

Evaluation of Medication Stockpiling and Oversupply under Current “Refill-too-Soon” Standards: A Retrospective Analysis of Prescription Claims among Members of a New Jersey Health Plan

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BACKGROUND

- The United States surpasses other high-income nations in overall pharmaceutical spend per capita, with spending rising 7.7% in 2021 to \$576.9 billion.^{1,2} Factors explaining the drug expenditure include drug utilization, type and mix consumed, and the unit cost.¹
- One of the preventable factors contributing to drug expenditure is improper utilization of medications through medication stockpiling. Stockpiling is defined as an excessive accumulation of medication beyond the amount required for therapy.³ The result is an oversupply of medicine which introduces the potential for inappropriate use or waste if therapy is changed, discontinued, or expires. Unused medications can be considered a waste of resources, translating to increased health care costs for consumers in the form of higher premiums and out-of-pocket costs.⁴
- Current strategies to minimize stockpiling include refill-too-soon logic employed by payers and pharmacy benefit managers, such as limiting medication refills to no sooner than 75% after the previous fill. Despite this, gaps remain which enhances expenditure and the potential for wastage.

OBJECTIVE

- To quantify medication oversupply and develop strategies to reduce the associated health and financial risks associated with stockpiling that may occur with availability of refill-too-soon logic.

METHODS

- This is a retrospective analysis based on paid pharmacy claims of Horizon Blue Cross Blue Shield of New Jersey’s Commercial members and Medicare members, covering 879,000 total lives (800,000 Commercial and 79,000 Medicare).
- Claims information included member name and identification number, drug brand name, generic name, therapeutic category, estimated quantity of excess medication accumulated, estimated date to run out of accumulated supply, estimated annual costs savings if intervention took place to utilize supply of medication on-hand prior to next fill, pharmacy, and prescriber.
- Horizon MAPD and Commercial members were included in analysis if continuously enrolled from 4/26/2021 to 6/10/2022 and accumulated an on-hand quantity of medication sufficient to provide at least 28 days (maximum = 217) of therapy at the “run-out date” of the most prescription claim over 1-year.
- Members whose cost-savings exceeded \$10,000 were outreached by telephone to assess self-reported medication supply. If an oversupply was reported, the pharmacy was engaged to align fills accordingly.
- The primary endpoints assessed when telephonic interventions were made included that the opportunity was an oversupply and the pharmacy was engaged, the opportunity was a minimal oversupply, the opportunity was not a true oversupply, or therapy was discontinued.
- The secondary endpoints assessed across all opportunities included identifying the most stockpiled medication by name, therapeutic category, and greatest contribution to cost-savings.

TABLES/CHARTS

Table 1. General Patient Characteristics

Oversupply Opportunities (N = 6,103)	N (%)
Age (years)	
0-19	90 (1.50%)
20-39	388 (6.45%)
40-59	2,749 (45.72%)
60-79	2,640 (43.90%)
> 80	146 (2.43%)
Enrollment	
Medicare	422 (7.02%)
Commercial	5,591 (92.98%)

Chart 1. Most Frequently Utilized Pharmacies

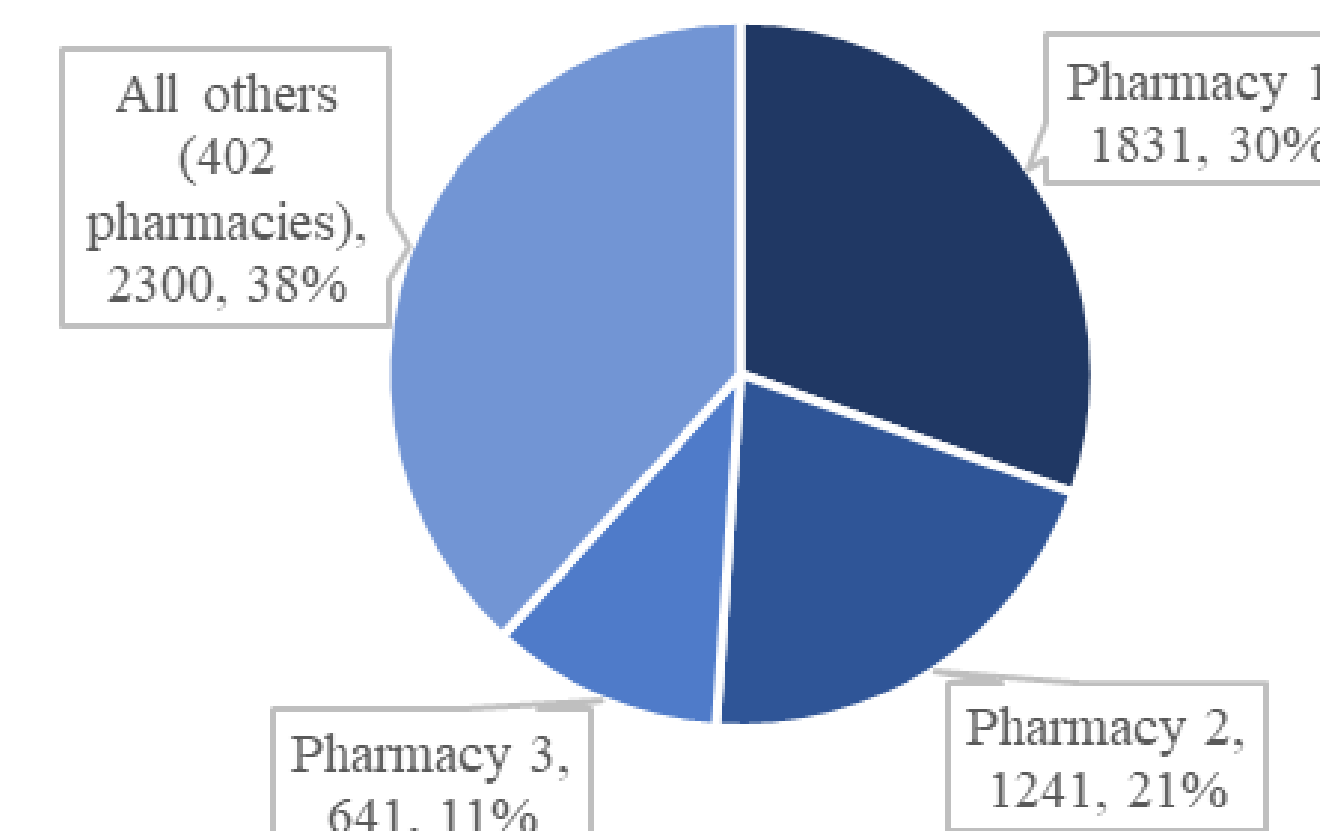


Chart 2. Top 10 Stockpiled Medications Contributing the Most to Estimated Annual Cost Savings

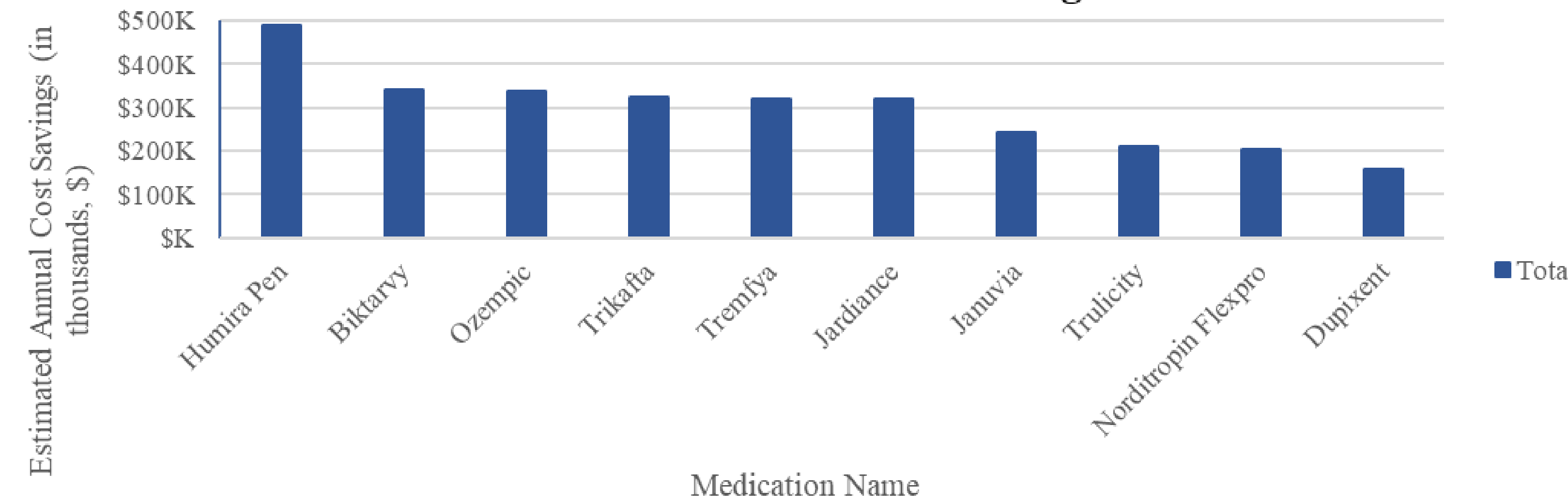


Chart 3. Top 10 Stockpiled Medications by Therapeutic Category with the Greatest Impact on Estimated Annual Cost Savings

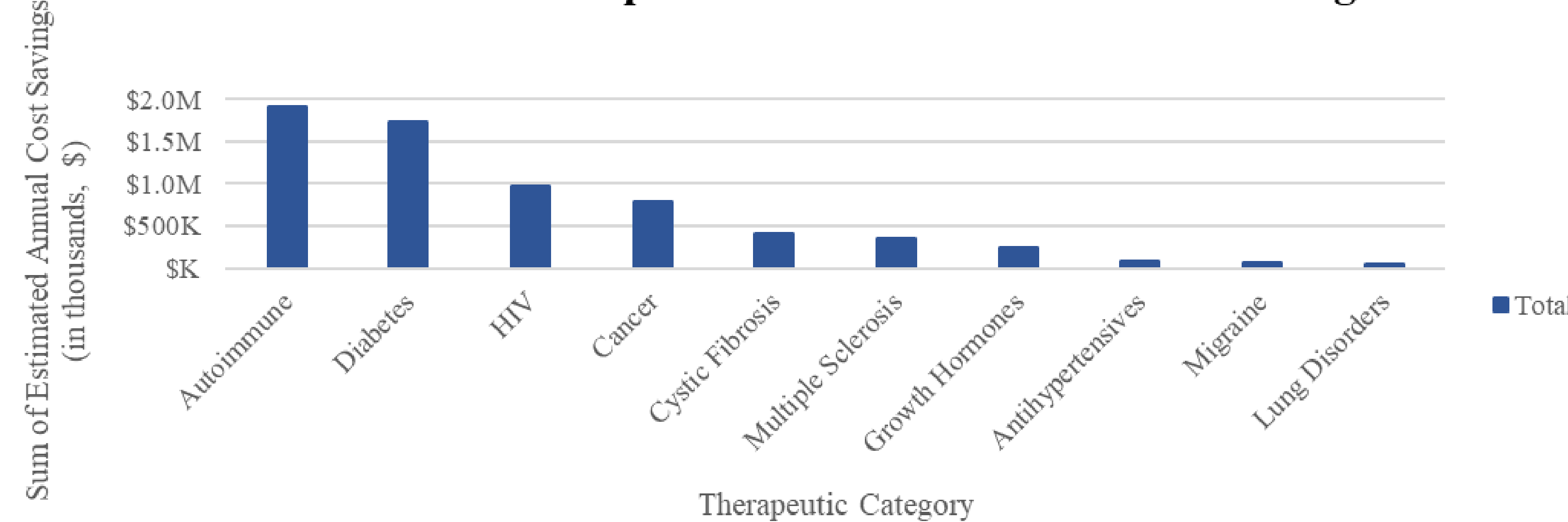


Chart 4. Top 10 Most Frequently Stockpiled Medications by Name

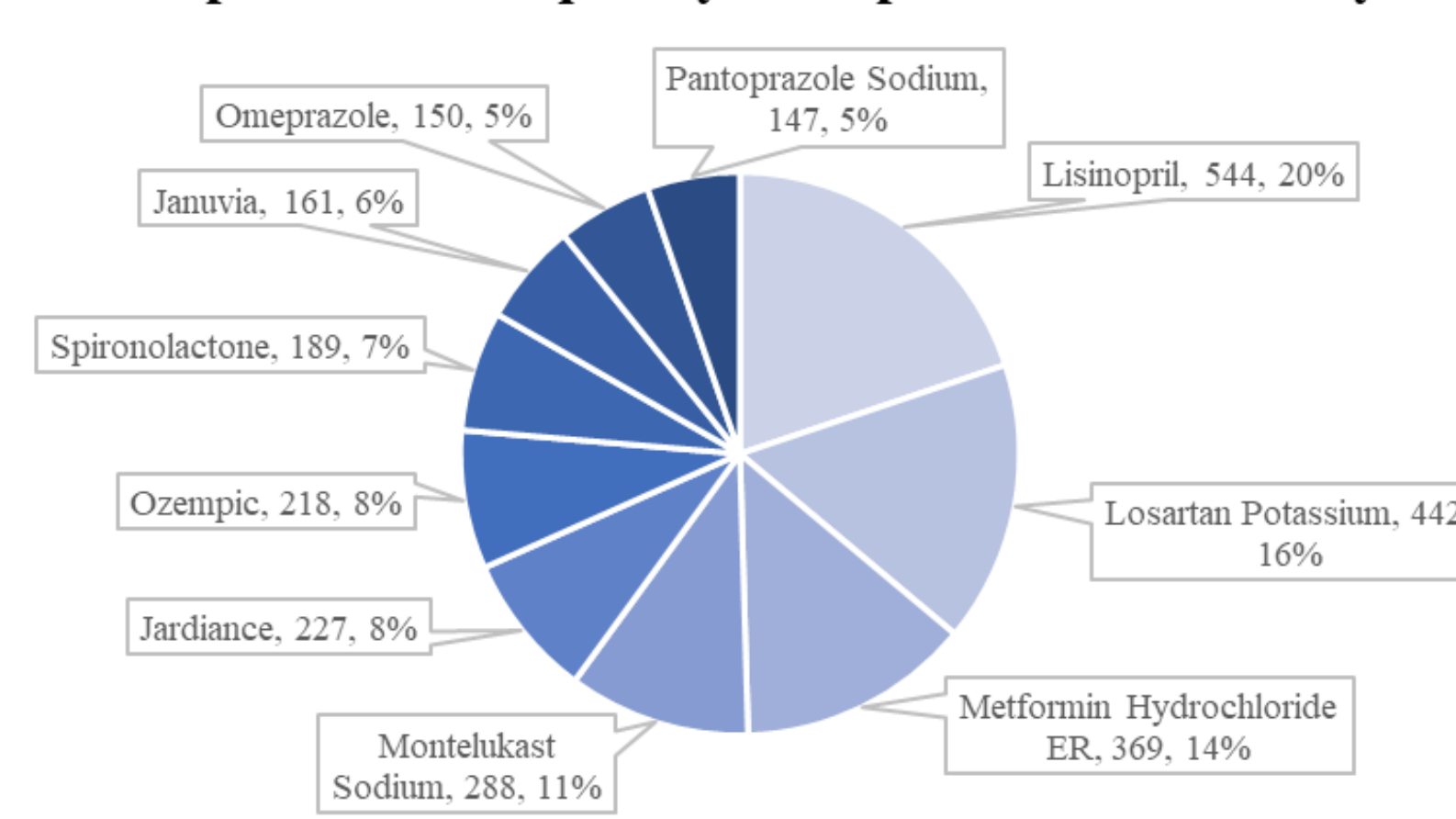


Chart 5. Top 10 Most Frequently Stockpiled Medications by Therapeutic Category

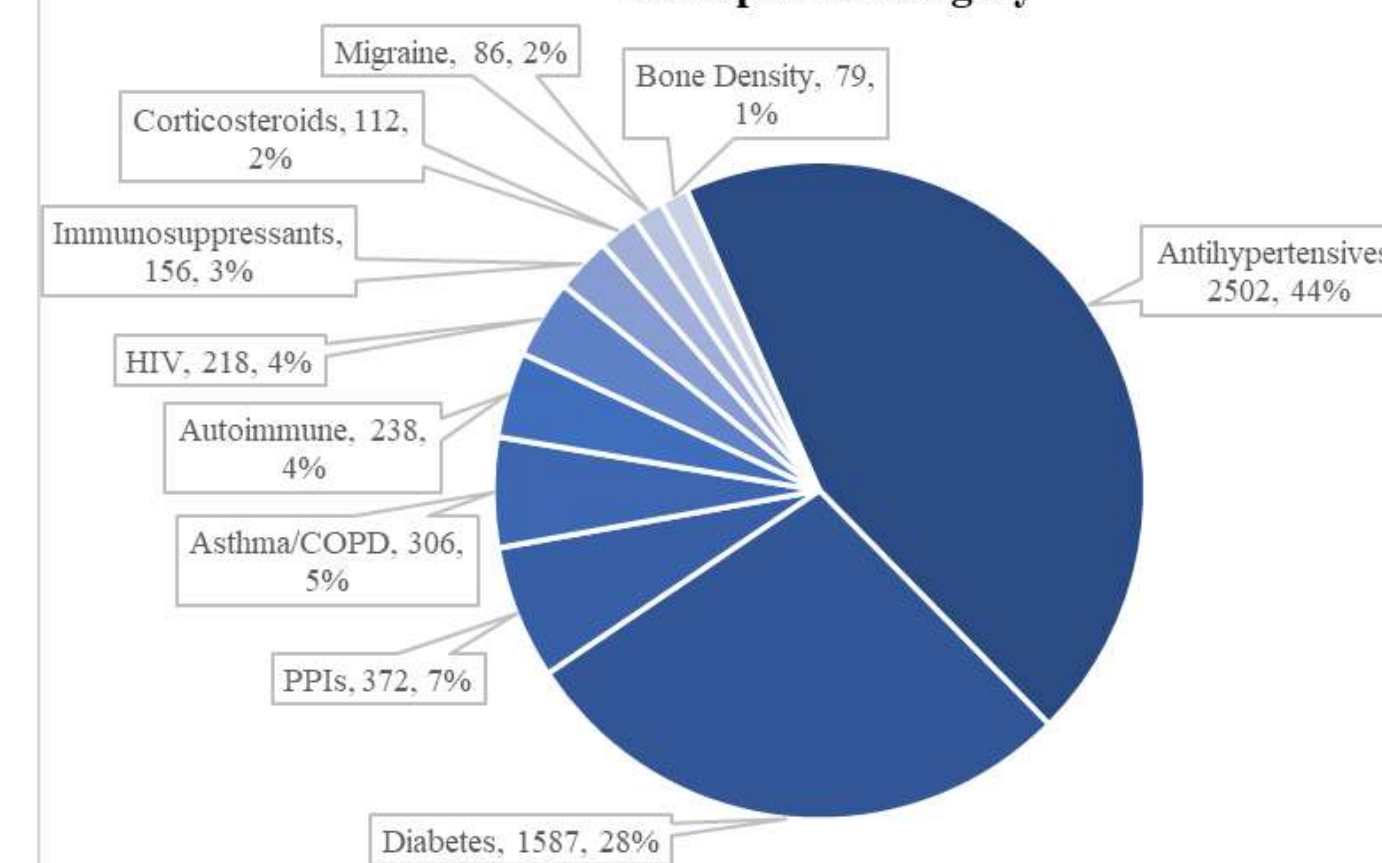


Table 2. Outcomes of Member Outreaches of the 127 Whose Cost-Saving Interventions Exceeded \$10,000

Members Successfully Reached (N = 55)	N (%)
Outcomes	
Self-reported minimal oversupply opportunity	24 (43.64%)
Specialty pharmacy educated	18 (32.73%)
Member no longer on therapy	8 (14.55%)
Not a true oversupply opportunity	4 (7.27%)
Member termed benefits	1 (1.82%)

RESULTS

- A total of 6,103 oversupply opportunities were identified. There were 127 members whose cost-saving interventions exceeded \$10,000. Of the 127 outreached by telephone, 55 were successfully reached.

Telephonic Outreach (N = 127)

- 55 of 127 members were reached. 24 of 55 (43.64%) self-reported a minimal oversupply, 18 (32.73%) indicated an oversupply, 8 (14.55%) discontinued therapy, 4 (7.27%) were not true oversupply opportunities, and 1 member (1.82%) terminated benefits prior to outreach.

Total Oversupply Opportunities (N = 6,103)

- Across all oversupply opportunities, chart 1 demonstrated that members utilized a total of 405 pharmacies. 3 pharmacies accounted for 62% of all oversupply opportunities (3,713 fills) while the remaining 402 pharmacies comprised 38% of the oversupply opportunities (2,300 fills).
- Shown in chart 5, antihypertensive agents comprised the greatest number of oversupply opportunities followed by medications to treat diabetes, proton pump inhibitors (PPIs), and therapies for asthma or chronic obstructive pulmonary disease (COPD).
- Chart 3 relays that medications to treat autoimmune disorders, diabetes, and human immunodeficiency virus (HIV) contributed the greatest to estimated annual cost savings.

CONCLUSIONS

- This retrospective analysis of real-world data demonstrated that medication stockpiling is a costly concern that requires enhanced management.
- Outreach efforts revealed inconsistencies in self-reported medication quantity and claims data, suggesting that members may be unaware of accumulated oversupply. Postulated reasons include members misplacing or losing medications, pharmacies auto-filling medications before a member requires a refill, or improper use. Alternatively, some members may be concerned about running out early or apprehensive over their medication going on a shortage in the future.
- Important considerations and areas of interest introduced in the timeline of analysis are novel challenges introduced by the COVID-19 pandemic in the form of lockdowns and supply chain disruptions which have influenced refill behavior.
- Proposed solutions to address concerns and reduce oversupply include exploring engagement strategies with members, strengthening coordination with pharmacies, and adjusting refill-too-soon thresholds.

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