

Impact of Real-Time Pharmacy Benefits on Prescribing Habits at the University of California, San Francisco

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Background

Currently, prescription payers limit wasteful spending through utilization management programs such as prior authorizations (PAs) and formulary restrictions. This system is reactive and only informs patients and prescribers of the status of the prescription (e.g. co-pay, PAs, formulary restrictions) after being processed by a pharmacy.¹ This current process may create significant barriers for patients by delaying care of necessary treatment and negatively affecting patient health outcomes. Real-time pharmacy benefits (RTPB) is a proactive system that informs prescribers of these potential obstacles at the time of order submission in the electronic medical record.

This study's purpose is to determine how often the real-time pharmacy benefits alert is identifying cost-saving alternative therapies, how often prescribers are selecting cost-effective therapies, and to characterize barriers of use.

Methods

- Retrospective quality improvement study
- Data obtained from electronic medical record (EMR) via CenterX® (third-party e-prescribing service)
- Analysis performed on prescriber orders between: January 1, 2020 - June 30, 2020
- The data was de-identified and includes:
 - Prescription information (drug, dose, route, frequency, quantity, refills, co-pay costs, prescriber)
 - Dispensing pharmacy information
 - Real-time pharmacy benefits information (alternative medication available, alternative medication co-pay cost, whether or not alternative medication was selected)
- Providers identified by the following criteria:
 - Practicing provider at the selected UCSF facilities with RTPB integrated in the EMR
 - Entered medication order into EMR between January 1, 2020 - June 30, 2020 that triggered the RTPB alert
- Descriptive statistics characterize study results

Primary Outcome

- Proportion of alternative medications chosen by prescribers utilizing CenterX's ® RTPB alert at UCSF Health clinics.

Secondary Outcome

- Alternative medication cost-savings per medication order

Results

- RTPB alert (figure 3) triggered 6,181 times between January 1, 2020 - June 30, 2020
- Of 6,181 alerts, 258 (4%, figure 1a) displayed alternative medication for the prescribed medication
- Within those 258 alerts, 86 (33%, figure 1b) displayed price information for alternative medication
- 86 medication orders generated 192 alternative medications (2.23 alternative medications per order)
- Majority (70%) of 86 ordered medications cost <\$10.00 (figure 2), 9% cost >\$100.00
- Ordered medication spanned 21 different therapeutic classes, with majority (21%) being antibacterials (figure 5)
- Proportion of alternative medications chosen by prescribers using the RTPB alert was 0 of 86 (0%)**
- Of the 86 prescriptions, 43% had savings (figure 4a), of which majority (54%) had cost-savings of \$0.01-\$10.00
- No savings (\$0.00) via alternative medications associated with 42% of orders, 14% of the orders generated alternative medications with higher patient cost than original prescribed medication (figure 4b).

Discussion

- Drug cost information alone does not significantly influence prescribing habits, which is consistent with existing literature.^{2,3,4}
- RTPB did not influence prescribers to select alternative medications despite cheaper costs but highlights potential barriers of use.
- Prescribing habits are complex and may be influenced by many factors (clinical experience, alert fatigue, patient requests, etc.).
- The study outcomes highlights the need to improve these tools to elicit high-value care.
- Alternatives were often of equal or higher cost compared to the original order and occasionally provided alternatives that are not therapeutically equivalent.
- Characterizing prescriber perception and feedback are an opportunity for future exploration and quality improvement.

Conclusion

- RTPB alerts did not impact prescribing habits.
- 1.4% (86 of 6,181) of medication orders had price information of alternative medications
 - 43% (37 of 86) had cost-savings
- Two major obstacles for RTPB alert use:
 - Majority of orders did not have alternative medications and price information
 - Majority of alternative medication did not provide a cost-savings.

References

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RTPB Alternative Medication Information

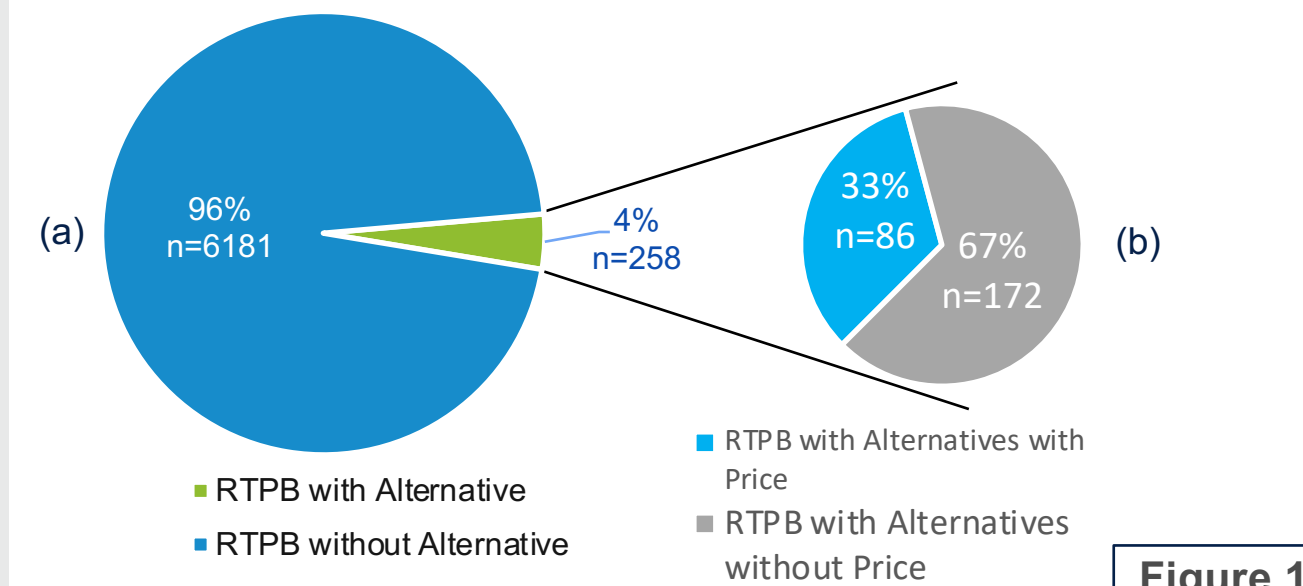


Figure 1

Alternative Medication Cost-Savings

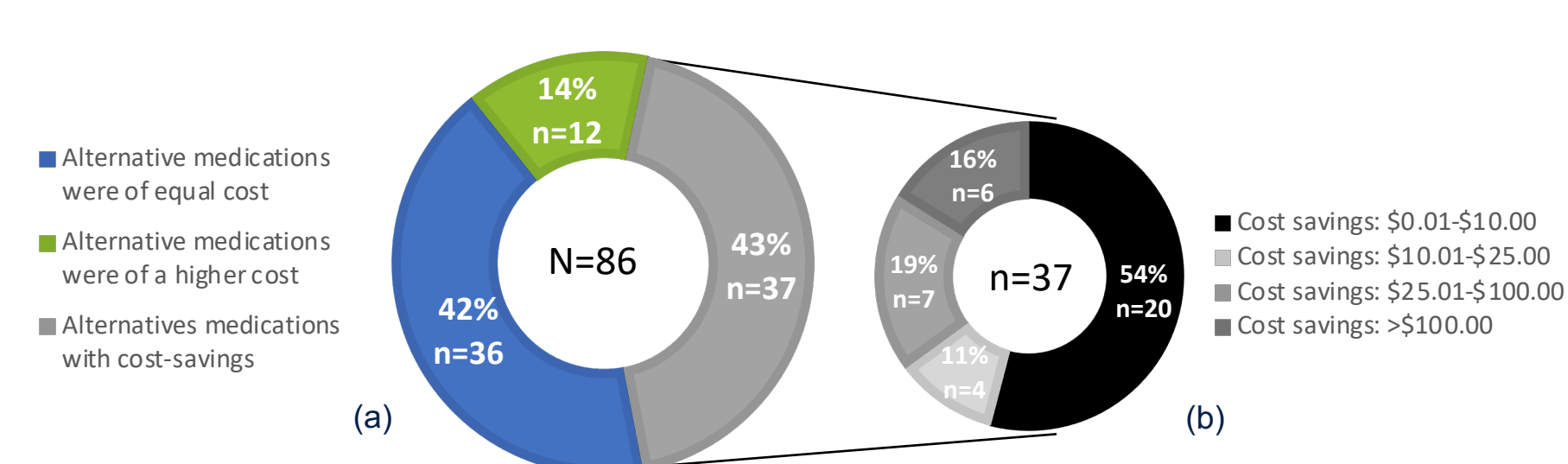


Figure 4

Ordered Medication Price Breakdown

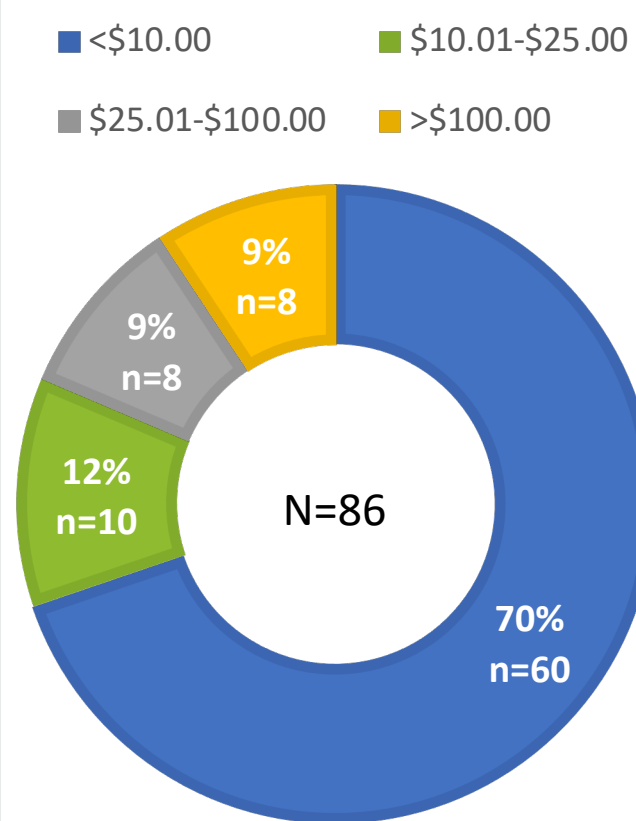


Figure 2

Test RTPB Alert Screen-Capture

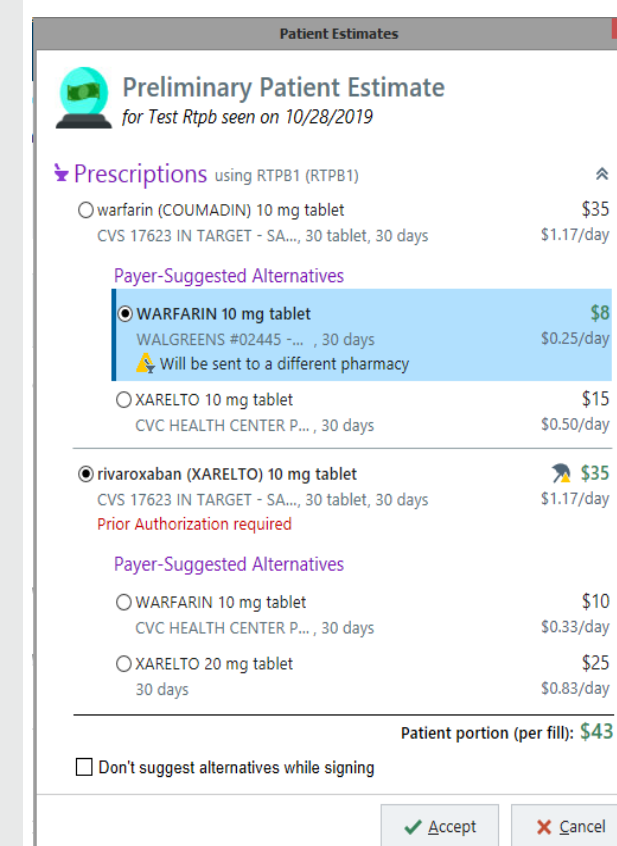


Figure 3

Therapeutic Class of Ordered Medication

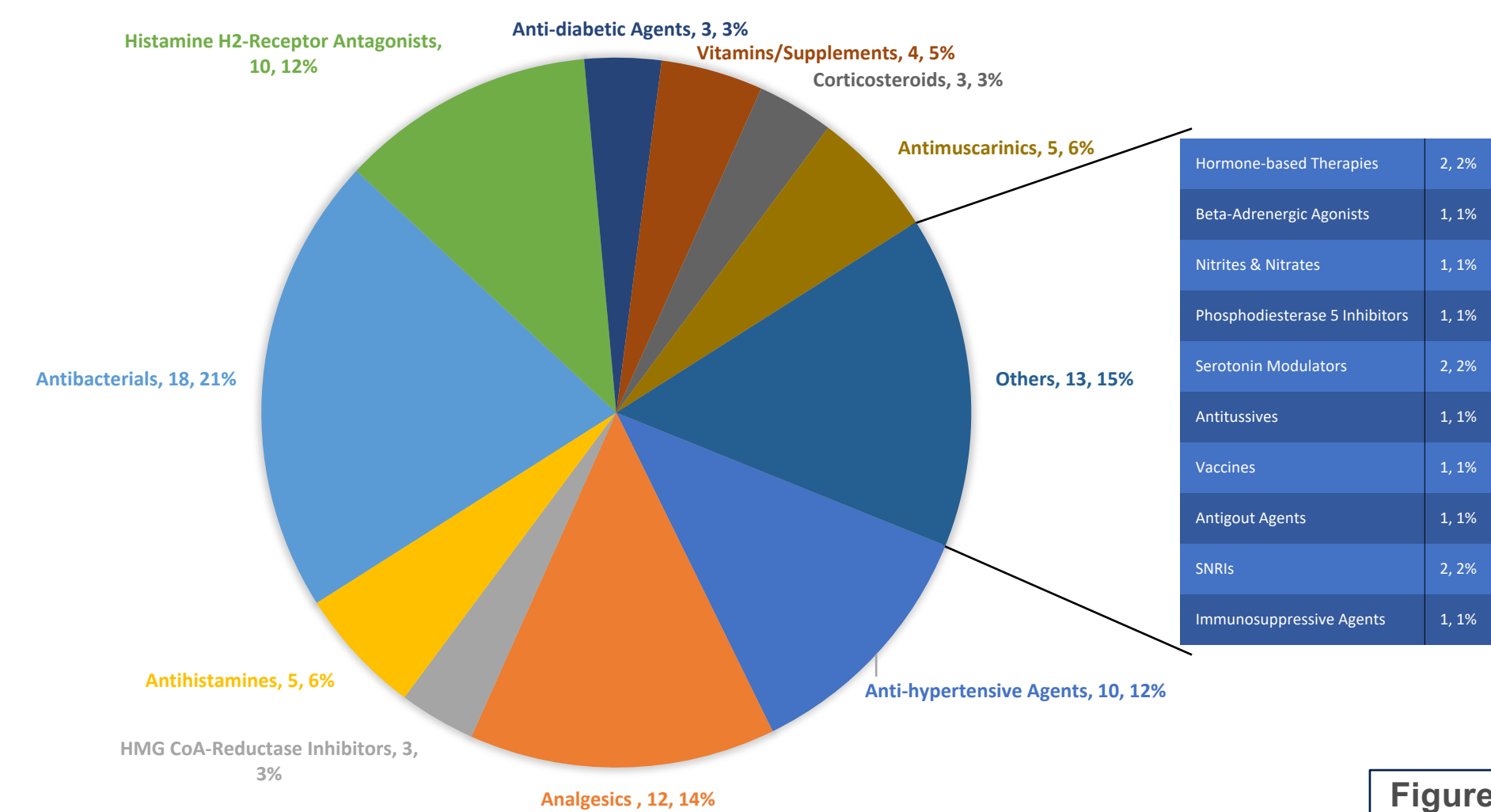


Figure 5