CIVHC
CENTER FOR IMPROVING VALUE IN HEALTH CARE

Data Release Review Committee
December 2023 Meeting Agenda

Time	Opportunity Number	Project Details
10:30 AM	24.105.75	HCPF Colorado Providers of Distinction and Value Based Payments
10:55 AM	24.100.4	HCPF DA Facility Fee
11:20 AM	24.09	UC Irvine, Department of Economics An Examination of the Determinants of Health Care Choice and Consumption
11:45 AM	24.08	Bluespine Overbilling Cost Analysis
12:10 AM	22.20	Boston University Comparing Utilization, Outcomes, and Choice between VHA and non-VHA Health Care Systems

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10:30 AM – 24.105.75, HCPF

Limited Extract

Colorado Providers of Distinction and Value Based Payments

Specific Research Questions:

This data request is in support of State of Colorado Contract #24-183277 between the Department of Health Care Policy and Financing (the Department) and KPMG LLP (Contractor).

See Appendix 1 for a project overview and a listing of research questions for each program within the Providers of Distinction and Value-Based Payments project. Programs include:

- Primary Care Alternative Payment Models (APM)
- Pediatric
- Maternity

Colorado Providers of Distinction (COPOD)

Methodology:

Data from the CO APCD will be used to create Procedure Episode Plans to evaluate whether the episodes can be created for non-Medicaid members using claims data from other lines of business. Evaluate whether CO APCD data can be used to create valid episodes.

See Appendix 1 for methodology description for each program.

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10:55 AM – 24.100.4, HCPF

Limited Extract

DA Facility Fee

Specific Research Questions:

This project is intended to address the items set forth in House Bill (HB) 23-1215. Specifically, HB 23-1215 creates a Steering Committee that has been charged with reviewing the impacts that facility fees have had on health care expenses, and modify the billing practice requirements around facility fees after July 1, 2024. The intent of this project is to identify when those facility fees are charged, the amount that is charged, and how that varies across health care programs and providers. This includes reviewing impacts for Medicaid, Medicare, and Commercial, and within those programs analyzing the impact by various types of provider practices including: hospital-owned physician groups, independent practices, and in-network/out-of-network providers relative to member benefit coverage. This project is also intended to review provider billing practices, and payer reimbursement policies, which will be substantiated by the APCD claims data. The intent is to review professional, outpatient, and inpatient services to identify facility fees that may be charged at each type of location.

This study will be building upon previous work identifying changes in cost due to vertical integration.

Methodology:

Optumas will be developing a methodology to identify the portion of claims reimbursement that is associated with facility fees. Given that these fees are not currently easily identifiable, the goal of this project will be to determine a methodology, which will likely go through iterative revisions. We anticipate reviewing the specifics of each claim at the code level to determine when reimbursement includes a facility fee at that level, based on various splits of data that will include: hospital affiliated providers, independent providers, in-network providers, out-of-network providers, and differences by program type (Medicaid, Medicare, commercial)

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11:20 AM – 24.09, UC Irvine, Deptartment of Economics

Limited Extract

An Examination of the Determinants of Health Care Choice and Consumption

Specific Research Questions:

The research question posed in this study is: how do the types of health plans held by individuals/families vary over time, particularly as macroeconomic and health shocks occur? Moreover, how does subsequent health care utilization vary with the health plan selected? To address these questions, this study will examine whether people continue to choose/hold the same health plan over time (i.e., examine if there is persistence in health plan selection) or do not, with a focus on how the presence of macroeconomic shocks or health shocks affects the types of health plan held. This study will also examine how health care utilization responds to the plan changes. Further, this study will examine how the presence of family/variation in family size affects these health plan decisions since the presence of family members may be a friction to health plan switching (e.g. Aouad 2023).

1. How do the types of health plans held (by individuals/families) vary over time, particularly as macroeconomic and health shocks occur?
2. Moreover, how does subsequent health care utilization vary with the health plan selected?

Methodology:

This study will use a number of empirical methods, including difference-in-difference models as well as event-study models. The underlying premise behind these models is to follow the individuals of interest (i.e. those exposed to the above-mentioned shocks) in the CO APCD before and after the shock occurs to see how their health care behaviors change in response to the shock. Control groups, formed from within the dataset, will also be used to construct the counterfactual (i.e. what would the behavioral responses be in the absence of the shock?) to better estimate causal effects. The health shocks to be examined include unexpected, medical events. Examples of unexpected, medical events include heart attacks, strokes, and cancer diagnoses.

Additionally, I am requesting ten years of data. The reason for this is that this study will follow individuals over time (before and after their shocks), where, in some instances, the shock will occur for different individuals in different years. As an example, a health shock may occur for individual 1 in 2013 vs. a health shock occurring in 2018 for individual 2. Thus, analyzing ten years of data ensures that there is sufficient time to observe individuals in the years before and after their shocks.

Moreover, ten years of data should ensure sufficient variability in the macroeconomic cycle so that there are enough macroeconomic shocks to analyze. Ten years of data should ensure this criteria is met since the average business cycle length, which includes economic expansions and contractions/recessions, is approximately 5.5 years. Thus, ten years of data allows for the observation of approximately two business cycles.

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11:45 AM – 24.08, BLUESPINE

Limited Extract

Overbilling Cost Analysis

Specific Research Questions:

Bluespine is a fully automated, AI-powered platform that streamlines overbilling detection and post-payment recovery processes to protect plan sponsors and their employees from adjudication errors, saving employers up to 14% of their annual health care costs.

The project's objective is to uncover medical billing errors or mistakes that are currently undetected using existing methods. The aims of this project are:

1. Better understand these errors frequency of these errors.
2. Can the errors be clustered based on their type, such as by services or providers?
3. What is the economic impact resulting medical billing errors or mistakes that are currently undetected?

For instance, if a surgery includes anesthesia and post-operative care, unbundling might mean billing for these elements separately. This practice can lead to overpayment and is considered fraudulent if used to inflate reimbursements.

Methodology:

The methodology for exploring the Claims data set to gain insights into overbilling is a robust and multidimensional process that harnesses the power of advanced data analytics techniques. Firstly, the large volume of Claims data is processed and managed efficiently using big data tools to extract relevant information. Next, data clustering algorithms are applied to group similar claims together, identifying potential patterns of overbilling behavior.

We are examining data related to the services provided, including their associated codes and modifiers, as well as the date, and location of the services by provider NPI.

Simultaneously, business intelligence (BI) tools are deployed to provide context and visualize the findings, enabling a better understanding of the economic impact of overbilling. The analysis also involves performing rigorous data cleansing and quality assurance to ensure the accuracy and reliability of the results.

To further enhance the methodology, insights from historical data and patterns are cross-examined across various policies and insurance coverage plans using advanced analytical techniques like Large Language Models (LLLM). This technique allows for a more comprehensive exploration of policy-specific irregularities, offering a deeper understanding of overbilling occurrences across different insurance types.

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12:10 PM – 22.20, BOSTON UNIVERSITY

Limited Extract

Comparing Utilization, Outcomes, and Choice between VHA and non-VHA Health Care Systems

Specific Research Questions:

The project will compare utilization patterns, outcomes, and costs among patients based on their health coverage. Specifically, the aims are to:

1. Compare utilization patterns among patients who receive services in the traditional VHA system and patients who receive services from private providers, which may be covered by MFFS, Medicare, Medicare Adv., Medicaid, Commercial insurance, or the VHA under the Community Care program implemented under the Choice and MISSION Acts of 2014 and 2018. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6973037/

2. Compare outcomes and utilization among patients treated at VHA medical centers that implemented various policy and operational structures, patients at non-VHA medical centers that implemented similar policies and structures, and patients at non-VHA medical centers that did not implement any such policies or structures. Examples of policies and structures include virtual or telehealth technologies and policies, COVID-19 related policies, and Choice and MISSION Acts.

3. To the extent possible, examine factors associated with patient choice of provider and health coverage and evaluate the share of services covered by various types of payers and whether this has changed (and if there is crowd out) due to the Choice and/or MISSION Acts of 2014 and 2018.

Methodology:

Using the CO APCD data, investigators will develop measures that quantify utilization, outcomes, and choice. Examples include readmission rates, emergency department admissions, episode durations, mortality rates, surgery rates, office visit rates, prescription drug usage, transfer rates (e.g., from ICU to skilled nursing facilities), and cost of services to treat an episode. The investigators will use regression analyses to compare these measures across VHA and non-VHA health care systems using statistical software, such as SAS, Stata, and/or R. The analyses will compare areas with a larger veteran population to areas with a lower population of veterans. Some of the analyses will characterize measures by provider. Hence, we need to include all members in the areas specified (by zip codes where veterans reside) and all members who have been patients of providers who have treated a member residing in specified areas. The analyses will control for many factors that may lead to differences in utilization, outcomes, and choice. Factors include local socioeconomic factors, demographics, practice patterns, health plan information, provider characteristics, and health care market characteristics. These factors will be derived from publicly available data, which will be merged to the CO APCD data using zip codes, counties, and other geographic identifiers.