



COLLEGE OF
PHARMACY

DEPARTMENT OF PHARMACY PRACTICE
& ADMINISTRATIVE SCIENCES

USE OF DIABETES, COPD AND ASTHMA MEDICATIONS AMONG DIFFERENT HEALTH INSURANCE PLAN LEVELS

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Conflict of Interest

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Background

Over 40,000 people enrolled for 2021 through New Mexico (NM)'s Health Insurance Exchange (bewellNM).¹

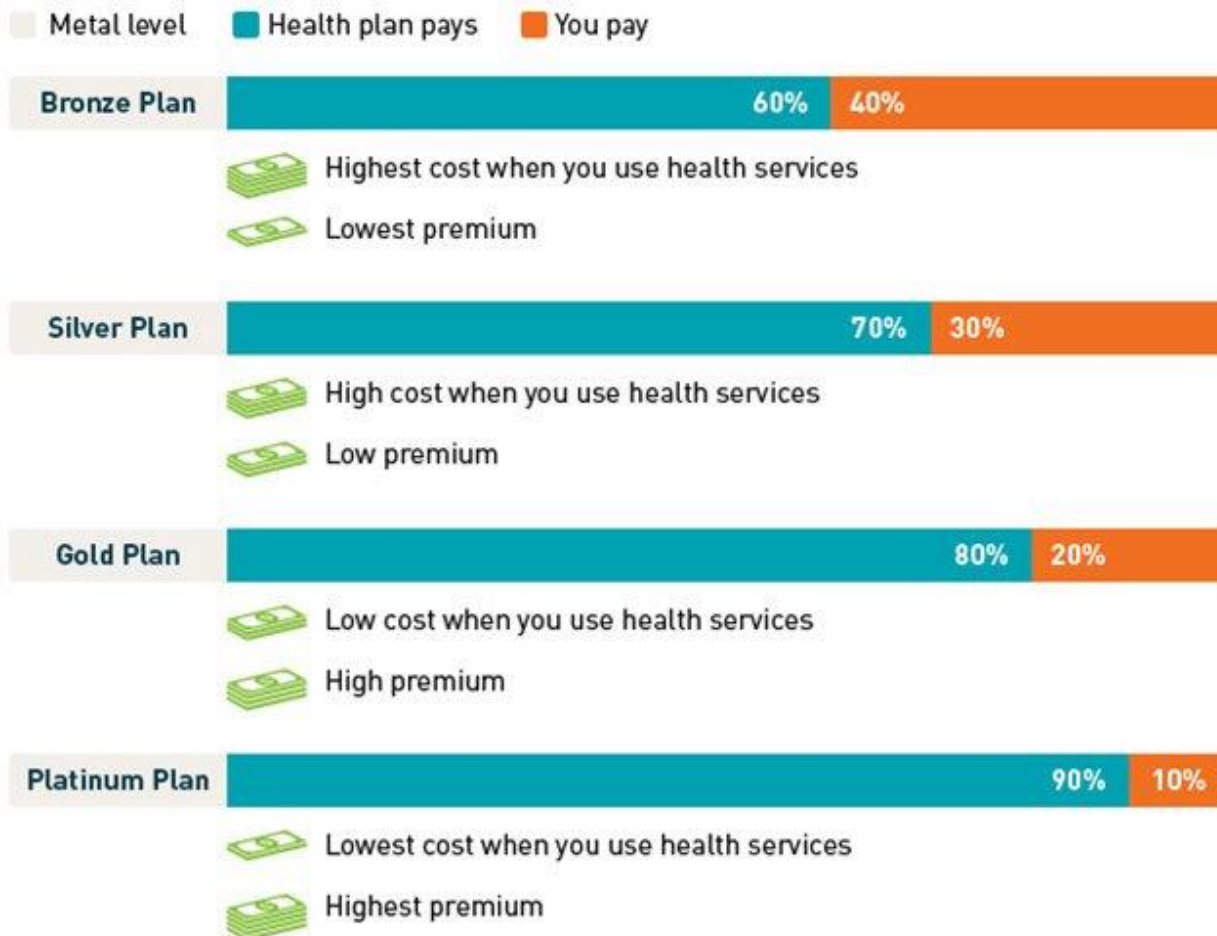
Exchange plans must include coverage of at least the greater of:

- 1) one drug in every United States Pharmacopeia (USP) category and class
- 2) the same number of prescription drugs in each category and class as the state approved Essential Health Benefits (EHB) Benchmark Plan – state standards.²⁻³



Background

Figure 1. Metal Levels of NM Exchange plans ⁴



Because of differences in cost sharing, differences may exist in the extent to which individuals fill condition-specific prescriptions across metal levels of Exchange plans.



Objective

To compare prescription medication utilization across metal levels of the Exchange plans among adult patients:

- Diabetes
- Chronic obstructive pulmonary disease (COPD)
- Asthma



Methods - Design

A retrospective cohort study with data from two NM Exchange insurers for years 2015-2019

Diabetes, COPD or asthma identified with ICD-9 and 10, drug groups based on US Pharmacopeia classifications

Each study year, Rx claims were included for adults who had:

- 1) ≥ 11 months enrollment in Bronze, Silver or Gold plans
- 2) ≥ 1 diagnosis for diabetes, COPD or asthma
- 3) ≥ 1 condition-related prescription claim



Methods - Analysis

Prescription medication utilization by metal level and drug group:

- Overall 5-year period (2015-2019)
- The total number of prescriptions by drug group were summarized for each metal level
- Percentages of condition-related prescriptions, compared by drug group across metal levels
- Rao-Scott Chi-Square tests



Results - Diabetes

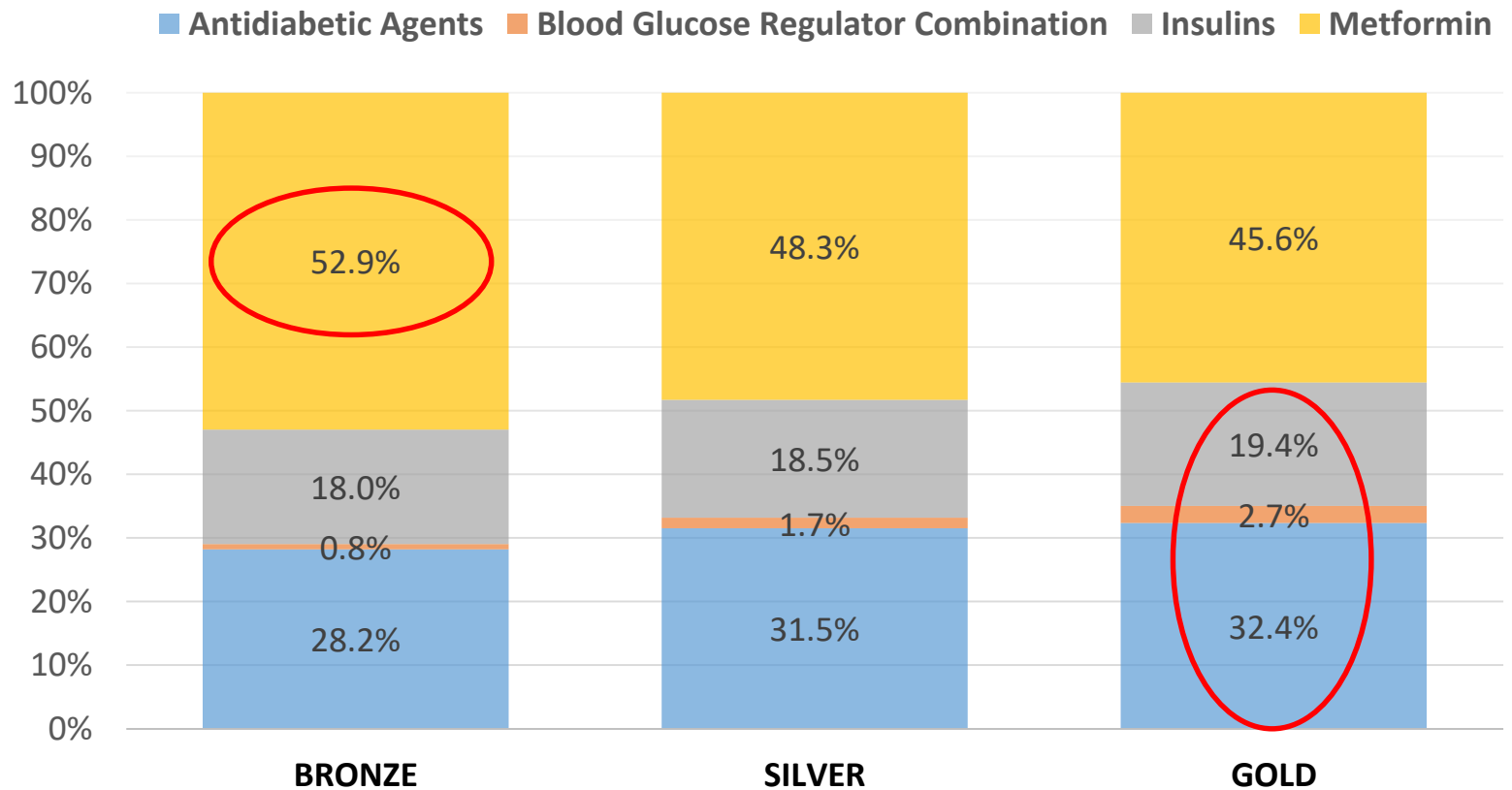
A total of 4,888 patients included with 99,024 Rx claims

For the four diabetes drug groups, highest use for metformin, with Bronze use highest

For the remaining three drug groups, use was highest for Gold

Significant difference observed in distribution of drug groups between metal levels ($p < 0.001$)

Figure 2. Summary by Metal Level of Drug Group Rx as Percentage of Total



Results - COPD

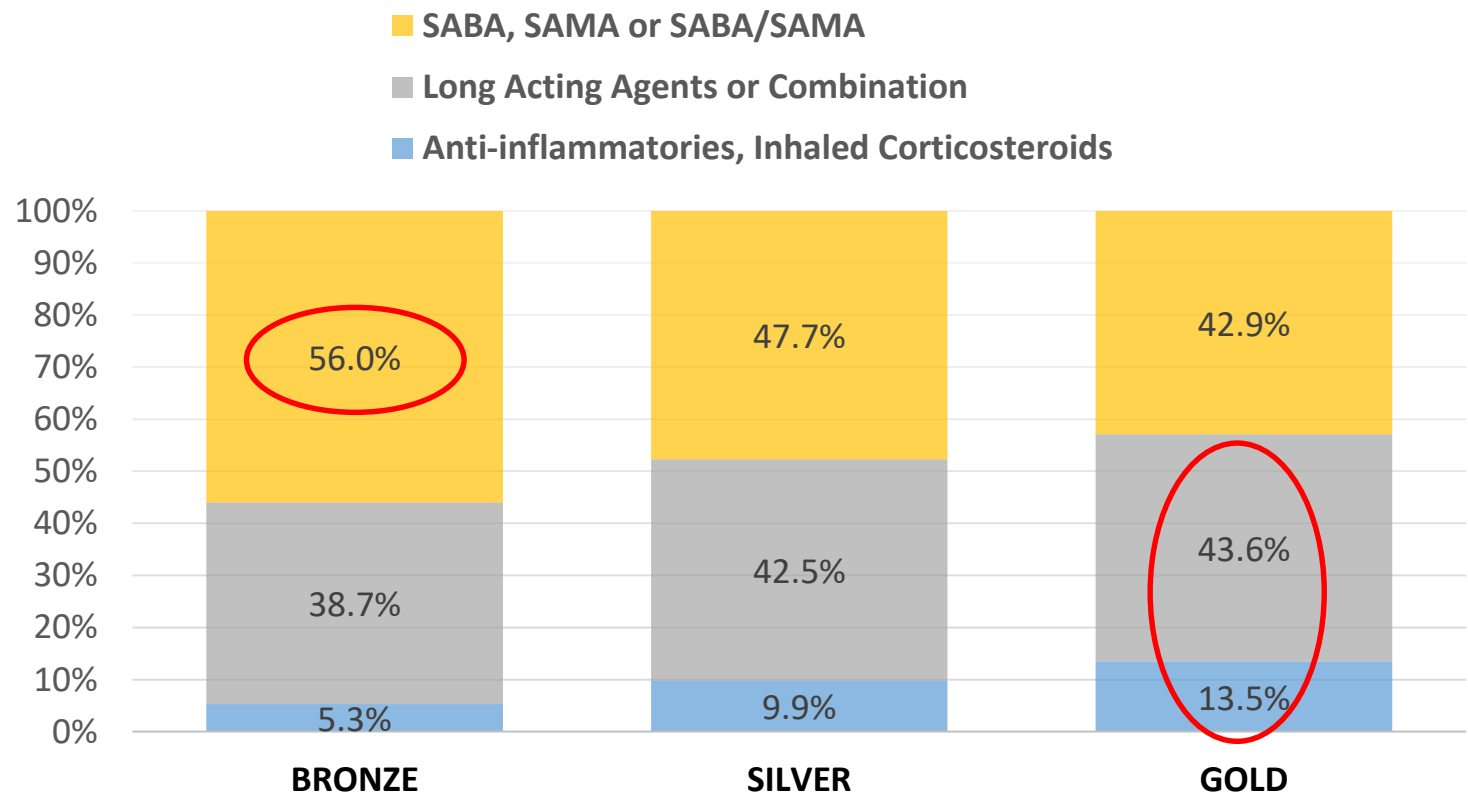
A total of 801 patients included with 9,577 Rx claims

For the three COPD drug groups:

- Short-acting inhaler use was the highest for Bronze
- Anti-inflammatory/ICS and long-acting inhaler use was lowest for Bronze, highest for Gold

Significant difference observed in distribution of drug groups between metal levels ($p=0.02$)

Figure 3. Summary by Metal Level of Drug Group Rx as Percentage of Total



Results - Asthma

A total of 2,456 patients included with 23,319 Rx claims

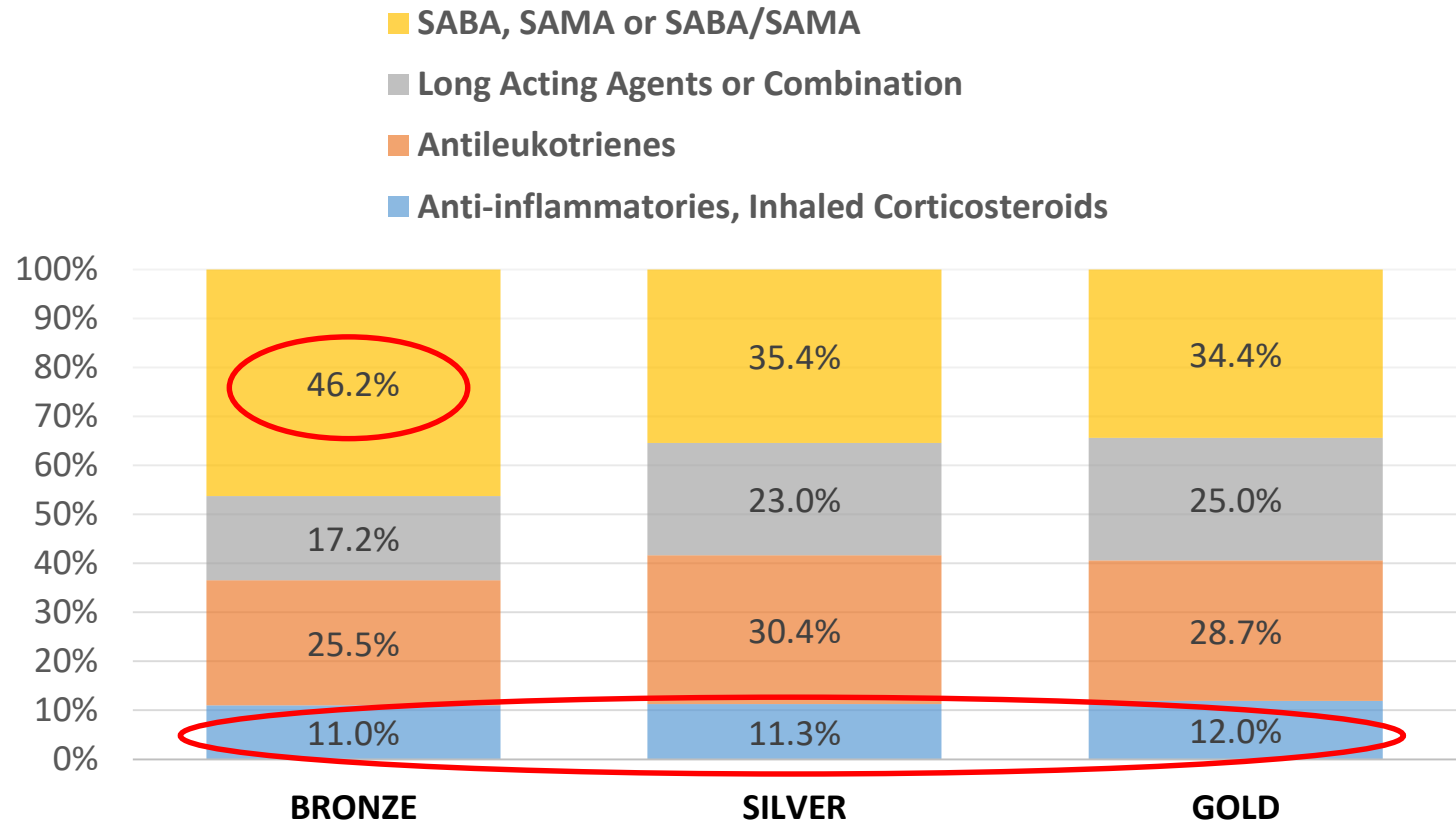
For the four asthma drug groups, highest use for short-acting inhalers, with Bronze use highest

Long-acting inhaler use was lower for Bronze

Anti-inflammatory/ICS use was similar across metal levels

Significant difference observed in distribution of drug groups between metal levels ($p < 0.001$)

Figure 4. Summary by Metal Level of Drug Group Rx as Percentage of Total



Conclusion

Significant differences in condition-related prescription claims between members with different health insurance coverage levels.

In general, medications associated with greater severity of disease were a larger percentage in the Gold level

- Individuals may be choosing appropriate levels of insurance for their needs.
- Longitudinal studies are needed to further investigate the effect.



References

1. New Mexico health insurance marketplace: history and news of the state's exchange. Available at <https://www.healthinsurance.org/health-insurance-marketplaces/new-mexico/>
2. 45 Code of Federal Regulations (CFR) 156.122
3. Qualified Health Plan Certification Information and Guidance; Application Materials/Review tools. Available at <https://www.ghpcertification.cms.gov/s/Review%20Tools>
4. METAL LEVEL HEALTH PLANS. Available at <https://www.bewellnm.com/explore-plans/metal-level-health-plans>



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