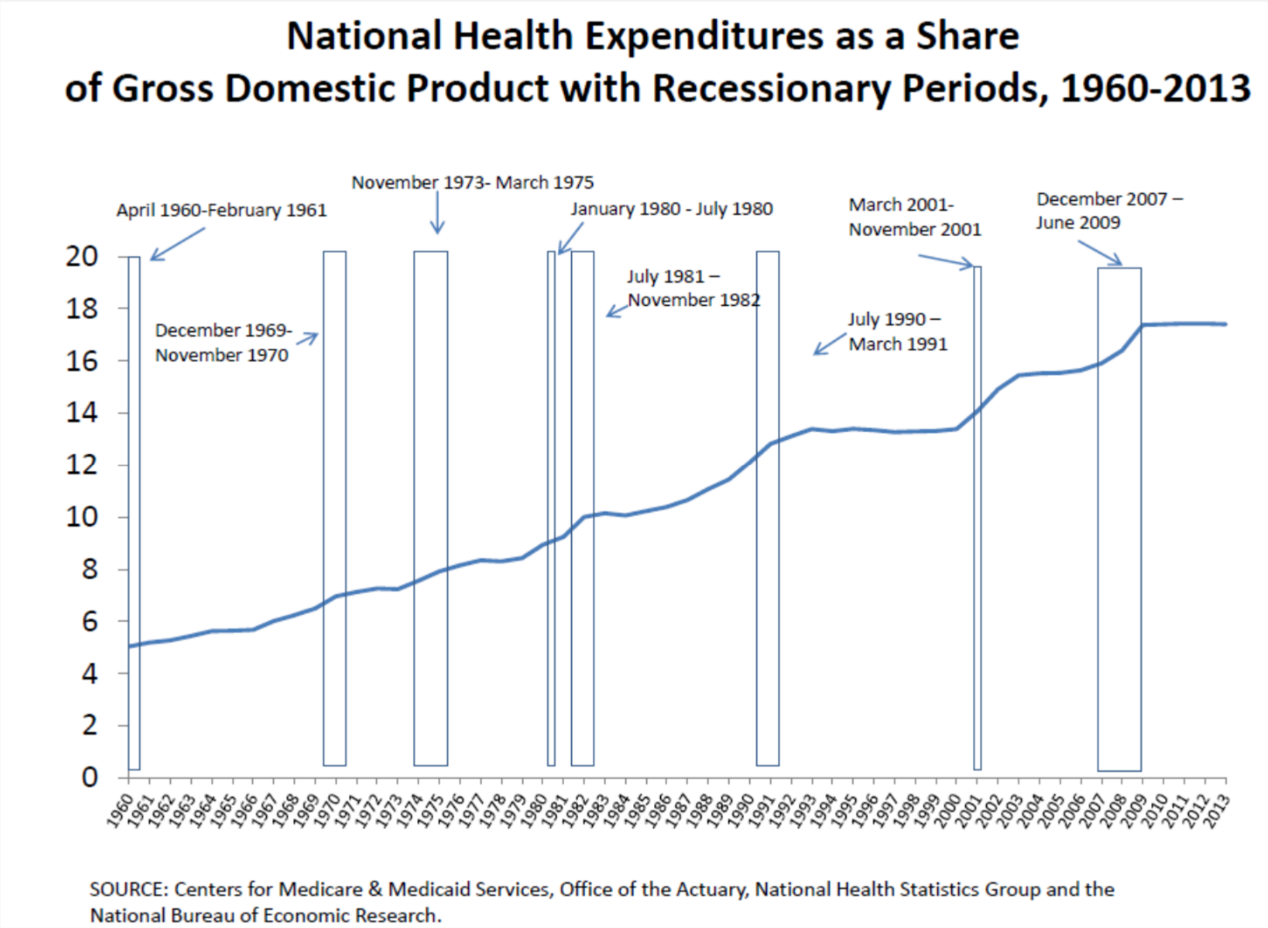
Appendix: 2015 County Cost & Credibility

Cost
<=92.5%
92.5%-97.5%
97.5%-102.5%
102.5%-107.5%
>=107.5%

Fort Collins
Greeley
Boulder
Denver
Grand Junction
West
CO Springs
Pueblo
East

Moffat
Routt
Jackson
Larimer
Weld
Logan
Sedgwick
Phillips
Morgan
Rio Blanco
Grand
Boulder
Broomfield
Washington
Yuma
Gilpin
Denver
Adams
Clear Creek
Garfield
Eagle
Summit
Jefferson
Arapahoe
Douglas
Elbert
Kit Carson
Mesa
Pitkin
Lake
Park
Lincoln
Delta
Teller
El Paso
Cheyenne
Gunnison
Chaffee
Fremont
Montrose
Crowley
Kiowa
Ouray
Saguache
Custer
Pueblo
Bent
Prowers
San Miguel
Hinsdale
Otero
Dolores
San Juan
Mineral
Rio Grande
Alamosa
Huerfano
Montezuma
La Plata
Archuleta
Conejos
Costilla
Las Animas
Baca

Healthcare Costs as a Percent of GDP



"History of Health Spending in the United States 1960-2013"
by Aaron C. Catlin and Cathy A. Cowen