CLIPBOARD HEALTH

CASE STUDY:

WHY 96% OF SHIFT VALUE REMAINS UNCLAIMED

Presented By:

Kazmain Shah

Associate Product Manager |
Clipboard Health Marketplace Case

Initial Data Discovery

- Reviewed the full dataset using Python to clean and explore the 266,340 shift offers
- Referenced the provided glossary to understand the marketplace structure
- Converted datetime fields and calculated key metrics like claim rates and margins
- Each row represents a shift offer viewed by a specific worker, with pay rates and charge rates determining the marketplace margin

Understanding the Revenue Model

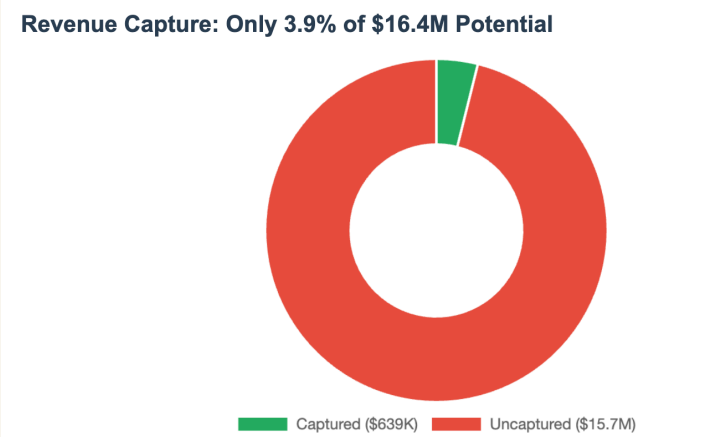
Clipboard Health provides a marketplace which matches healthcare facilities with verified healthcare workers

Clipboard earns revenue **only** when a shift is claimed and completed, and takes a cut from payment from **Facility → Worker**

We can calculate this revenue by:
Total Posted Shifts × Pay Rate × Hours
= Potential Revenue

KEY STATISTICS

- 266,340 shift offers
- 10,291 workers
- 132 workplaces



Where are we losing Value?

Based on the chart to the right, we can see that there is a total of around 16.4 Million Dollars in potential revenue with only 639 Thousand being claimed (assuming a 20-25% revenue platform cut).

The biggest drop off happens at the point of action. Offers exist, however only 4.9% are being claimed. Leading to a massive 95.1% drop in potential revenue in completed shifts.

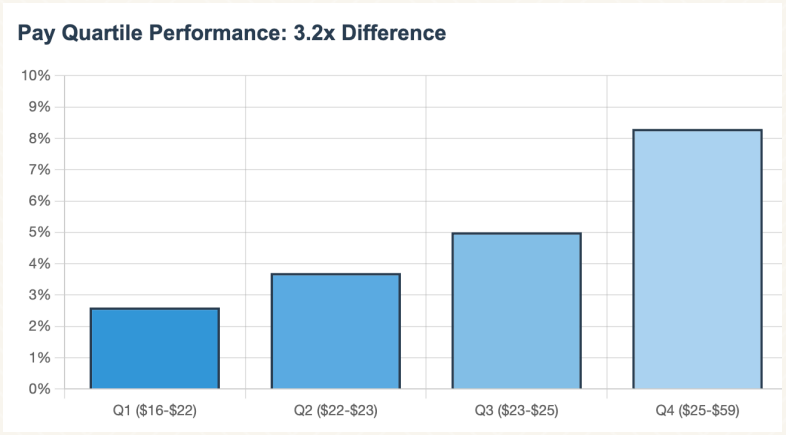
An average of 13.4 healthcare workers are viewing each shift, meaning workers are seeing the opportunity, but not acting. Which could resemble a disconnect in timing, relevance, or incentive.

Over 87% of the workforce hasn't claimed a single shift. Which points towards a lack of platform engagement, workers are either not enticed enough or are just not using the application overall.

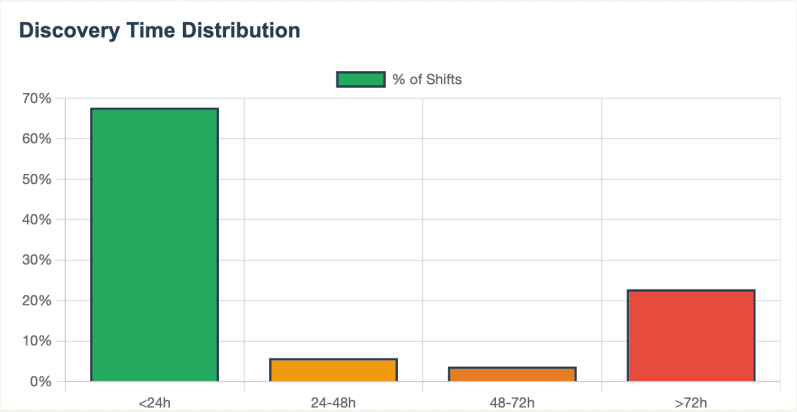
What's causing this missed Revenue?

Pricing Inefficiency

- To really dive in why healthcare workers aren't picking up shifts, my first thought would be to examine the price points of completed shifts.
- Based on the chart on the right, I found that Q4 ($25-$29) shifts are claimed at over **3x** the rate of Q1 ($16-$22) shifts
- The **Elasticity Coefficient** came out to **5.58**, meaning that even the smallest increase in pay, can yield large increases in completed shifts.
- The current **static pricing ignores context**, pricing should be **dynamically changed** according to how likely a worker is to take that shift.



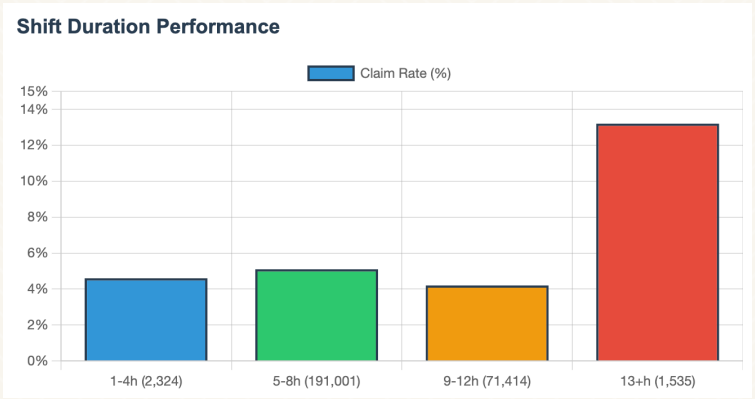
Discovery Delay

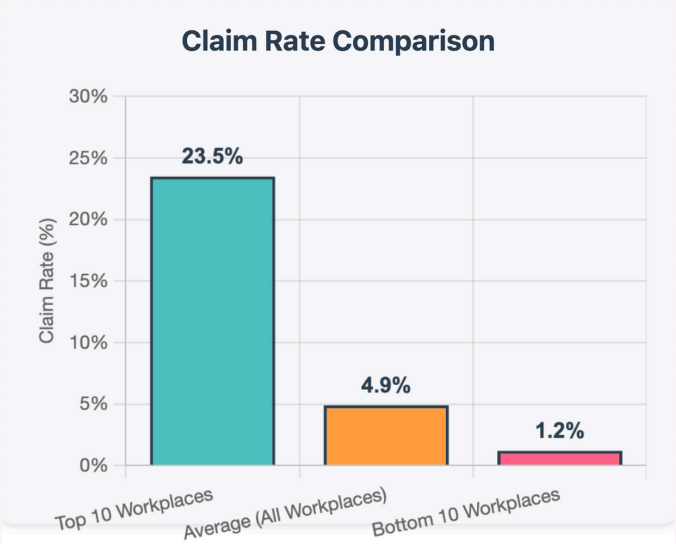


- Another discovery I found is that a great chunk of shifts are taking over three days to get its first view.
- This directly suggests an issue with the applications appearance algorithm, where older listings could potentially get buried under a wave of new listings.
- 22.7% of shifts posted are viewed within 24 hours, while a significant majority of claims happen within an hour of first view, meaning discovery timing is the key driver of action. Most workers could check the app at different times, leading to a potential mismatch between when shifts are posted and when users are actively browsing.

Poor Shift Design

- Claim rates vary drastically based on shift length and time, with long and evening shifts significantly outperforming all of the other ones
- 12+ hour shifts have a 13.2% claim rate, more than 2.6x higher than the average 8-hour shift
- Evening shifts (starting at 8pm) are claimed at a 16.6% rate, over 3x the rate of weekend or daytime shifts
- Majority of the shifts posted are 8 hour shifts and are underperforming at just 5.1% claim rate.





Workplace Performance Gap

- There is a massive 10x difference in claim rates between the top and bottom workplaces even when considering benefits are the same
- The top 10 workplaces average a 23.5% claim rate, while the bottom 10 average just 1.2%, a massive drop-off with no clear pricing explanation
- Some likely causes are poor on-site experience, logistical friction, and overall bad reputation that disencourages workers to come again
- Without feedback loops or accountability for these facilities, underperforming workplaces can continue to post shifts that will remain unclaimed

My solutions to win back some revenue

Dynamic Pricing

With an elasticity of 5.58, the price of the shifts correlate greatly with claims of shifts. A new Dynamic Pricing System could bank in on this correlation with potential parameters of lead time, worker history, and workplace performance. With this pricing algorithm this application can also learn which shifts are most likely to be taken or not, and adjust according to that.

Smart Notification System

A significant statistic was that shifts take over 74.6 hours on average to get its first view. A solution similar to the Dynamic Pricing Solution above could provide great value, with an algorithm that sends notifications to workers. These notifications could vary from sending notifications for workers who are highly likely to accept, behavioral nudges, and personalized/customizable alerts.

Shift Bundling

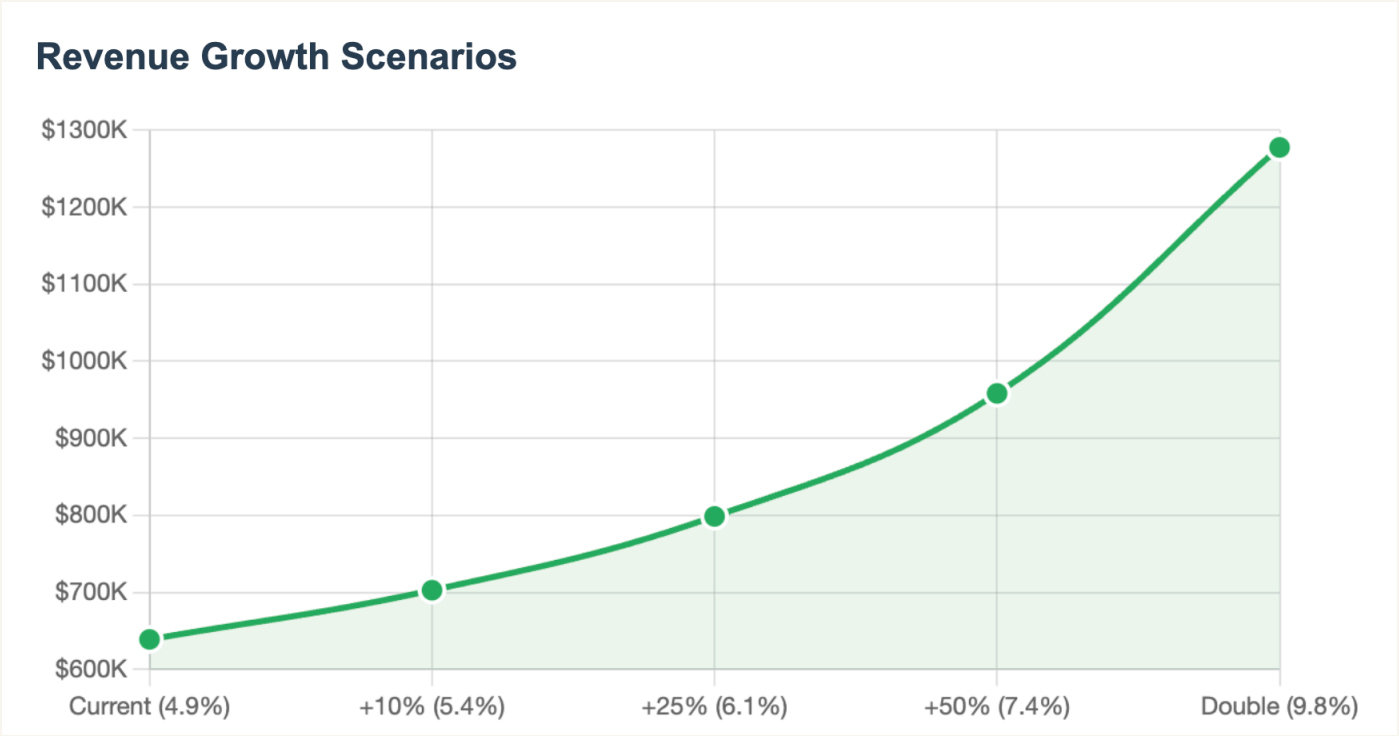
Shifts are abundant but the amount of workers that are willing to work them are low, with the platform having 87.4% of its workers who have never claimed a shift before. A campaign involving a worker activation program can take place with compensations for coming back to the platform. Outside of increased outreach to these workers, this can involve targeted incentives, with static bonuses ($20) being given for first shift claims, or even a higher pay-rate.

Worker Activation Program

Workers prefer longer, high-paying shifts as shown above with 12+ hour shifts leading to a significantly more claim rate than the 8-hour ones. A potential solution could be to bundle adjacent 4-8 hour shifts, into 12-16 hour super shifts. This will call for a new tier of shift durations, with more hours being worked = more platform revenue.

Conclusion

Using the current 4.9% claim rate, we can simulate the revenue increase by increasing this rate as shown below



Data Analysis/Visualization Tools

- Python Vanilla: Only built in libraries like csv, datetime, collections, statistics
- CSV Processing: Direct python parsing of over 266,340 rows
- Statistical Analysis: Manual implementation of quartiles, correlations, and distributions
- HTML/CSS: Created simple visualizations using real data from the csv
- Chart.js : JavaScript library for interactive charts

Strategy

- Started with simple ideas of conclusions I wanted from the dataset
- Found weaknesses that could explain the lost potential revenue
- Then decided quick wins that directly addressed the weaknesses of the data present, like dynamic pricing and shift bundling.
- Then thought of more long-term solutions of worker engagement through notifications, programs, and ML based algorithms.

Product Management Mindset

- Translated data into a story
- Understood weaknesses and strengths
- Considered risks and trade-offs
- Understood marketplace dynamics through previous internship experience and working in the healthcare industry
- Spoke with current healthcare professionals who have used similar applications to gather feedback on worker claim rates