



Wellmark Team: Paul Hlivko, Michael Loewen

# PriceRx





Trimming the Pricing Gap with Optimization in Health Insurance

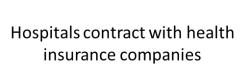
# PROBLEM

Wellmark, an independent licensee of Blue Cross Blue Shield subsidiary, is a prominent health insurance company in Iowa and South Dakota. Wellmark negotiates rates with providers for all services in their network. With new public information egarding insurance company rates, we look to leverage this increased transparency through an optimization approach.

### Create pricing advantage for Wellmark over their competitors



Faculty Advisor: Jim Butler





People purchase health insurance to cover high medical costs



Insurance pays a large portion of the fees when patients visit hospitals

- Recommend price changes to the healthcare services offered to optimize lower member cost of care
- Build a rate comparison tool and recommend target areas for negotiation

# DATA

## **Procedure - Provider Rates**

Public datasets as a result of the Transparency in Coverage Rule containing dollar rate for every provider in insurance company's

network

that Wellmark filed in 2022 Used for weighting the impact of each rate

**Utilization Counts** 

Encapsulates all the claims

### **Supplementary Data**

- NPI Registry
- Health Systems
- Geographic Regions
- CMS Procedure Groups



Rates x Claims 100+ GB

Grouping providers by equal rates & procedures by medical type reduced data space by 1000x

# PRICING OPTIMIZATION

### **MODELS**

**Baseline Model** Adjusts all rates by the 1-year CPI rate

**Default Model** Optimizes procedure-specific

**Local Model** 

## **OBJECTIVE**

Minimize the price gap in rates where Wellmark outpays their competitors

### CONSTRAINTS

**BUDGET** ш

OCAL

**MAGNITUDE** 

**MAGNITUDE** 

**REGION** 

**FAIRNESS** 

**UNIQUENESS** 

default rates, with user input

Iterates upon default model to offer provider-specific rate changes

# rate changes

The projected cost of the fee schedule, calculated by the sum of all rates multiplied by their 2022 utilization, cannot be greater than the user input budget The projected cost must be above \_% of the budget, with user input

Upper limit to any individual rate change in the model is \_%, with user input Lower limit to any individual rate change in the model is \_%, with user input

Local upper limit to individual rate change is a 1% above the default rate Local lower limit to individual rate change is a 1% below the default rate

All regions are between -0.5% and 0.5% total change of projected payment No decrease in projected payment for the rural region

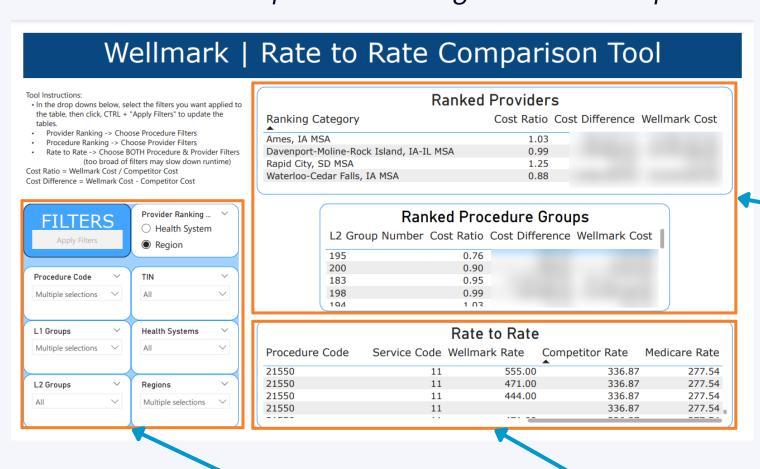
Each provider can have \_ rates that deviate from the

# RATE TO RATE TOOL

+1.1 Billion

**Rates** 

Dynamic dashboard for network negotiators to assess Wellmark's performance against their competition



Use different cost metrics to recommend areas of most suitable for negotiation

Users can filter on different groupings of providers and procedures

Display the rate information for Wellmark & competitors at the most granular provider & procedure level

# IMPACT



# **Reducing Insurance Costs**

Default input optimized rates reduce pricing gap by

10.2%

compared to the baseline

# **Facilitating New Negotiation Strategy**

Optimized rates and tool metrics combine to shape new positions in pricing negotiations



# **Faster Analysis Opportunities**

Tool leads to simultaneous rate comparison through multiple different lenses, improving operational efficiency

# **RESULTS**

Sample Pricing Optimization Summary Statistics				
	Baseline Model	Default Model	Local Model	
Projected Cost of Plan	\$	\$	\$	
Average Rate Difference	10.0%	8.0%	6.0%	
Change Over Baseline		-3.0%	-7.0%	
Change Over Default	+3.0%		-4.0%	
Change Over Local	+7.0%	+4.0%		

Sample Default Rates for Procedure Groups		
Procedure Group	Default Rate	
218	+2%	
8	+2%	
1	+1.55%	
229	-1%	
7	-0.2%	
3	-1%	

Sample Local Rates Tuned for Provider Groups				
Procedure Group	Provider Group	Service Code	Local Rate	
218	А	11	+3%	
1	В	21/22	+3%	
7	С	11	-0.2%	
8	С	21/22	+2.55%	

Note: \$ values censored for confidentiality purposes

Cost Metrics for Procedure and Provider Rankings Identify key areas where Wellmark can improve rates

**High Cost Difference** (Wellmark Cost - Competitor Cost)

Small improvements may have a large impact

**High Cost Ratio** Wellmark Cost / Competitor Cost) Reducing the pricing gap will be met with less resistance from providers

Cost = Sum of Insurance Company's Rates at Wellmark's Utilization

# Health System Cost Example

Health System	Cost Ratio	Cost Difference
Health System 1	1.199	\$
Health System 2	0.913	-\$

A target area for Wellmark could be
procedure group 157 for Health System 1

Health System 1 Procedure Groups			
Procedure Group	<b>Cost Ratio</b>	Cost Difference	
114	0.871	-\$	
157	1.435	\$	
183	1.174	\$	
418	0.979	-\$	