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Health System Affiliation and Total Cost of Care Among Primary Care Clinics in Utah and Oregon

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Project Goal

- Examine the relationship between health system affiliation of primary care clinics and their patients' total cost of care

- Understanding this relationship is important because:
  - This data can help guide conversations to incentivize value-based payment models
  - Identifying clinics that are delivering low-cost, high-quality care and learning their best practices can help everyone improve

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Acknowledgements

- This work was completed as part of **Agency for Healthcare Research and Quality Award No. U19HS024072-03** (referred to as “U19”)
- The National Bureau of Economic Research (NBER), especially:
  - David Cutler, PhD
  - Nancy Beaulieu, PhD
  - Annetta Zhou, PhD
- The U19 Project 2 Team: The Network for Regional Healthcare Improvement (NRHI), Massachusetts Health Quality Partners (MQHP), and Center for Improving Value in Health Care (CIVHC)
- Judy Loren, for her technical expertise in the HealthPartners Total Cost of Care and Johns Hopkins Risk Adjuster methodology
- We are grateful for our partnership with the Utah Department of Health Office of Health Care Statistics (OHCS) and specifically Brantley Scott

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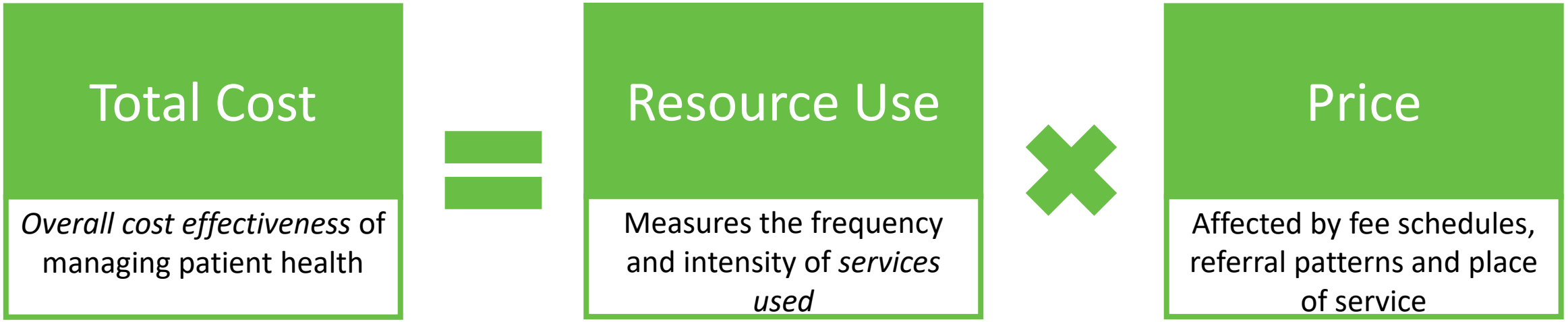
Data Sources

- Utah All Payer Claims Database (APCD), 2016
- Comagine Health/Utah Department of Health master provider list, 2016
- Oregon Data Collaborative (voluntary APCD), 2016
- Comagine Health Oregon provider directory, 2016
- National Bureau of Economic Research (NBER) Enhanced Database, 2016

HealthPartners Total Cost of Care Overview

- Based on the NQF-endorsed patented algorithm of HealthPartners, Inc.
- In use for over 10 years and adopted nationally. Over 260 licensees in 40 states and the District of Columbia.



- Costs are adjusted to account for differences in age, gender and illness burden.
- Indices for inpatient, outpatient, professional, and pharmacy costs, resource use, and price

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Inclusion Criteria

Patients

- Data meet strict quality requirements
- Commercially insured only
- Ages 18-64 years
- Attributed to a primary care provider through Evaluation and Management visits by servicing NPI
- Primary care provider attributed to primary physical clinic location through master provider list

Clinics

- 150 or more qualifying attributed patients with medical benefits
- 20 or more qualifying attributed patients with pharmacy benefits

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Categorization of Clinics

Non-System		
Independent (Single office, single specialty)	**Large Primary Care Group** (Multiple offices, single specialty)	**Multi-Specialty Group** (Single or multiple offices, multiple specialties including primary care)
In-System		
Clinics owned or operated by a healthcare system. AHRQ defines a system as *"an organization that includes at least both a hospital and a physician group, and where there is an ownership relationship between the hospital and physician group, or between these and a corporate entity"*		

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Clinic Categorization Results, 2016

	OR	UT
Independent	149	67
Large Primary Care Group	29	1
Multi-Specialty Group	30	33
In-System	139	95
Total	**347**	**196**

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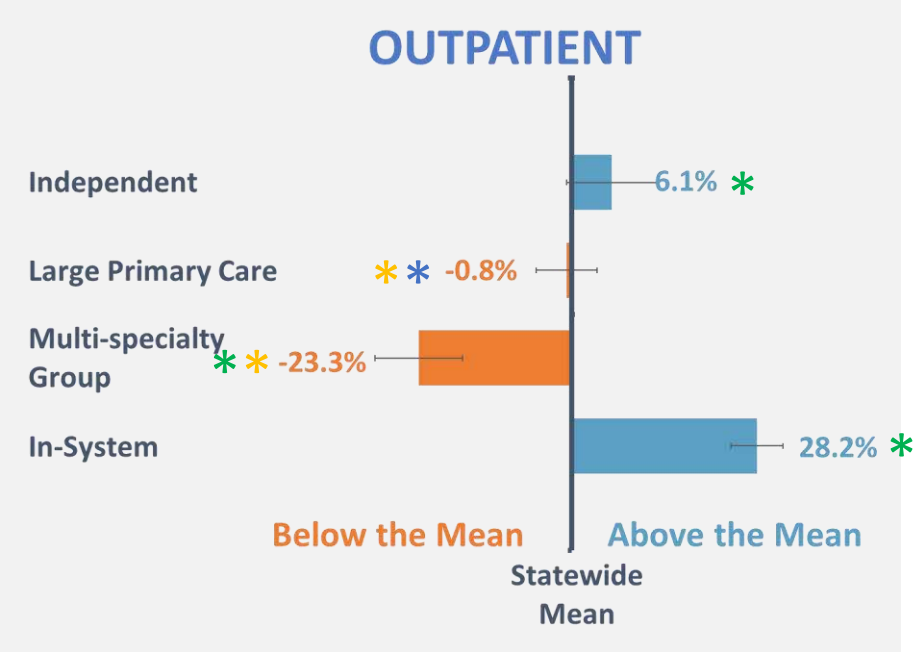
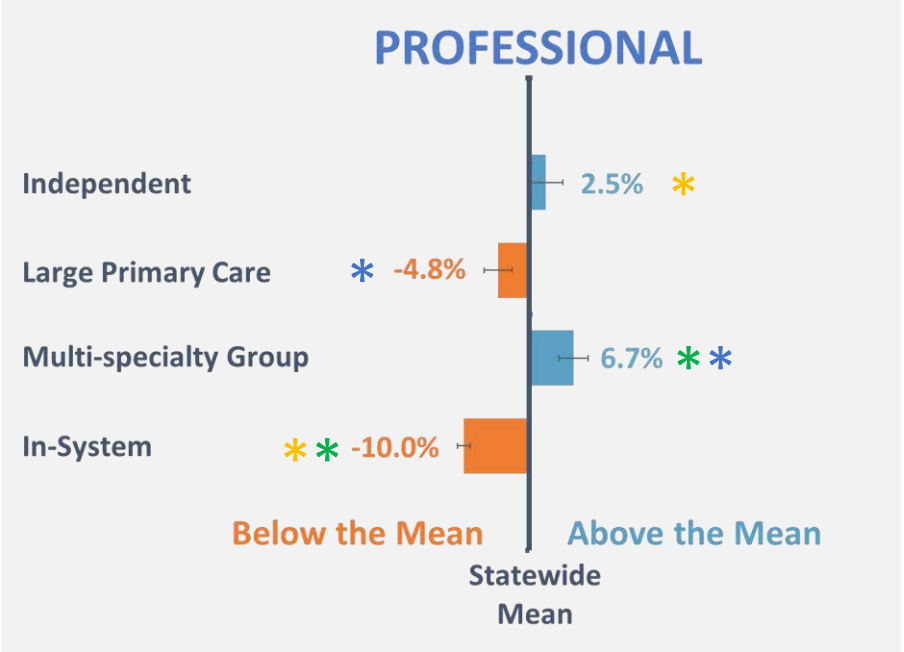
Major Findings: Oregon

In-system clinics in Oregon have **higher** *outpatient* resource use than other clinic types, but much **lower** *professional* resource use. In contrast, multi-specialty groups have **lower** *outpatient* resource use and costs coupled with **higher** *professional* resource use and costs.

Resource Use Index



Resource Use Index



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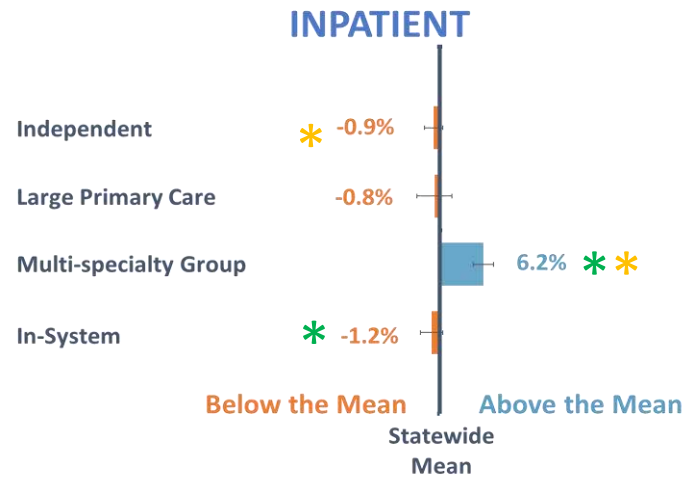
*** bars sharing the same color asterisk are significantly different ($p < 0.05$)

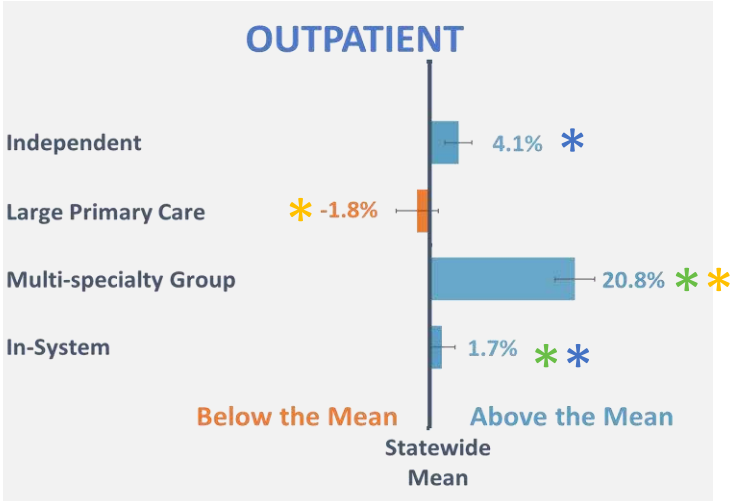
Major Findings: Oregon

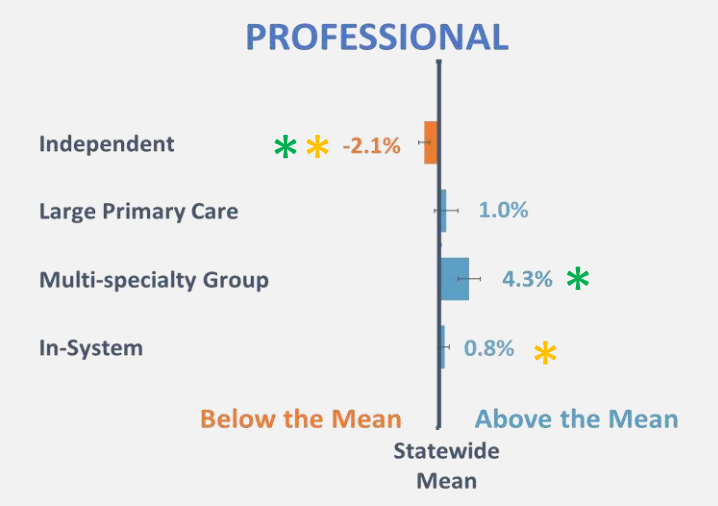
Multi-specialty group clinics in Oregon have **higher** than average prices across *all* categories

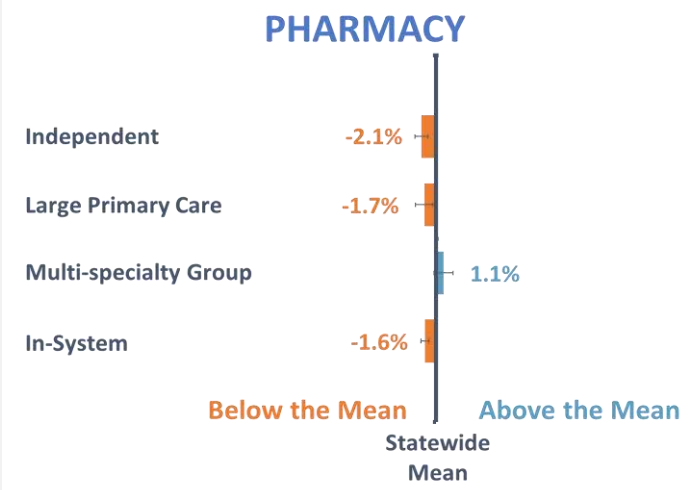
* * * bars sharing the same color asterisk are significantly different ($p < 0.05$)

Price Index









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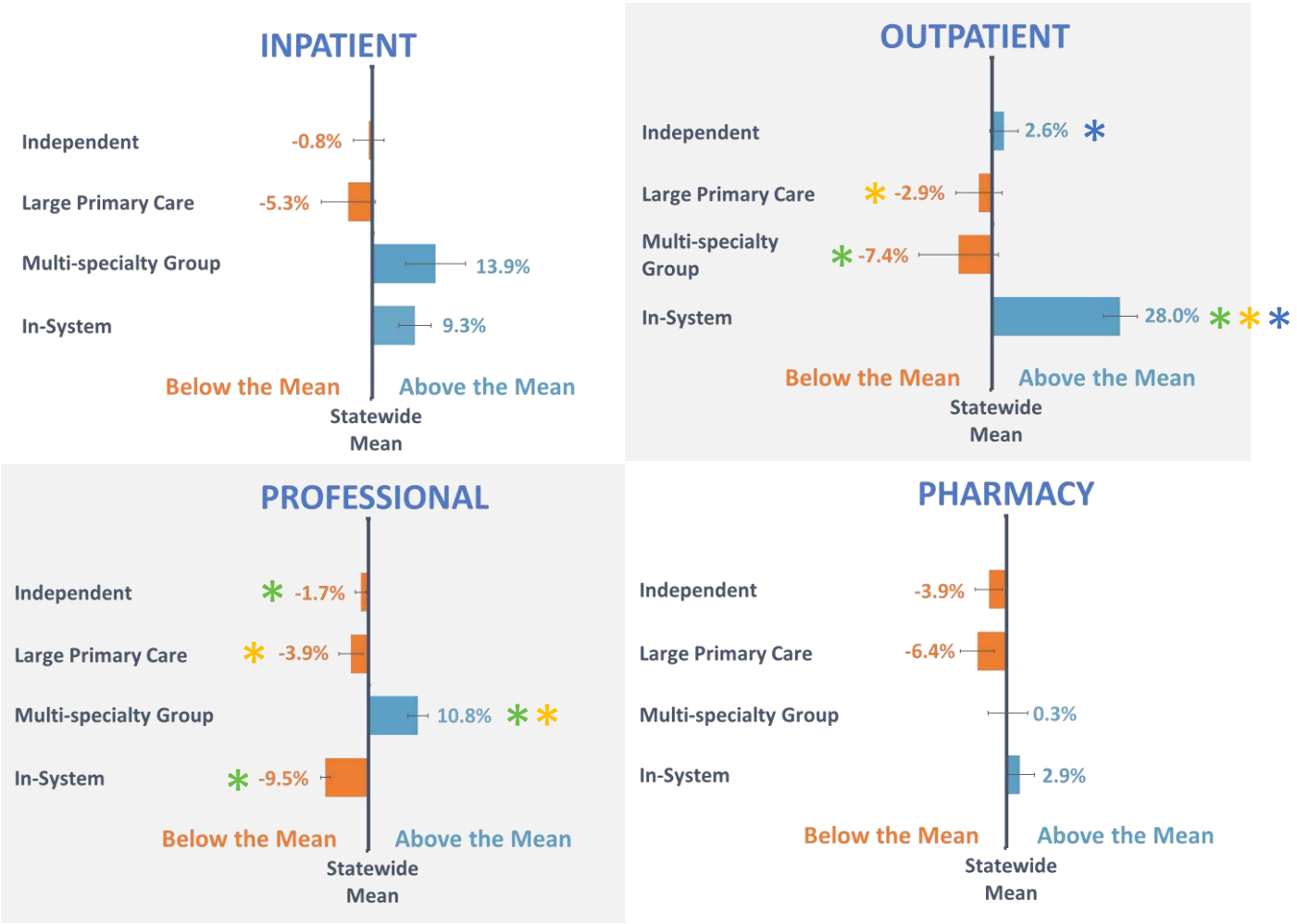
Major Findings: Oregon

Clinics that are part of large primary care groups tend to have **slightly below average** total cost

* * * bars sharing the same color asterisk are significantly different ($p < 0.05$)

Total Cost Index



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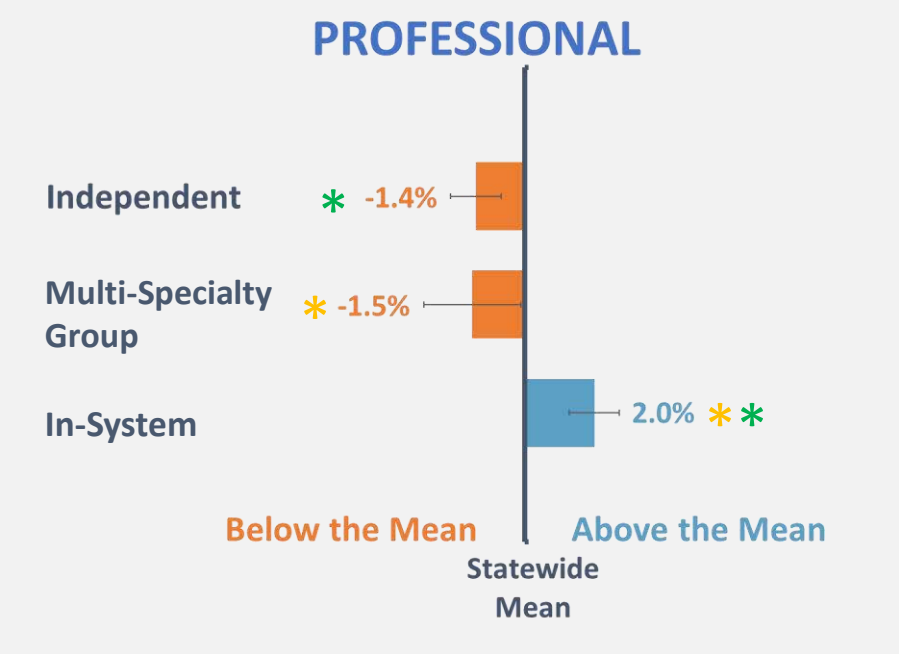
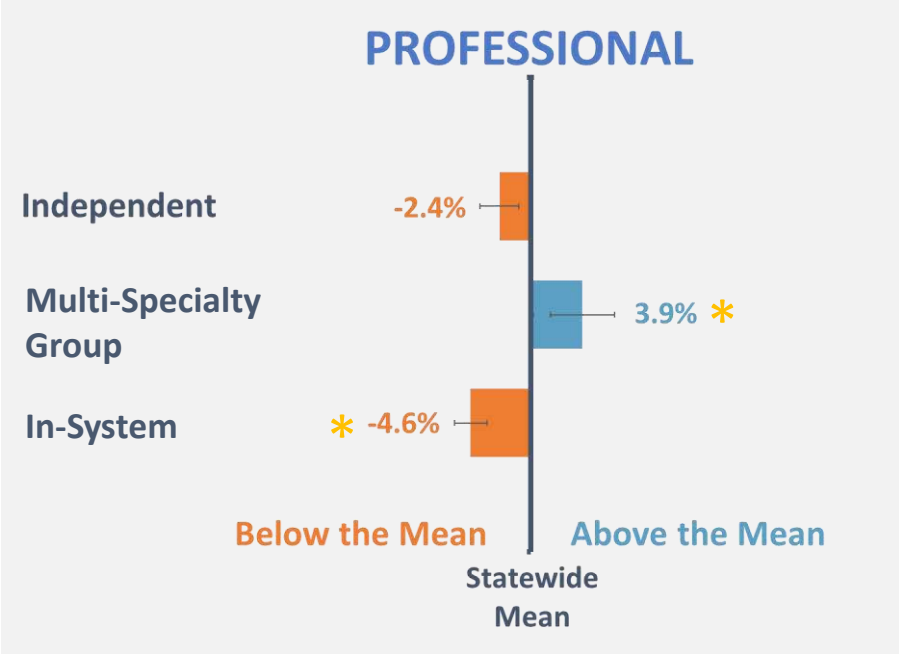
Major Findings: Utah

In-system clinics have **higher** professional *prices* and **lower** professional *resource use* than multi-specialty group clinics

Price Index



Resource Use Index



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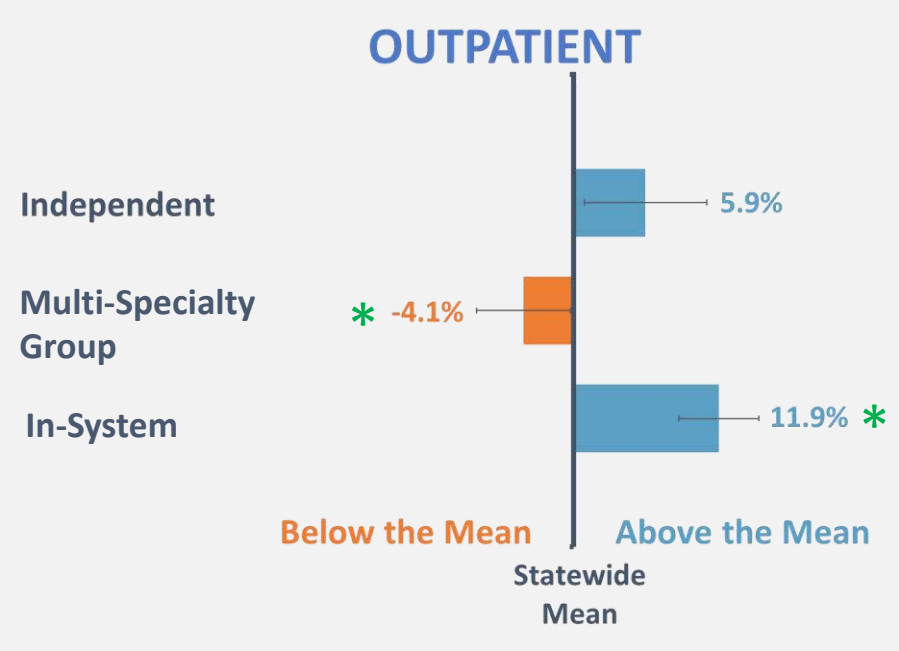
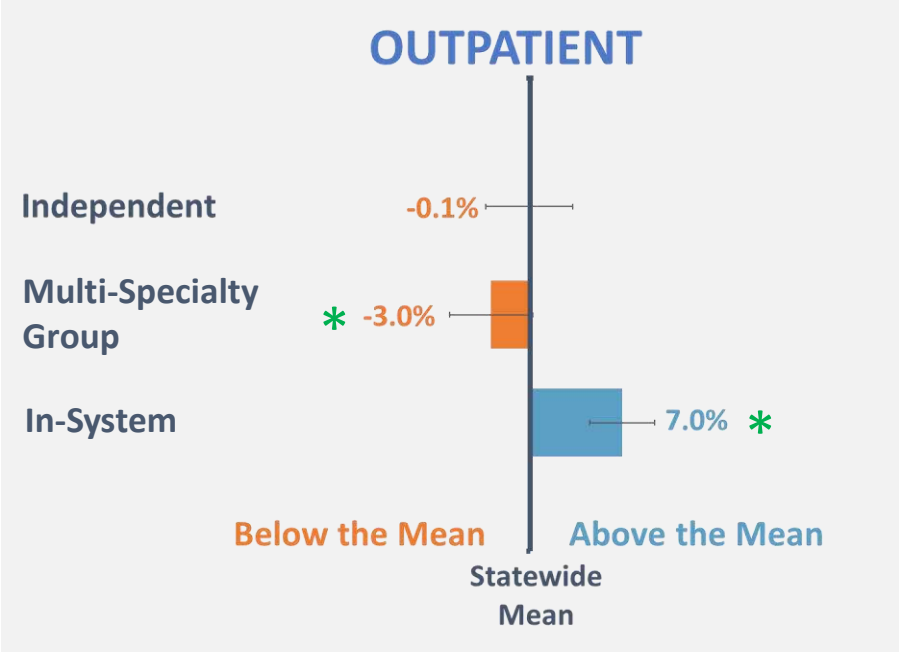
Major Findings: Utah

In-system clinics have **higher** outpatient *total cost,* explained by their **higher** outpatient *resource use* than multi-specialty group clinics (not price)

Total Cost Index



Resource Use Index



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Stakeholder Feedback on Findings

- Differences in billing practices by system-owned clinics could explain variation in outpatient facility and professional resource use (OR, UT)
- In-system clinics who also have a corresponding health plan may extend better prices to their network and charge higher prices to other insurers (OR, UT)
- Referral patterns likely have an impact on the resource use indices of clinics in a multi-specialty group (OR, UT)
- Participation in value-based payment models could be even more impactful than clinic ownership (OR) – a future question to be explored

Implications

- This data can help shift the conversation to incentivize value-based payment models

- Identifying positive outliers (clinics) and learning their best practices for delivering low-cost, high-quality care can help all improve

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Questions?

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Supplemental Information

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Overall Project Goals

- Examine relationships between delivery system characteristics, patient-centered outcomes research (PCOR)-based evidence, and related clinical and economic outcomes.
- Identify which delivery system features influence the diffusion of evidence-based care in order to accelerate the quality and performance value of health systems.
- Understand the factors impacting health systems' use of patient-centered outcomes research (PCOR) and identify best practices in dissemination and use.

AHRQ U19 Overview

- U19 = Comparative Health Systems Performance (CHSP) Initiative
- Grants awarded to three Centers of Excellence (NBER, Dartmouth and RAND)
  - National Bureau of Economic Research (NBER) portfolio of 5 projects called Measuring Clinical and Economic Outcomes Associated with Delivery Systems
- Five-year project, currently in Year 5, ending August 31, 2020
- Comagine Health's funding is administered through the Network for Regional Healthcare Improvement (NRHI) by the National Bureau of Economic Research (NBER)
- Four participating states (Colorado, Massachusetts, Oregon and Utah)
- Utilizes all-payer claims data (APCD) and a unique Enhanced Database (EDB)

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Agency for Healthcare Research and Quality

RAND
Center of Excellence

Dartmouth College
Center of Excellence

National Bureau of Economic Research (NBER)
Center of Excellence

Harvard

Network for Regional Healthcare Improvement (NRHI)

Center for Improving Value in Health Care (Colorado)

Massachusetts Health Quality Partners

Comagine Health (Utah and Oregon)

U19 Overview Continued

- Projects are centered around the use of the Enhanced Database (EDB)
  - NBER/Harvard developed a database identifying individual providers who practiced within a system, with most recent version being 2016.
  - EDB classification system is based on the health system definition adopted by the Agency for Healthcare Research and Quality, which describes a health system as "an organization that includes at least both a hospital and a physician group, and where there is an ownership relationship between the hospital and physician group, or between these and a corporate entity."

Enhanced Database (EDB)

- The Enhanced Database (EDB) describes the organization of health care providers in health systems. It was created to support the research goals of examining how health systems impact health care delivery, cost, clinical quality, and patient care outcomes.
- Data inputs include PECOS, Physician Compare, Medicare provider of services (POS) files, Public Provider and Supplier Enrollment Files (PPEF), IRS Tax Data (Business Master File and 990 Forms), Medicare Data on Provider Practice and Specialty (MD-PPAS), Medicare Claims, a claims database from a large commercial insurer, SK&A physician and hospital data, NPPES NPI Registry, Annual SEC 10-K Filings, S&P Capital IQ M&A Transactions, Irving Levin Health Care Acquisition Reports, and MAX Provider Characteristics (MAXPC).

About the Total Cost of Care Measures

- Population-based measure of average cost for the health care of an attributed population.
- Total per capita costs (or resources used) for a panel of patients attributed to a primary care clinic
  - Includes all care delivered to all attributed patients
    - Inpatient facility, outpatient facility, professional and pharmacy
  - Includes all allowed amounts
    - All payments made by the patient and the insurer
- Clinic-level reporting measured against a benchmark

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Standardized and Adjusted For Risk

- Costs per member per month (PMPM) are adjusted to account for patient characteristics.
- Patients are grouped based on diagnoses, age and gender using Johns Hopkins' Adjusted Clinical Groups (ACG) risk adjusters
  - One ACG per person per time period
  - 92 different ACGs active at a given time. Each ACG includes individuals with a similar pattern of morbidity
  - Unit of analysis is patient and not visit or service
  - Person-focused: captures longitudinal, multi-episode dimension of care
- Exclusions:
  - Costs over $100k per patient for one-year measurement period

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