Analysis of Out-of-Pocket Burden in Heart Failure Patients: Post-Inflation Reduction Act Implications for Medicare Beneficiaries with Coexisting Health Conditions

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ABSTRACT

This study examines the potential financial implications of the Inflation Reduction Act (IRA) on Medicare Part D beneficiaries with heart failure, focusing on comorbid conditions (diabetes, COPD, renal insufficiency) and racial disparities. Analyzing Medicare Part D Event claims from 2021-2022 for over 1.3 million beneficiaries, it found that the average annual out-of-pocket (OOP) costs for heart failure medications increased from $383 in 2021 to $456 in 2022. Around 14% of patients on heart failure medications alone exceeded $2,000 in OOP spending, while those with comorbidities saw an average OOP cost of $1,341 in 2022, with 22% exceeding the $2,000 threshold.

Racial disparities were evident, with 8% of Black and 80% of White patients without comorbidities exceeding the $2,000 OOP cost. Among those with comorbidities, 16% of Black patients faced OOP costs above $2,000. Despite some financial relief from the IRA, significant disparities persist, especially for Black patients, highlighting the need for additional actions to alleviate healthcare financial burdens.

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INTRODUCTION

Public Health Challenge of Heart Failure: Heart failure is a major public health issue in the United States, significantly impacting millions, especially Medicare beneficiaries. The condition's management has been transformed by advanced pharmacotherapies such as angiotensin receptor-neprilysin inhibitors (ARNIs) and sodium-glucose co-transporter 2 inhibitors (SGLT2i), which, while clinically beneficial, lead to substantial out-of-pocket (OOP) costs for patients.

Financial Burden on Patients: The cost of managing heart failure, exacerbated by the high prices of new medications, creates a significant financial burden. Patients are often faced with steep OOP expenses for their treatments, affecting their ability to afford necessary care.

Study Objectives: This study examines the IRA's impact on OOP expenses for heart failure patients, with a focus on those with comorbidities and racial disparities, using 2021-2022 Medicare Part D data to assess how policy changes may improve healthcare affordability.

METHODS

Data Source and Population: This study utilized **100% Medicare Part D Event data** from 2021 and 2022. We focused on a cohort of 1.3 million unique beneficiaries diagnosed with chronic heart failure, ensuring that all selected subjects were continuously eligible for Medicare coverage for at least 12 months. The demographic information, including age, race, and low-income subsidy (LIS) status, was retrieved from the **Master Beneficiary Summary Files (MBSF)** to facilitate a comprehensive analysis.

Analytical Approach:
We calculated mean costs and the percentage of beneficiaries exceeding the IRA's $2,000 cap, analyzing by comorbid status and racial disparities. Logistic regression were performed to assess the likelihood of patients exceeding the IRA's $2,000 OOP limit, considering race and gender among Medicare Part D heart failure beneficiaries with comorbidities. The model accounted for age, comorbidity levels, and medication adherence, presenting the associations as odds ratios (ORs) with 95% confidence intervals (CIs).

RESULTS

The annual average OOP costs for heart failure medications increased from $383 in 2021 to $456 in 2022. Among beneficiaries solely on heart failure medications in 2022 (n= 29,942, ~3% of chronic heart failure beneficiaries), 22% incurred OOP costs over $2,000 (17% in 2021). Individuals with common heart failure comorbidities faced higher OOP costs, averaging $1,341 in 2022.

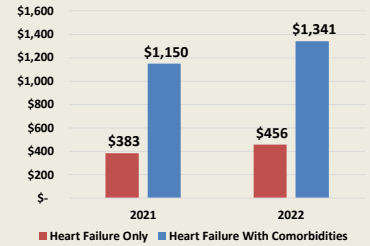

Figure 1. Annual OOP Costs for Heart Failure Medications with and without Comorbidities (2021-2022)

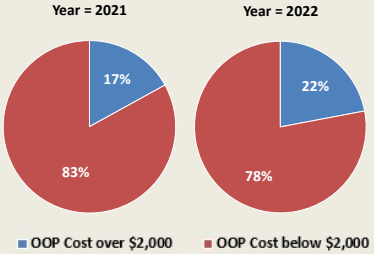

Figure 2. OOP Breakdown: Percent of Heart Failure Beneficiaries with Comorbidities

Delving further, among those without comorbidity and with OOP costs exceeding $2,000, 8% of the beneficiaries were black and 80% were white. However, for beneficiaries who are also has comorbidities, the percentage of those with more than $2,000 OOP cost raised to 16% for black patients.

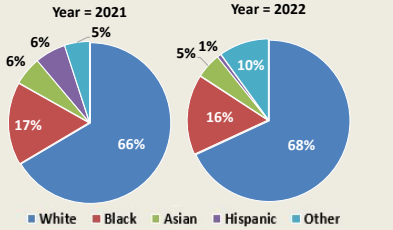

Figure 3. OOP Breakdown: Percent of Heart Failure Beneficiaries with Comorbidities who has OOP greater or equal to $2,000

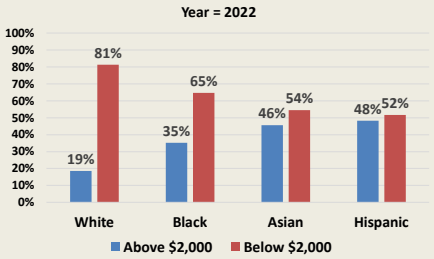

Figure 4. OOP Breakdown: Percent of Heart Failure Beneficiaries with Comorbidities who has OOP greater or equal to $2,000 within Race

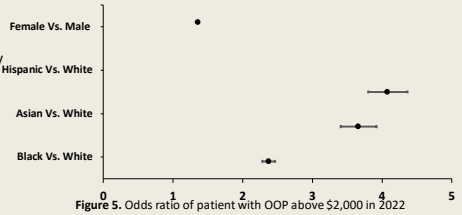

Figure 5. Odds ratio of patient with OOP above $2,000 in 2022

DISCUSSION

The Imperative for Ongoing Evaluation
The dynamic nature of healthcare economics and policy impact necessitates continuous data analysis and monitoring. While the IRA represents a significant policy intervention aimed at reducing out-of-pocket costs for medications, the evolving healthcare landscape and persistent disparities highlight the need for adaptable policy mechanisms. Continuous evaluation will enable policymakers to identify emerging trends, assess the effectiveness of financial relief measures such as IRA, and understand its broader implications for health equity.

Future Research Directions
To adapt and refine healthcare policies effectively, future research should focus on longitudinal studies that track the impact of the IRA and subsequent policy initiatives on a range of outcomes, including medication adherence, payment and health equity. A critical aim of this research will be to unravel the effects of policy measures on healthcare accessibility and outcomes, with a particular focus on the disparities experienced by diverse racial groups. By conducting future comparative analyses among distinct patient demographics and within varied healthcare frameworks, valuable insights can be gleaned regarding optimal practices and pioneering policy innovations. This approach not only promises to illuminate the pathways through which policies exert their influence but also to identify strategies that could mitigate disparities and enhance the overall efficacy of healthcare delivery.

CONCLUSIONS

The IRA has provisions that could lower healthcare expenses for individuals with heart failure. This may have implications for Black or Hispanic beneficiaries under Medicare, who often face a variety of health and economic challenges. Initial assessments indicate IRA may have a role in moderating financial barriers to necessary healthcare for some of the more affected populations.

The study acknowledges potential limitations, including the generalizability of results to populations outside Medicare Part D beneficiaries and the exclusion of non-medication related out-of-pocket costs. Future and continued assessment of Medicare beneficiaries OOP spending and prescription adherences will be critical as the provisions of the IRA are implemented over the coming years.