CIVHC
CENTER FOR IMPROVING VALUE IN HEALTH CARE

Data Release Review Committee
October 2023 Meeting Agenda

Time	Opportunity Number	Project Details
10:30 AM	22.16	Duke University Improving Medication Adherence and Disease Control for Patients with Multimorbidity: The Role of Price Transparency Tools
11:00 AM	23.25	University of Wisconsin - Madison Provider Networks, Hospital Systems, and Changes in Practice in Response to Regulations
11:30 AM	23.73	Duke University Effects of Negotiated Price Transparency Regulations: Evidence from Hospital Prices
12:00 PM	24.105.10.3	Division of Insurance Data Mart Premium Validation Use Case

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10:30 AM – 22.16, Duke University

Limited Extract

Improving Medication Adherence and Disease Control for Patients with Multimorbidity: The Role of Price Transparency Tools

Previously presented in October 2022 DRRC Meeting (no notes available for reference).

Many patients with multimorbidity struggle to pay for their medications. These patients have lower medication adherence, resulting in a higher risk of disease progression, functional limitations, hospitalization, and death. Patients cannot account for medication costs in their medical decisions, because they rarely know what those costs will be before getting to the pharmacy. If clinicians could access information about their patients' medication-related out-of-pocket costs at the point-of prescribing, they could help their patients apply for financial support, or prescribe lower-cost alternatives. New out-of-pocket drug price transparency tools could fill this need. The Centers for Medicare and Medicaid Services recently mandated that Medicare Part D plans make clinician-facing out-of-pocket drug price transparency tools available to clinics and hospitals via the electronic health record (EHR). No one has described the uptake and acceptability of these tools, or their impact on clinical outcomes among middle-aged and older patients with multimorbidity. The goal of this project is to evaluate how primary care providers at one large academic health system use a widely available out-of-pocket medication price transparency tool and how price transparency at the point-of-prescribing affects clinical outcomes for middle-aged and older patients with multimorbidity. The University of Colorado Health (UCHealth) price transparency tool, adopted in 2019, is compatible with all Medicare plans and ~95% of private insurance plans in the state. It provides clinicians with medication cost estimates in real-time, as well as lower-cost alternative medications in the same therapeutic class.

This project was previously approved by DRRC on 10-5-22. The PI needs to add Census Tract information and would like to increase the age range for her research from 50+ to age 18 and over. Census Tract information is considered PHI and needs be re-approved by DRRC. Please see the justification for each on Page 1, 1 A & B.

Project: The goal of this project is to evaluate the University of Colorado Health (UCHealth) price transparency tool which was adopted in 2019 and evaluate how primary care providers at a large academic health system use a widely available out-of-pocket medication price transparency tool and how price transparency at the point-of-prescribing affects clinical outcomes for middle-aged and older patients with multimorbidity's.

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11:00 AM – 23.25, UNIVERSITY OF WISCONSIN, MADISON

Identifiable Extract

Provider Network, Hospital Systems, and Changes in Practice in Response to Regulations

Previously presented in August 2023 DRRC Meeting.

August DRRC Objections:

1. Open-ended request that does not meet minimum necessary requirements.
2. Large amount of identifiable data requested for a long period of time.
3. Needs more specificity.

Note: Substance use disorder claims and Medicaid portion of the data and opioid related drug poisoning diagnoses for this project have been addressed through the CIVHC "Internal Request" process and will not negatively impact this analysis.

Dr. Zang addressing DRRC concerns:

To provide a general overview, I will use social network analytics to examine the relationship between provider formal network, informal network, and prescribing practices. I will use regression models to assess how changes in provider networks are associated with changes in patient care and leverage several plausibly exogenous shocks that impact the provider networks for causal identification. These include hospital mergers and acquisitions, physician sanctions, or changes in insurance plan features. A difference-in-difference approach will be used to evaluate patterns in prescribing and patient care before and after these plausibly exogenous shocks for "treated" and "control" networks.

Providers' formal networks will be constructed using their formal organizational affiliation (e.g. hospital/clinic) and the insurance plans they are contracted with. Providers' informal networks will be constructed based on patient-sharing from all Medicaid encounter claims. This method of social network construction has been widely applied in prior health care services research, which has shown that patient-sharing networks transmit information and advice between physicians (Barnett et al. 2011), predict the diffusion of expertise and medical innovations (Pollack et al. 2015) as well as collaboration, teamwork, information sharing, health care integration, learning, and teamwork (Everson et al. 2018, Funk et al. 2018, Ghomrawi et al. 2018, Hollingsworth et al. 2016, Zhang and King 2021). Social network methods will then be applied to construct key variables including degree centrality (# of connections) and cohesion (clustering coefficient).

Data needed to answer the research question:

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Why does the research need all encounter data?
All patient-physician encounter data are needed in order to construct and accurately map physician networks. This method is needed to capture general relationships between physicians (beyond the drug of study) and has been validated by previous work. For instance, Barnett et al (2011) used claims data from physicians for all specialties in all office-based settings who filed a claim in a given year to construct the physician network.

Why the time period? (this has been adjusted to 2028)
The research will leverage various quasi-exogenous shocks that occurred during different time horizons (including hospital mergers and acquisitions, physician migration across hospitals) as causal identification strategies to increase the rigor of the research. The requested time horizon is needed for constructing multiple control periods for comparison analysis.

Moreover, longitudinal data will provide valuable insight as to how physicians' relationship dynamics co-vary with the institutional and regulatory environment, which has been an important piece of puzzle that is currently missing for research and for policy. It is valuable to understand how the mounting attention targeted toward opioid prescribing *in the past decade* altered the trajectory of social influence of physician networks on their prescribing practices (as well as social exclusion of physicians who do not conform to current regulatory standards).

Why identifiable information on hospitals and physicians?
Hospitals are a basis for the formation of formal networks and therefore hospital affiliations are needed to examine the interplay between physicians' formal and informal networks. Hospital identifications will also be used to construct physician migrations across hospitals and identify hospital M&As, which will be leveraged as quasi-exogenous events that "disrupts" the physicians' networks. Identifiable data on physicians are needed to incorporate physician-characteristics (such as gender, graduation year) as model controls.

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11:30 AM – 23.73, DUKE UNIVERSITY

Identifiable Extract

Effects of Negotiated Price Transparency Regulations: Evidence from Hospital Prices

Previously presented in August 2023 DRRC Meeting.

My specific research questions are:

1. What are the effects of mandated price transparency on hospital prices?
2. What does variation in effects across markets and prices suggest were the mechanisms of the effects of price transparency?
3. Did price transparency lead to follow-on effects such as changes in employer health care costs, individual marketplace premiums, and healthcare use, thereby affecting consumers?

My project will study the effects of price transparency of hospital prices negotiated between health systems and private insurers by analyzing two policy changes: the state of Colorado's Shop for Care Tool and the Centers for Medicare and Medicaid Services' (CMS) 2021 Hospital Price Transparency Rule. I plan to study these effects with difference-in-differences techniques. First, I will compare changes before versus after prices were posted in the Shop for Care Tool for prices included in the tool versus prices for similar services not included. The first version of the Shop for Care Tool was posted in 2014, so I have requested data dating back to 2012 to have a 2-year pre-period. I will compare changes in prices before versus after 2014 for services with prices posted in the Shop for Care Tool (treatment) versus the same change over time in prices for services not posted in the Shop for Care Tool (control). I will use similar methods to study later versions of the Shop for Care Tool posted in 2019, 2020, and 2022. Further information found in the application.

This request was presented to August DRRC. It was suggested by the committee to remove all INPATIENT claims. Upon further review and consulting with CIVHC analysts, COAPCD INPATIENT data is needed to complete the analysis. Please see the attached word document outlining the adjustments to meet minimum necessary. Please see the word doc accompanying this request for detailed information.

Project: This project will help improve the understanding of policies to reduce the per capita cost of health care. The research and analysis will generate evidence on both state and federal policies intended to reduce health care costs. Specifically, this project will help to study how hospital prices and consumer behavior changed due to the Centers for Medicare

and Medicaid Services (CMS) 2021 Hospital Price Transparency Rule, as well as how Colorado's Shop for Care Tool impacted these market outcomes.

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12:00 PM – 24.105.10.3, Division of Insurance

Data Mart Use Case

Data Mart Premium Validation Use Case

Description: Assess accuracy and any issues of premiums that are submitted to the APCD compared to approved premiums by the DOI to validate what payers are submitting.

Business Significance and Triple Aim Impact: Premiums can be a significant portion of a patient's healthcare expenditures and may help understand the total cost of care and total patient expenditure. Understanding premiums in conjunction with utilization could allow for enhanced analysis around healthcare expenditures. Validating submitted premiums with those that are approved on a plan level by the DOI will ensure accuracy of these submitted data elements.

Analytic Steps:

- Assessing submitted premium amounts compared to internal DOI data about premiums to determine if they are accurate
- ACA premium rates can only vary by geography, age, and smoking status. Reviewing the submitted premiums at this level will be necessary to determine if the premiums on an individual level are correct (knowing that smoking status is not an available data element in the APCD).
- Matching premiums with HIOS plan IDS that payers have submitted to ensure accuracy at that level
- Determining if payers are submitting premiums inclusive of tax credits and how that could be applied to further analysis and identification of different populations in DOI-regulated plans.

PHI Requested

- Zip code so the Division can map to counties and DOI regions to validate premiums as they differ by region

Data elements to be used in this analysis:

Total Monthly Premium Amount	5 Digit Zip Code
Subscriber Monthly Premium Amount	Member DOB- Year
Out of Pocket Maximum	HIOS plan ID
Member Deductible	5 Digit Zip Code
Plan Effective Dates	Actuarial Value
Market Category Code	Metallic Value Description
Line of Business Code	

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Primary Insurance Indicator	
Exchange Offering	
High Deductible Health Savings Account Plan	
Metallic Value	