



CENTER FOR IMPROVING
VALUE IN HEALTH CARE



Variation in Quality Measures: Feedback from Colorado Leaders

October 18th, 2017

Agenda

- Welcome
- Purpose of the meeting
- Overview of Network for Regional Healthcare Improvement (NRHI) and Healthcare Delivery Systems Analysis (HDSA) project
- Overview of HDSA project and findings
- Discussion of findings
- Wrap-up and next steps

Housekeeping

- Phone lines are muted
- Use chat box on the lower left of your screen to join the discussion





Overview of AHRQ U19 Grant

National Bureau of Economic Research (NBER) and Harvard University received the AHRQ U19 grant for research on health care costs, quality and outcomes. The project includes developing an enhanced database (EDB) and five different projects:

Project 1: Delivery system structure and outcomes

Project 2: The delivery system and outcomes in four states

Project 3: Characteristics of high performing delivery systems for cancer

Project 4: Accelerating the pediatric performance of health systems

Project 5: Causes and consequences of institutional consolidation

Principal Investigators: David Cutler, PhD, Nancy Beaulieu, PhD



Health System Definition

AHRQ defines a health system as

An organization that includes at least one hospital and a physician group, and where there is an ownership relationship between the hospital and physician groups, or between these and a corporate entity

Project 2: The delivery system and outcomes in four states (HDSA)

Project 2 uses commercial all-payer claims data (APCD) from Oregon, Colorado, Massachusetts and Utah

Aims of the HDSA project

- **Aim 1:** Assemble data on use of Patient Centered Outcomes Research (PCOR)-based evidence and related **clinical and economic outcomes in these states** and over time, and compare these outcomes across areas.
- **Aim 2:** Merge data on use of PCOR-based evidence and related clinical and economic outcomes with **data from the Enhanced System Database** derived from national data, and supplement that data with area-specific information.
- **Aim 3:** Use variation within and across states to **examine the impact of different delivery systems** on use of PCOR-based evidence and related clinical and economic outcomes.



Review of HDSA Technical Analysis

1. Identify the portion of the APCD that should be used to calculate quality measures
2. Construct the uniform data store
3. Map the provider specialty
4. Create SAS Formats from HEDIS[®] value sets
5. Write measure code
6. Run measure code and calculate results
7. Create age/sex aggregates for risk calculation
8. Create geographic divisions within each state
9. Calculate results by geography type
10. Research reasons for discrepancies



Consensus Measure Set

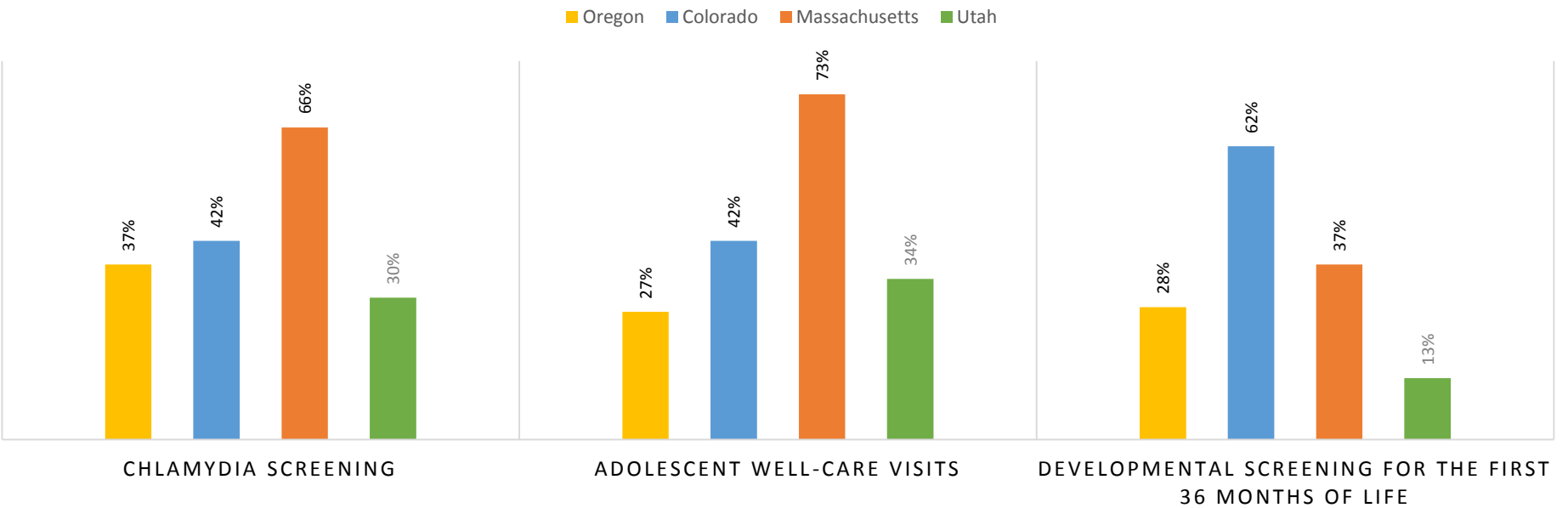


Measures	Reference
Chlamydia Screening (age 16-24)	NQF 0033
Adolescent Well-Care Visits (age 12-21)	NCQA
Developmental Screenings in the First 36 Months of Life	NQF 1448
Anti-depressant Medication Management: (a) Effective Acute Phase Treatment (b) Effective Continuation Phase Treatment	NQF 0105
Follow-up care for children prescribed ADHD medication (a) Initiation Phase (b) Continuation and Maintenance Phase	NQF 0108
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	NQF 0058
Hospital Admissions for Ambulatory-Sensitive Conditions, Rate per 100 Patients – Chronic Composite (age 18 and older)	AHRQ
Hospital Admissions for Ambulatory-Sensitive Conditions, Rate per 100 Patients – Acute Composite (age 18 and older)	AHRQ



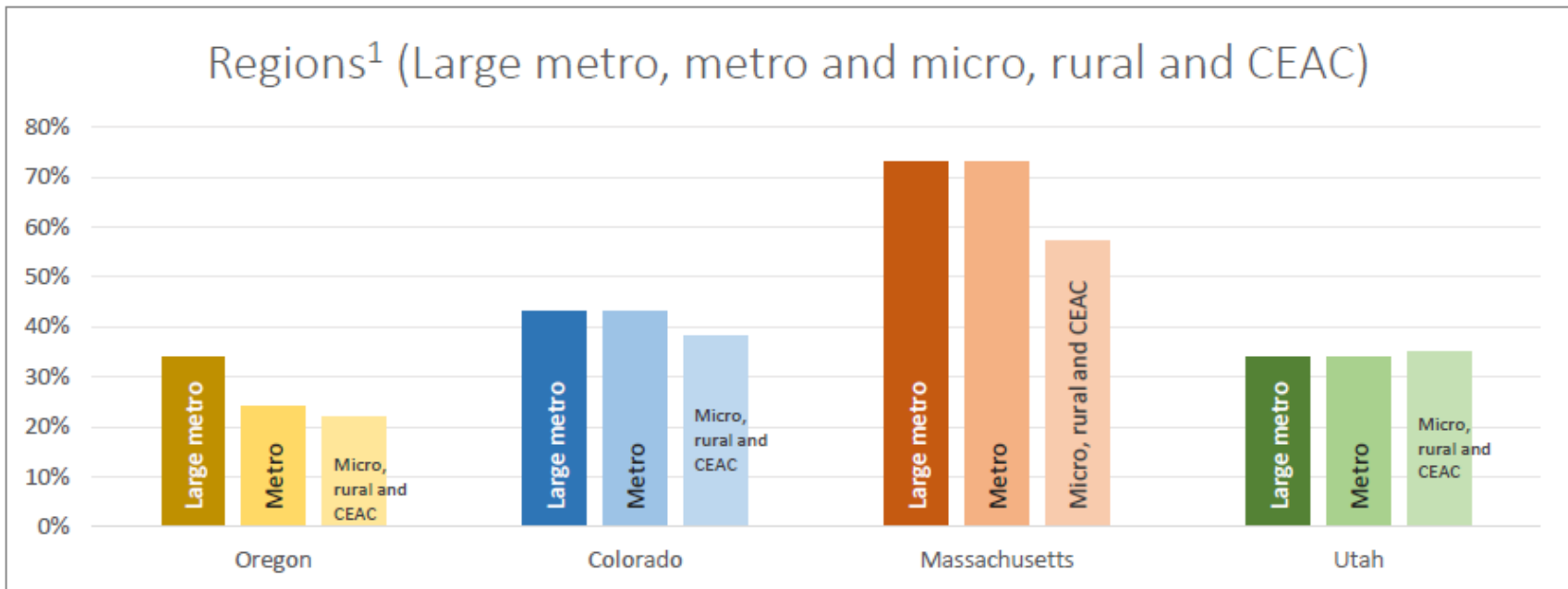
Commercial Results: Preventive Care Measures

PREVENTIVE CARE MEASURES



	OREGON		COLORADO		MASSACHUSETTS		UTAH	
	N	Rate	N	Rate	N	Rate	N	Rate
Chlamydia screening	17,968	37%	23,238	42%	26,423	66%	23,802	30%
Adolescent well-care visits	78,640	27%	102,746	42%	84,881	73%	138,624	34%
Developmental screening for the first 36 months of life	15,620	28%	21,068	62%	21,815	37%	29,556	13%

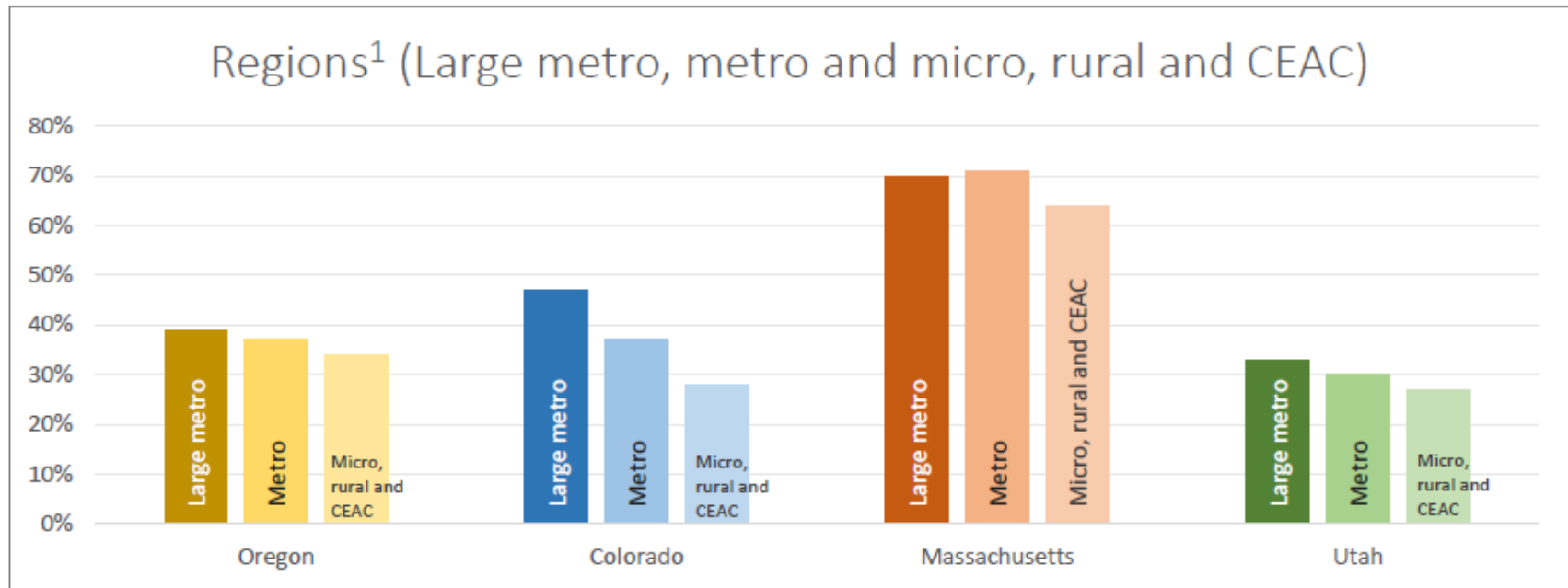
Adolescent Well-Care by Geographic Region



	Large metro areas		Metro		Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	28,960	34%	28,420	24%	21,260	22%
Colorado	57,456	43%	29,458	43%	15,832	38%
Massachusetts	55,297	73%	29,298	73%	286	57%
Utah	45,124	34%	64,415	34%	29,085	35%

¹ CMS County Types, see Appendix A for more detail. In Oregon, Washington and Clackamas counties were changed from Metro to Large Metro to treat as part of the Portland metro area.

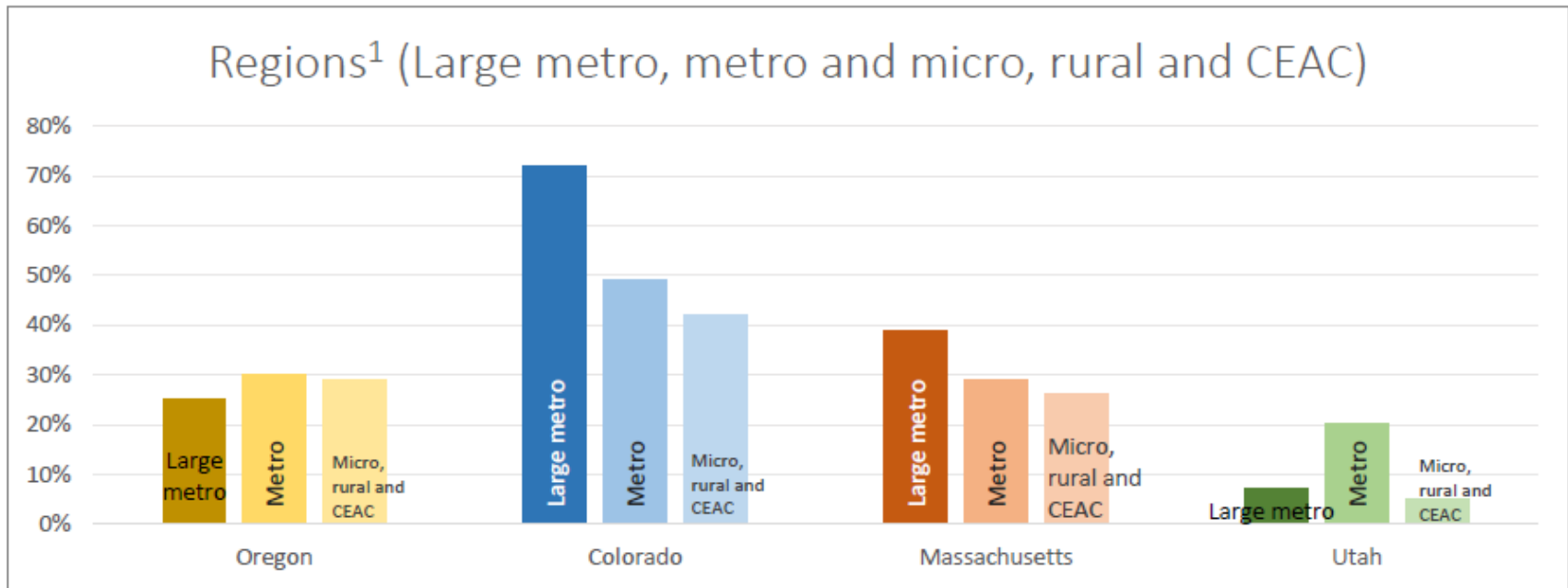
Chlamydia Screening by Geographic Region



	Large metro areas		Metro		Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	6,631	39%	6,594	37%	4,743	34%
Colorado	13,735	47%	6,211	37%	3,292	28%
Massachusetts	15,775	70%	8,867	71%	96	64%
Utah	8,494	33%	10,365	30%	4,943	27%

¹ CMS County Types, see Appendix A for more detail. In Oregon, Washington and Clackamas counties were changed from Metro to Large Metro to treat as part of the Portland metro area.

Developmental Screening by Geographic Region



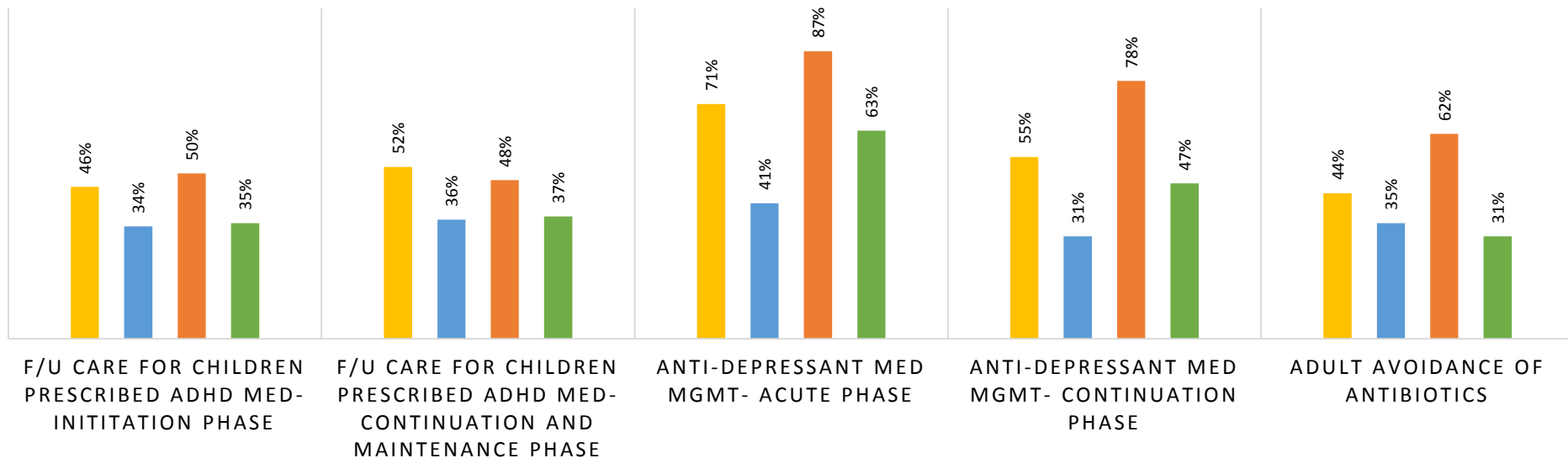
	Large metro areas		Metro		Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	6,971	25%	5,191	30%	3,458	29%
Colorado	12,862	72%	5,511	49%	2,695	42%
Massachusetts	15,863	39%	5,882	29%	70	26%
Utah	9,584	7.0%	14,346	20%	5,626	5.0%

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Commercial Results: Prescription Drug Measures

PRESCRIPTION DRUG MEASURES

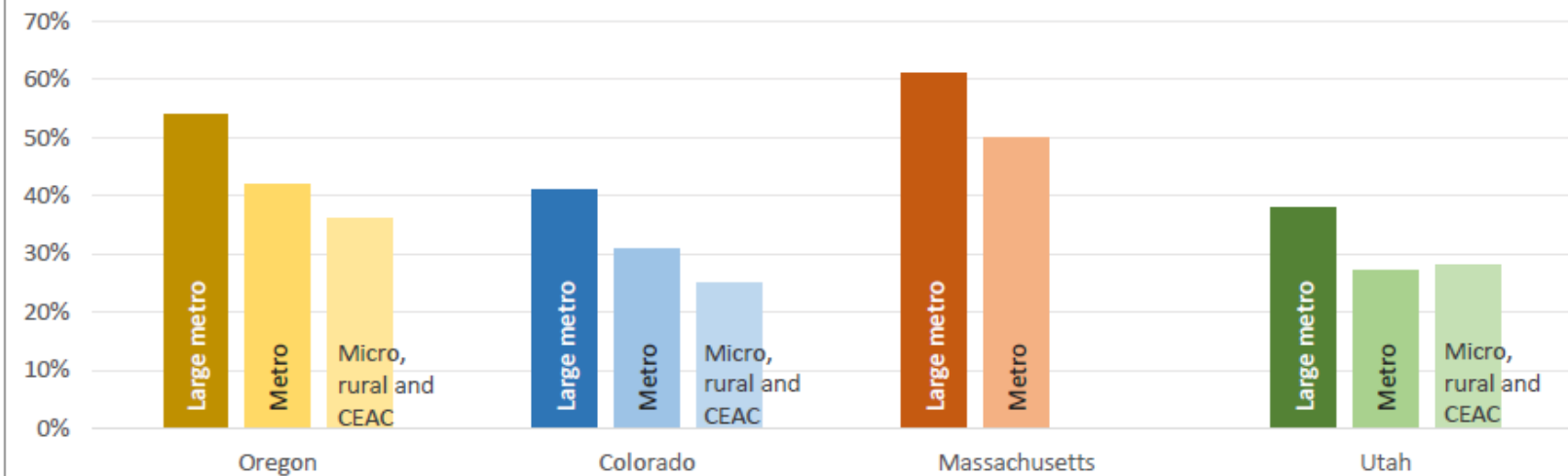
■ Oregon ■ Colorado ■ Massachusetts ■ Utah



	OREGON		COLORADO		MASSACHUSETTS		UTAH	
	N	Rate	N	Rate	N	Rate	N	Rate
Follow-up care for children prescribed Attention Deficit Hyperactivity Disorder (ADHD) Medication- initiation phase	813	46%	1,605	34%	5,701	50%	1,337	35%
Follow-up care for children prescribed Attention Deficit Hyperactivity Disorder (ADHD) Medication- continuation and maintenance phase	368	52%	270	36%	2,260	48%	409	37%
Anti-depressant medication management- acute phase	7,067	71%	6,423	41%	14,161	87%	5,901	63%
Anti-depressant medication management- continuation phase	7,067	55%	6,423	31%	14,161	78%	5,901	47%
Adult avoidance of antibiotics	8,190	44%	7,769	35%	5,119	62%	6,128	31%

Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis

Regions¹ (Large metro, metro and micro, rural and CEAC)



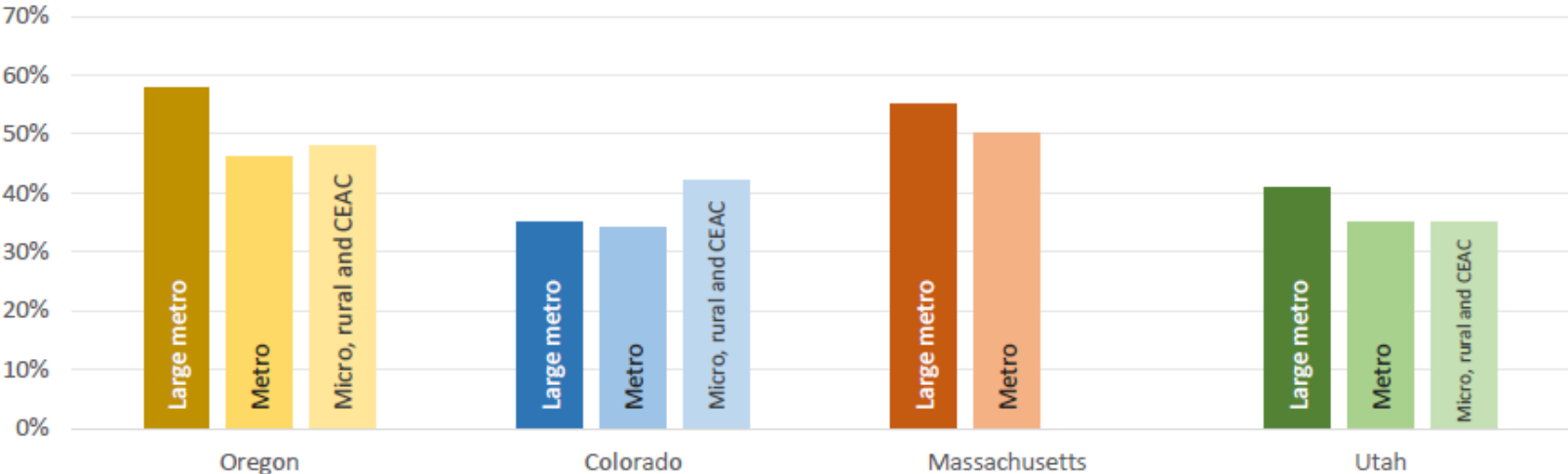
	Large metro areas		Metro		Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	2,403	54%	3,242	42%	2,545	36%
Colorado	3,578	41%	2,554	31%	1,637	25%
Massachusetts	1,895	61%	1,317	50%	*2	*2
Utah	2,043	38%	2,924	27%	1,161	28%

¹ CMS County Types, see Appendix A for more detail. In Oregon, Washington and Clackamas counties were changed from Metro to Large Metro to treat as part of the Portland metro area.

² Values suppressed due to n<11.

Follow-up Care for Children Prescribed Attention Deficit Hyperactivity Disorder (ADHD) Medication – Initiation Phase

Regions¹ (Large metro, metro and micro, rural and CEAC)



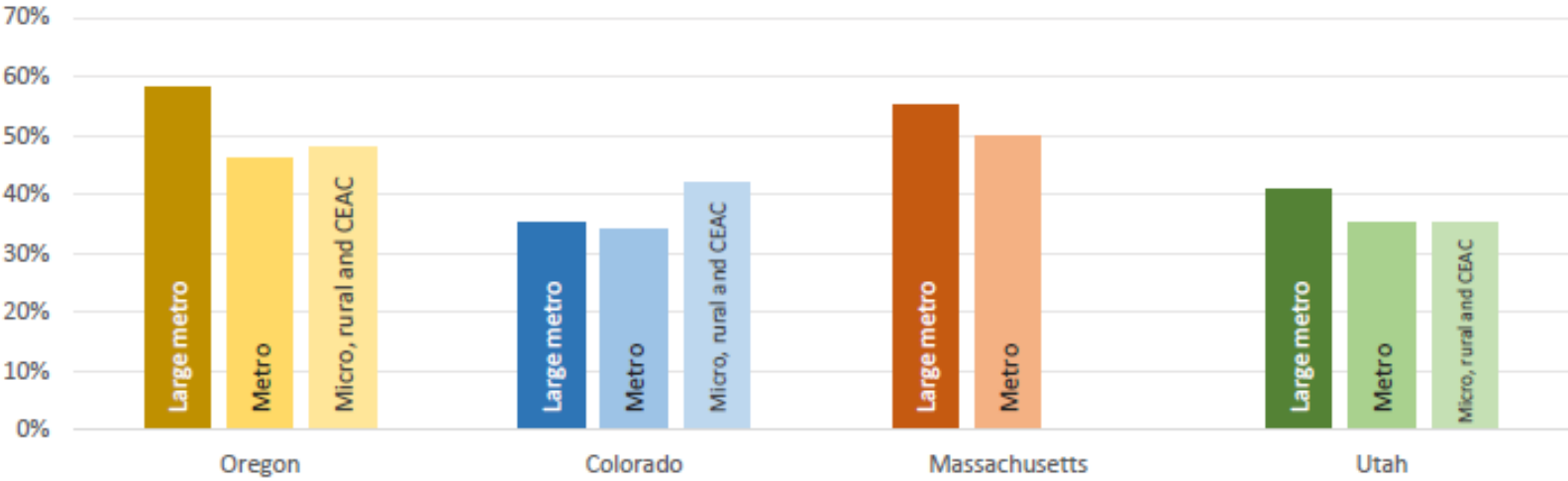
	Large metro areas		Metro		Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	166	58%	129	46%	73	48%
Colorado	155	35%	82	34%	33	42%
Massachusetts	690	55%	425	50%	*2	*2
Utah	162	41%	187	35%	60	35%

¹ CMS County Types, see Appendix A for more detail. In Oregon, Washington and Clackamas counties were changed from Metro to Large Metro to treat as part of the Portland metro area.

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Follow-up Care for Children Prescribed Attention Deficit Hyperactivity Disorder (ADHD) Medication – Continuation and Maintenance Phase

Regions¹ (Large metro, metro and micro, rural and CEAC)



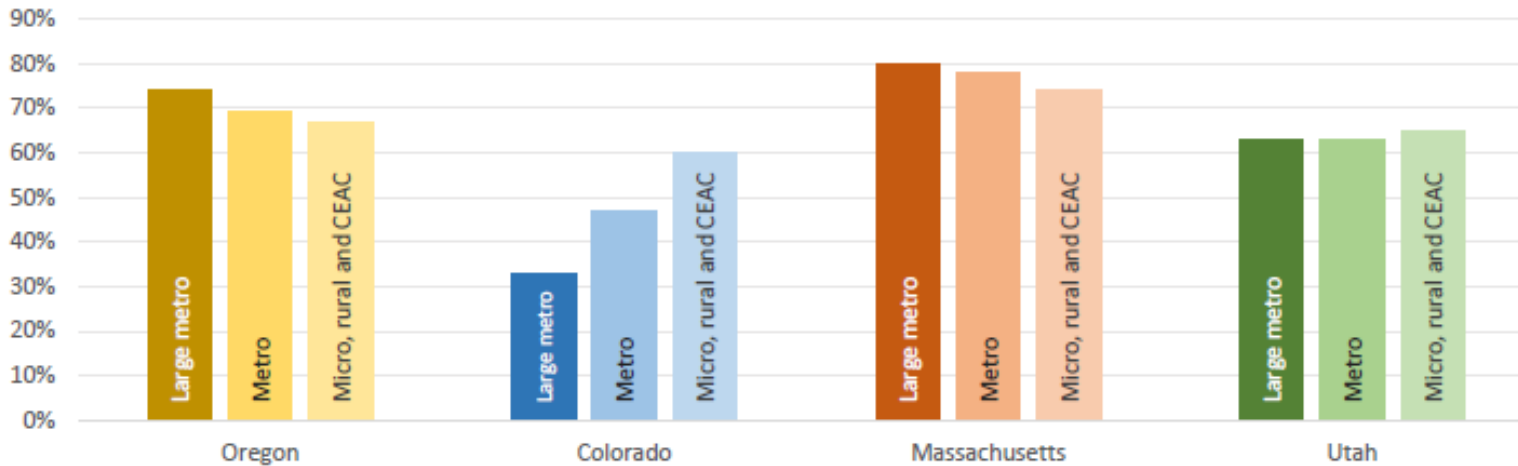
	Large metro areas		Metro		Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	166	58%	129	46%	73	48%
Colorado	155	35%	82	34%	33	42%
Massachusetts	690	55%	425	50%	*2	*2
Utah	162	41%	187	35%	60	35%

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Anti-Depressant Medication Management – Acute Phase

Regions¹ (Large metro, metro and micro, rural and CEAC)

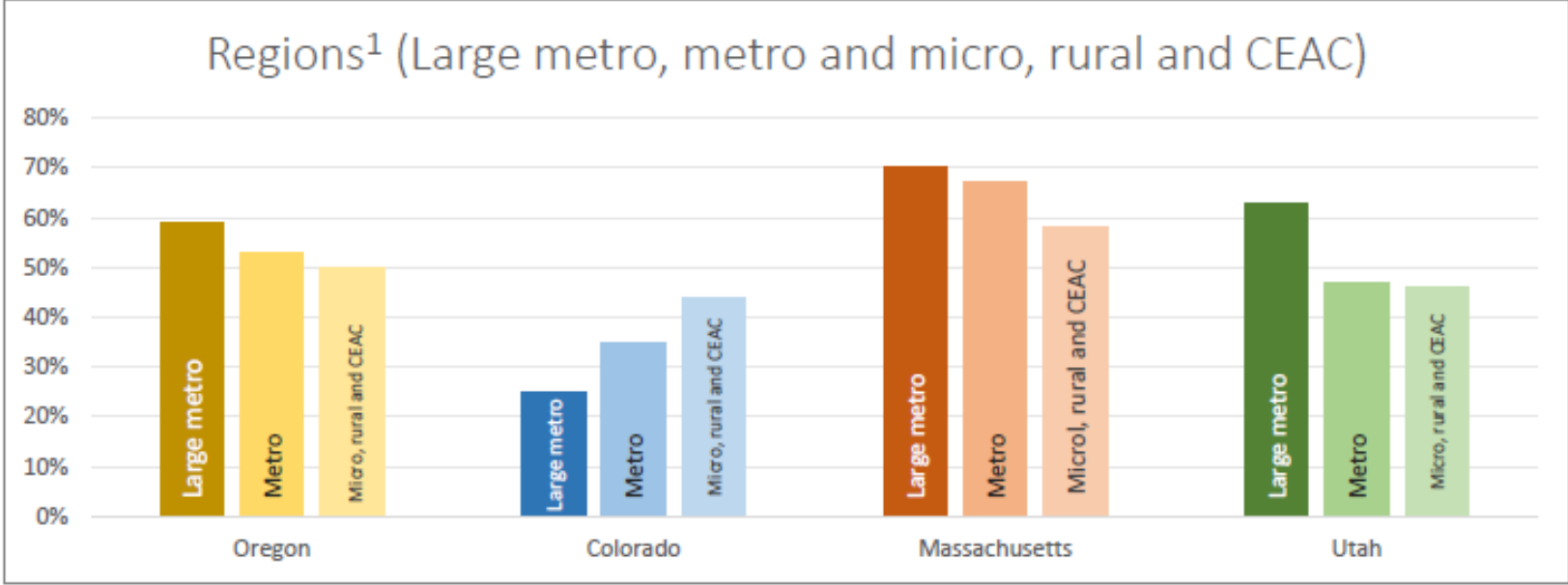


	Large metro areas		Metro		Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	2,779	74%	2,670	69%	1,618	67%
Colorado	3,697	33%	1,711	47%	1,015	60%
Massachusetts	5,460	80%	3,033	78%	31	74%
Utah	2,185	63%	2,662	63%	1,054	65%

¹ CMS County Types, see Appendix A for more detail. In Oregon, Washington and Clackamas counties were changed from Metro to Large Metro to treat as part of the Portland metro area.

² Values suppressed due to n<11.

Anti-Depressant Medication Management – Continuation Phase



	Large metro areas		Metro		Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	2,779	59%	2,670	53%	1,618	50%
Colorado	3,697	25%	1,711	35%	1,015	44%
Massachusetts	5,460	70%	3,033	67%	31	58%
Utah	2,185	63%	2,662	47%	1,054	46%

¹ CMS County Types, see Appendix A for more detail. In Oregon, Washington and Clackamas counties were changed from Metro to Large Metro to treat as part of the Portland metro area.

Discussion Topics: System factors that might drive variation

Structural	Non-structural	Strategic	Components of health services
Academic vs non-academic	Compensation model	Differentiation	Hospital services
For profit vs non-profit	Governance model	Integration	Physician arrangements
Health plan integration	Provider availability	Centralization	Provider-based insurance activities
Size of system	Mergers and acquisitions		
Primary care vs specialist provider ratio	Level/effective use of EHR		
Differentiation	Market dynamics		
Integration	Organizational dynamics		
Centralization	Quality improvement organization activities		

Source: *The Commonwealth Fund and HDSA Project team*



Discussion Topics: Factors that might drive variation

Environmental factors	Organizational attributes	Internal mechanisms	Characteristics of innovations
Perceived competition	Governance/leadership	Physician compensation models	Palliative care and pain management
	Integration	Performance monitoring	Behavioral health integration
	Payment models	Performance reporting	Care of complex, high-need patients
	Organization structure	Information systems	Patient engagement
	Organizational culture	Evidence management	
	Payment and delivery reform initiatives	Adoption of evidence-based innovations	

Source: Domains and subdomains in *The Dartmouth Institute National Survey of Healthcare organizations & Systems*



Discussion Questions

When looking at the variation among the states and within the state (among large metro, metro and rural regions).

- What factors might account for the variation observed?
- We see some variation between metro and rural areas within the state. Why might that be?
- What system characteristics might affect these measures?
- What do you think about the explanations that others have suggested? Do they ring true to you or not? Why is that?
- What other information would you need to generate ideas as to why these variations exist? (e.g. certain variation chart/data presentation layout)