

Review Paper

Impact of Medicare Part D on Racial and Ethnic Minorities

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ABSTRACT

Objectives: Prior to the implementation of Medicare Part D in the United States, inequalities were found to exist in the use of medications between minority and white beneficiaries. Despite improvements in medication affordability after Medicare Part D implementation, it is still not clear whether the characteristics of the program have improved drug utilization patterns among minorities to the same degree as whites. This review aims to determine whether there were barriers for Medicare Part D to realize its potential to improve prescription drug utilization patterns among minorities.

Methods: Google Scholar, PubMed, Sciencedirect and Scopus were used to conduct a comprehensive search of the literature published since 2003 when the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) was passed, which authorized the establishment of the Part D program. All studies and documents related to the effects of Medicare Part D on minorities were included to present a relatively comprehensive review on the topic.

Results: Evidence indicated that minorities are not equally benefiting from Medicare Part D prescription drug coverage compared to whites. Examples of characteristics of Medicare Part D that caused significant racial differences in drug utilization include the donut hole, the complexity and number of drug plans, and drug utilization management strategies.

Conclusion: Medicare Part D has increased access to prescription medications for the elderly. However, continued analysis and research of drug utilization patterns among minorities should be conducted to ensure that all enrollees regardless of race are benefiting equally from Medicare Part D. Identification of these barriers can provide insights on how to improve the program to allow minorities to benefit equally from the Medicare Part D program and remove health inequalities.

Keywords: Prescription drug; Minorities; Medication; Health illiteracy; Chronic conditions

Introduction

The United States of America spends the most health care dollars among all countries in the world, but a significant number of people are still uninsured or underinsured¹⁻³. Therefore, healthcare reform has been a major topic of discussion in legislature within the past decades. Efforts have been made to reduce healthcare costs and improve the quality of care for all. One of the areas of concern is Medicare and prescription coverage for Medicare beneficiaries. In 2003, President Bush in

response to rising prescription drug costs, signed the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA) that would establish outpatient prescription coverage (Part D) for Medicare beneficiaries⁴. Part D was introduced to reduce out-of-pocket expenses, lower the cost of prescription drugs, and improve access to medication therapy. While implementation of this plan has reduced many barriers to prescription utilization for Medicare beneficiaries, there exist concerns regarding prescription drug access and utilization among minorities.

Prescription coverage under Part D can be obtained in two ways, either through Medicare Prescription Drug Plans (PDP) or through Medicare Advantage prescription drug plans (MAPD)⁵. Prescription drug plans are facilitated and managed by private insurance companies that offer consumers a variety of packages. Although deductibles, monthly premiums, and copayments vary, they must meet basic criteria and be approved by Medicare. The standard plan for 2012 included a deductible of \$320, a coverage limit up to \$2,930 and an out-of-pocket threshold of \$4,700. If consumers exceeded their coverage limit, they fell into the coverage gap (donut hole) in which they must pay 100% of expenses until they reach the out-of-pocket threshold⁵. After they reach the out-of-pocket threshold, catastrophic coverage begins in which consumers pay \$2.60 for generic drugs and \$6.50 for brand name drugs or 5% of the total cost, dependent on which is higher⁵. The 2010 Patient Protection and Affordable Care Act (PPACA) have proposed to eliminate over time the coverage gap or donut hole in the drug benefit. The law has also reduced cost sharing for drugs in the gap, beginning in 2011 for generics and 2013 for brand medications. This saving will continue over the next several years until the gap is closed in 2020⁶.

Certain chronic conditions such as hypertension and type 2 diabetes are more prevalent in minority populations when compared to their white counterparts^{7,8}. However, previous studies have reported that minorities utilize fewer prescription medications than whites after controlling for socio-demographic and health characteristics of patients⁹⁻¹³. Reasons behind this phenomenon could be related to medication adherence, health illiteracy, decision-making capabilities, and cost. The objective of this literature review was to examine effects of Medicare Part D on racial and ethnic minorities. Because of the complexity of this research topic, other relevant aspects of the topic were also considered including income disparities, complexity of plan selection and market-based drug utilization management strategies. This literature review may be relevant to other countries because many countries have populations diverse from the perspectives of socio-economic status, racial and ethnic background and other compartmental factors¹⁴⁻¹⁶. This review may be helpful to them for solving similar problems.

Methods

Several databases including PubMed, Sciencedirect, Google Scholars, and Scopus were utilized to identify relevant literature. "Health disparities", "Medicare", "prescription utilization", "non-adherence", "drug therapy", "cost-sharing", "Part D plan selection", "prior authorization", "medication discontinuation" and "effects of copayments" were the key search terms used in various combinations. The search was limited to studies published since the year 2003 when Medicare Prescription Drug, Improvement, and Modernization Act (MMA) was passed, which established the outpatient prescription drug (Part D) benefit for Medicare beneficiaries.

Due to the limited number of studies on this topic, there were only 9 peer-reviewed studies that specifically analyzed the effects of Medicare Part D on minorities at the time of this

study. All these studies were included in this comprehensive review. Additionally, other studies and documents related to the research topic were included to represent other relevant aspects of the topic. A systemic review such as meta-analysis was not conducted due to the limited number of studies and wide differences in methods used. Studies in the following four categories were included due to the relevance of these topics to the impact of Medicare Part D on racial and ethnic minorities: 1) effects of income disparities; 2) effect of Medicare Part D on minorities; 3) complexity of Medicare Part D plan selection and 4) market-based drug utilization management strategies.

Results

Effects of income disparities

Cost-sharing requirements of Medicare Part D can create additional financial barriers for minorities; since minorities tend to have lower income than their white counterparts⁹. In 2011, of the total Medicare population, 23% belonged to the racial and ethnic minority groups. Sixteen percent of Medicare beneficiaries had income less than 100% of the federal poverty level and 47% of Medicare beneficiaries had income below 200% of the federal poverty level¹⁷. In 2009, 21% of Medicare beneficiaries also qualified for Medicaid as dual eligible.¹⁷ Eighty six percent of the dual eligible had income less than 150% of the federal poverty level and minority groups were more likely to belong to these income groups than whites¹⁸.

MMA has a provision to provide low-income subsidies for people with low incomes and limited assets. Qualifications for these subsidies are solely based upon income levels and assets. Income cannot exceed \$17,235 and assets cannot exceed \$13,070 for a single person in 2013¹⁹. Low-income subsidy programs help the qualified beneficiaries to pay their Part D premiums and cost sharing, including the costs in the coverage gap. The program also shifted the dually eligible Medicare and Medicaid beneficiaries from Medicaid to Medicare Part D and these beneficiaries were eligible for the low-income subsidy programs²⁰.

The low-income subsidies benefit all including minorities but there are some concerns related to the experience of the beneficiaries in receiving these benefits²⁰. Specifically, it has been reported that one fifth of eligible beneficiaries for the low-income subsidy did not receive it²⁰. Another concern is the annual changes in the availability in the Part D plan for these beneficiaries which resulted in disrupted coverage and increases in premiums for more than two million beneficiaries between 2008 and 2009²⁰. Additionally, low-income subsidy beneficiaries who are assigned to new benchmark plans may face disruptions in their medication regimens if the new plan does not cover their medications or imposes utilization management restrictions that their previous plan did not²¹. It has been reported that switching from one plan to another can be challenging for these beneficiaries who have multiple chronic conditions and for whom medication adherence is very important²¹. The census data showed that higher proportions of minorities belong to the lower income level as compared to the whites²². Minorities are

more likely to have lower income than whites so they are more likely to be affected by these issues. Furthermore, minorities who barely pass the threshold to receive the subsidy are extremely vulnerable to high out-of-pocket expenses²².

Effects of Medicare Part D

Medicare Part D has been proven beneficial for enrollees, but its role in enhancing utilization amongst minority and/or vulnerable populations still needs further investigation. A sample (n=5,996) from the Medical Expenditure Panel Survey (MEPS; 1996-2000; before Part D) implementation, was analyzed to determine whether Medicare Part D would benefit vulnerable populations²³. Study populations included those that did not qualify for low-income subsidies, different racial/ethnic groups, and those with comorbidities. Medicare beneficiaries who were eligible for Medicaid, whose income was less than 150% of the poverty line, or with employer sponsored plans were excluded from the study²³. Projected out-of-pocket drug costs were calculated and approximately 9.2% of beneficiaries had drug costs over \$5,100. Persons with comorbidities, blacks, and those with lower income levels would have increased spending. This study found that 34.9% of enrollees with 3 or more comorbidities would enter the donut hole. A little more than a half would have to pay at least \$2,250 in drug costs per year. It was estimated that savings across racial and ethnic groups would not be the same. In fact the average savings for blacks and Hispanics would be less than whites, and persons classified as near poor would still have higher out-of-pocket drug costs in comparison to those in different income brackets²³. Higher out-of-pocket expenses can potentially influence utilization patterns among minority enrollees. Thus exceeding the threshold needed for public assistance or falling into the donut hole can have a major impact on whether or not minorities still use fewer medications than whites following implementation of Medicare Part D.

Another study by Kanavos et al. examined the impact of individual population characteristics on choice between public, private and no prescription drug coverage. The study was conducted prior to the Medicare Part D implementation, to find the impact that Medicare Part D would have on the eligible beneficiaries. MEPS data for the year 1996-2000 were used²⁴. The study found that Hispanics, blacks and other race were more likely to be covered by a public program, more likely to be uninsured for prescription medication outlays and less likely to have private prescription drug coverage as compared to the white beneficiaries. The authors then concluded that Part D may not provide equity in access among the elderly and disabled beneficiaries²⁴.

The effect of Medicare Part D on the general population can provide some insight into utilization patterns among different groups of people. Nair et al. collected data from an insurer who provides MAPDs. This study included 6876 individuals who were once enrolled in M+C plans prior to enrolling into MAPDs. The study compared medication utilization, persistence, and out-of-pocket costs. As part of the M+C plan there was a \$600 yearly cap for non-formulary and formulary

brand-name drugs²⁵. While enrolled in M+C plans, 36.73% of persons reached the brand name cap. After enrolling into a MAPD plan, approximately 29.5% of beneficiaries reached the donut hole. As part of the MAPD plan, enrollees have a \$2,250 cap, which includes the total cost paid by the insurer and enrollee, before entry into the donut hole in which they pay 100% of costs until total expenses reach \$3600²⁵. According to the study it took 9.8 months for those enrolled in M+C plans to reach the brand name cap, while it took 7.8 months for them to reach the donut hole while enrolled in a MAPD plan. Persons with diabetes spent longer time in the donut hole in comparison to persons with hypertension. It has been found that diabetes and hypertension are more prevalent in minority populations than whites; therefore, the effects of Medicare Part D on persons with these morbidities have significant implications among minority beneficiaries²⁶.

Although Medicare Part D increases utilization, problems related to the coverage gap are of most concern, especially for vulnerable populations who might fall into this category. Another study was conducted in which data from CVS Caremark was used to study beneficiaries who fell into the coverage gap (n=217,131). Analyses were conducted to compare rates of discontinuation, the odds of switching, and adherence among those who received subsidies and those who paid 100% of the cost. Participants were categorized into 4 groups: those who received full subsidies, partial subsidies, no subsidies, and those enrolled in retiree plans that did not involve a coverage gap²⁷. The rate of non-subsidy enrollees entering into the coverage gap each month increased over time, while those receiving financial assistance entered the gap at a constant rate each month. Drug-level analyses were conducted and results from the pooled cohorts revealed the following results: those not receiving financial help during the gap were 2 times more likely to discontinue a drug. Beneficiary level analyses also revealed that those not receiving financial assistance during the gap were 1.18 times more likely to experience decreased adherence than those receiving some type of assistance. It was noted in the study that diabetes and cardiovascular disease were highly prevalent in both cohorts²⁷.

Studies that highlight the effect of Medicare Part D on dual beneficiaries can also reveal utilization patterns that could exist amongst minority populations. A 5% random sample was taken from a national pharmacy chain in which data was collected from persons who purchased medications between 2006 and 2007²⁸. The sample comprised of dual eligible and near elderly Medicaid recipients who were divided into two cohorts, the treatment and control group respectively (n=177,311). The treatment group included dual eligible, those who qualified for Medicare and Medicaid, between the ages of 65 and 78 on or before January 1, 2005. The control group was composed of Medicaid beneficiaries, who were between the ages of 60 and 63 (near-elderly). Medication utilization was measured using pill-day²⁸. As per the results, the average monthly pill day for the treatment cohort before Part D was 96 while afterwards it was 99. The total amount of prescriptions per month before Part D was 3.1 and remained 3.1 for the treatment group after implementation Part

D. Total monthly out-of-pocket expenditures for this same group before Part D in US dollars was 14.9 and after Medicare Part D was 14.7. Results for the control group were similar indicating that Medicare Part D did not significantly impact utilization among dual eligible beneficiaries. Dual-eligible individuals, according to this study, did not experience significant changes following implementation of Medicare Part D²⁸.

The study by Chen et al. was one of the first studies to examine racial/ethnic differences in out-of-pocket expenses and access following implementation of Medicare Part D. MEPS data between 2004 and 2007 were used. The study involved Medicare-only beneficiaries who were classified as non-Latino white, Latino, or black. The study also included dual-eligible individuals over the age of 65 who were classified within one of the racial/ethnic groups²⁹. According to the study all groups experienced decreases in total out-of-pocket expenses. Out-of-pocket expenses for Medicare only beneficiaries decreased 34% for whites, 31% for Latinos and 39% for blacks. The probability of having unmet needs, when beneficiaries delay or go without medication, decreased 4% for blacks and remained the same for white and Latino Medicare-only beneficiaries. It was noted that differences in unmet needs between whites and blacks were no longer significant. Among the study population, in comparison to the 23% of whites, 47% of blacks and 66% of Latinos did not have a high school diploma. Additionally, whites reported higher income levels. Although minorities in the study benefited the most from Medicare Part D, it was noted that the study could not take into account the effects of the coverage gap on expenditures²⁹. Indeed, in a later study by Mahmoudi and Jensen, the researchers reported mixed effects of Medicare Part D. After Part D implementation, disparities in prescription drug use between Hispanics and whites were reduced but disparities in drug spending between blacks and Whites were increased³⁰. Schmittiel et al. conducted a survey on Medicare beneficiaries with diabetes who entered the coverage gap in 2006 to examine patients' communication levels with the physicians regarding prescription medication cost³¹. The study found that minorities had significantly lower levels of communication with their physicians regarding drug costs than whites. Better communication can help providers and health plans to implement strategies for minorities to manage their prescription drug costs³¹. Vaidya et al. conducted a study to analyze the trend in statin utilization in patients with diabetes before and after the implementation of Medicare Part D³². Between the years 2004 to 2008, there was a significant increase in the utilization of statins from 55.05% to 61.25% ($P=0.002$). The study also found that African-Americans were less likely to report statin use compared to the whites. The study results indicate that Part D was unable to reduce disparities in statin prescriptions for racial subgroups as compared to whites³².

A study by Bakk also found that based on the analysis of the data from the Prescription Drug Study and Health Retirement Study, racial and ethnic disparities in cost-related medication non-adherence persist after Part D implementation³³. Another analysis found that there are still racial and ethnic disparities in adherence to preventive medication therapies among Medicare

Part D enrollees after acute myocardial infarction³⁴. Similarly, the study by Zhang and Baik reported problematic adherence to medications for heart failure after Part D implementation³⁵.

Not all studies mentioned above have documented the effect of Medicare Part D on minority beneficiaries. However, minorities have higher prevalence of chronic conditions and are more likely to have lower income compared to whites, and are more likely to be dually eligible for Medicare and Medicaid in comparison with other Medicare beneficiaries^{8,9,18}. Therefore these studies suggest that disparity issues across racial and ethnic groups may not have been resolved.

Complexity of Medicare Part D plan selection

The complexity of plan selection for Medicare Part D may have negatively affected the minority population. According to Kaiser Family Foundation's 2012 Medicare Data Spotlight there were a wide variety of stand-alone PDP available for Medicare beneficiaries³⁶. In 2012 there were a total of 1041 PDPs available nationwide and on an average every beneficiary had a choice of 31 stand-alone PDPs³⁶. The variety of options can provide beneficiaries the chance to choose a plan that meets their individual needs; however, uncertainty regarding proper plan selection arises when too many choices are available. The studies reviewed in this section assess the association of various factors including age, race and ethnicity, knowledge and number of plans available on the ability to choose Part D plans.

Hanoch et al. conducted a study with 192 participants in which they examined how the number of choices and age affect decision making capabilities when it comes to choosing Medicare Part D prescription plans³⁷. Participants were placed in 3 groups each containing various amounts of drug plans (3, 10 and 20). Each group was given information regarding the prescription plans involved in the study and were asked to identify the plan that reduces total annual costs, the plan that reduces annual costs and still offer mail order services, the plan that utilizes the most pharmacies, and the plan that did not offer mail order services but had the closest pharmacy³⁷. Logistic regressions were conducted and per the results older adults were less likely to choose the plan that reduced total annual costs, were more likely to be confident in their choices and less likely to answer three of the four questions correctly. It was also noted that persons in groups where the choice set included 10 and 20 plans were less likely to correctly answer three of the four questions in comparison to persons in the group with 3 plans. According to the study as the number of plans increased the quality of plan selection deteriorated³⁷.

Abaluck et al. completed a study in which they evaluated the choices that Medicare beneficiaries had when choosing appropriate prescription plans³⁸. Prescription records were obtained and evaluated from a longitudinal sample of persons age 65 and older from Wolters Kluwer Company in 2005 ($n=477,393$). Beneficiaries were matched to their specific plan using their county code, insurance name and co-payment structure. As per the study 12.2% of persons picked the cheapest plans while 30.9% of persons could have saved on total spending

if they had chosen the cheapest plan available. Choice sets for residents of California were shown using a graph where the X axis represented the mean of total costs for each plan and the Y axis represented the average standard deviation in costs³⁸. Results revealed that most of the plans lied off the efficient frontier indicating that cost and variance could have been lowered if beneficiaries had chosen differently. It was noted that this could be due to beneficiaries not choosing plans based on how those characteristics would affect them³⁸.

Knowledge regarding prescription plans can greatly influence how beneficiaries choose between their options. Hsu et al. conducted a study in which they interviewed MAPD plan enrollees and sought to determine their level of knowledge regarding benefits and cost sharing³⁹. The sample included persons who were continuously enrolled throughout 2006 in Kaiser Permanente-Northern California's MAPD plan whose coverage included a gap (n=1040). Phone interviews were carried out and as per the results 40% of the samples were aware that their plan included a coverage gap. It was noted that awareness regarding the coverage gap increased as drug costs increased. As per the results 49% of persons with drug costs between \$1301 and \$2250, 75% of those whose cost were between \$2251 and \$3500 and 89% of persons who exceeded \$3500 were aware of the coverage gap. Due to out-of-pocket costs 36% of the sample reported having to change prescription taking behaviors³⁹. According to the results of the multivariate analyses, those with incomes below \$40,000 a year were more likely to engage in these behaviors when compared to those whose incomes were higher. Additionally, those who were aware of the coverage gap were more likely to switch to a cheaper alternative and experience lower financial burden³⁹. A limited amount of knowledge regarding prescription plans can negatively influence patient outcomes. Therefore, knowledge regarding coverage gaps should be acquired and expected out-of-pocket expenses should be calculated before enrolling into prescription plans by consumers in order for them to make better choices³⁹.

Knowledge regarding plan characteristics prior to enrollment can potentially aid in proper plan selection and provide beneficiaries the chance to make better choices. Research regarding minority beneficiaries and plan selection can determine whether the suboptimal plan selection can negatively affect prescription utilization. In one such study, data was collected in 2006 from the Chicago Health and Aging Project in which blacks and whites were given interviews (n=2,694)⁴⁰. Per the results 35% of whites and 40% of blacks enrolled into the Medicare Part D program. It was noted that 44% of blacks reported very satisfied in comparison to the 61% of whites. Among those who did not enroll in the program, blacks were more likely to be unaware or confused about the program than their white counterparts. Thirteen percent of blacks and 1% of whites thought the program was too difficult to understand. Two percent of white and 10% of black non-enrollees was unsure of which plan to select. Ninety three percent of white non-enrollees reported other reasons for not enrolling into the program⁴⁰. Based on this study a knowledge gap between black

and white non-enrollees seems to exist. Knowledge gaps can potentially result in low prescription medication utilization amongst minority populations.

In another study, data was collected in 2008 from the Consumer Assessment of Health Care Providers and Systems survey of U.S. Medicare beneficiaries⁴¹. The objective of the study was to examine racial/ethnic differences in Medicare beneficiaries' experiences with the Medicare Part D drug coverage. Two composite measures were used to determine access to and information about prescription medications. The first composite measure assessed the access to needed medications by using 3 questions and the second composite measure assessed the experience of getting information to prescription drugs by using 4 questions. The study found that Hispanics, non-Hispanic blacks and non-Hispanic Asian or Pacific Islander had greater difficulties in obtaining information regarding coverage and obtaining needed prescription drugs compared to non-Hispanic whites. Greatest disparities were observed for the Spanish-preferring Hispanics especially those with low income⁴¹. Improper selection among minority beneficiaries can possibly affect utilization patterns and contribute to health disparities.

Indeed, in a study by McGarry et al., by analyzing the National Health and Aging Trends Study from 2011, researchers found that Hispanics have 35% lower likelihood of having Part D coverage than non-Hispanic whites. No statistically significant disparities were identified between non-Hispanic blacks and non-Hispanic whites⁴².

Market-based drug utilization management strategies

Companies offering Medicare Part D plans must offer at minimum the standard plan which includes 4 stages of cost sharing: a deductible, initial coverage, coverage gap, and catastrophic coverage⁴³. In addition, some companies use additional strategies to control spending such as limited formularies, prior authorization, step therapy, quantity limits, and drug tiers⁴⁴. A 2008 report by Kaiser Family Foundation examined the application of utilization management strategies by Medicare PDPs for 47 unique national plans⁴⁴. A sample of 169 drugs were selected including the most commonly prescribed drugs and all alternative medications in some drug classes most commonly used by Medicare beneficiaries. The report found that overall, at least one restriction was applied to 30% of the drugs in 2008, compared to 20% of the drugs which had at least one restriction in 2006. Quantity limits were applied to 21% of the sample drugs in 2008 compared to 12% in 2006, while the use of step therapy doubled from 6% of sample drugs in 2006 to 12% in 2008⁴⁴. Limited evidence also suggests that restrictions in Part D drug plan coverage through utilization management techniques have restricted access to prescription medications⁴⁵. Medicare Part D plans using these market based strategies must be further examined to determine their effects on utilization and whether they contribute to health disparities amongst minority populations. While this has not been comprehensively studied in the literature, insurance companies have historically used a number of market-based strategies to control consumer

spending and the effects of these strategies have been examined in the literature.

Lu et al. conducted a study to examine the relationship between prior-authorization, medicine discontinuation and the use of hospital services (outpatient and inpatient services) for persons with bipolar disorder⁴⁶. They obtained Maine Medicaid enrollment and claims data from the Centers for Medicare and Medicaid Service's Medicaid Statistical Information System. Medicaid data were linked to Medicare data for those that were dually eligible for Medicaid and Medicare. From these data two cohorts were established, the pre-policy cohort and policy cohort. The pre-policy cohort consisted of persons who initiated second generation antipsychotic/anticonvulsant or lithium medication one year before implementation of the prior authorization policy, while the policy cohort group consisted of persons who initiated therapy when the policy was in effect. Two subgroups were established within these cohorts: those that had at least 2 visits to Community Mental Health Centers (CMHC-attenders) and those that had less than 2 visits (non-attenders) during the 8 month observational interval⁴⁶. Overall the policy cohort had higher rates of discontinuation in comparison to the pre-policy cohort. Thirty eight percent of CMHC-attenders and 41% of non-attender within the policy cohort discontinued medication in comparison to the 31% of CMHC-attenders and 33% of non-attenders in the pre-policy group. Non-attenders within the policy cohort were more likely to discontinue medications within 30 days of initiation than those in the pre-policy cohort⁴⁶.

Each year the total out-of-pocket threshold increases for Part D enrollees. Rising out-of-pocket expenses can potentially affect minority populations that are classified as near poor or with comorbidities. Additionally, because low socioeconomic status can be more prevalent among minority populations, strategies used to contain cost for high-cost specialty medications can greatly affect minority beneficiaries. Studies have not been conducted to examine the roles of these issues on minorities on Medicare after Part D implementation. However, other related studies have found that rising copayments was associated with reduction in medication adherence⁴⁷. High-cost specialty medications were associated with increase in prescription abandonment⁴⁸.

Discussion

According to Healthy People 2020 health disparities can be defined as different health outcomes that exist between different populations that can correlate with environmental, social, and economic differences⁴⁹. Health disparities contribute to social injustices because they cause financial burden, poorer health status, and higher mortality rates^{7,8,22}. Therefore, it is imperative that our society continues to make improvements towards our health care system in order to reduce and/or eliminate health disparities. Healthy People 2020 seek to eliminate health disparities, foster health equality, and improve overall health for all persons⁴⁹. One goal for Healthy People 2020 is to improve access and the quality of health care services. In order to achieve that goal Healthy People have created several objectives that center around medical insurance which includes prescription drug coverage. One of the objectives is to increase

the proportion of person with health insurance, while another is to reduce the number of people who are unable to obtain or have to delay medical care and the use of prescription medication⁴⁹. Therefore, Medicare Part D must be evaluated and analyzed continuously to determine if it meets the needs of our society.

Medicare Part D has improved access to prescription medication for elderly persons enrolled. Although it has made significant improvements in utilization patterns, more in-depth research may be needed to determine if improvements are shared equally among different racial and ethnic groups⁵⁰⁻⁵². Although Medicare Part D has made improvements for minority populations, some of the plans' characteristics such as the donut hole, the complexity and number of plan and drug utilization strategies can adversely affect minority beneficiaries, especially those who are classified as low income and with comorbidities⁵³. Some of the plans' characteristics can potentially increase out-of-pocket expenses, decrease prescription drug utilization, and contribute to health inequalities. So far research regarding these issues has been very limited.

Changes to the Part D plan in 2010 under the PPACA sought to close the coverage gap by providing discounts for the next several years until 2020 when this gap is completely closed⁶. However, the impact of the closure of the coverage gap on disparities remains to be seen. This current review suggests that problems besides the coverage gap can also contribute to health inequalities among minority populations. High premiums, decision-making capabilities and inappropriate plan selection by consumers can greatly impact their experience with the program^{40,48,53}. Various state-wide programs offer Medicare assistance for seniors⁵⁴⁻⁵⁶; however, utilization of these services is still problematic because in some states, low income beneficiaries have fewer choices of plans unless they pay out-of-pocket for premiums higher than what the subsidy covers. Moreover, these beneficiaries also may have a disrupted coverage because they have to switch their plans or pay higher premiums to stay in the same plan⁵⁷.

In summary, issues addressed in this review provide insight on problem areas that may contribute to health disparities. In order for Medicare Part D to contribute to Healthy People 2020 goal of eliminating health disparities, certain policy interventions may be needed. These interventions can target different aspects of the prescription drug benefits such as reducing complexity of the plans, providing affordable plan choices and increasing access to prescription medications for vulnerable beneficiaries including minorities and those belonging to lower income groups. Reducing number of Part D plan choices, highlighting important differences among Part D plans, and having policies that do not impose utilization management strategies could be some of the policy interventions for consideration.

Limitations

This study has multiple limitations despite its significant contributions to the literature. The studies reviewed have been conducted before the closure of donut holes in Medicare Part D so the status afterwards has not been reflected. Additionally, literature is limited on the effects of Medicare Part D on

minorities with every given chronic condition. Therefore, future studies are needed to examine the status after the closure of donut hole after 2020 and for patients with any given chronic condition. Novel strategies may need to be developed to solve the problems that were identified in the Medicare Part D program.

Conclusion

In conclusion, this literature review provides insights and some evidence of the characteristics of Medicare Part D may be benefiting minorities to a lesser degree. The objective for the establishment of Medicare Part D by policy makers was to provide prescription coverage to elderly in order to improve health outcomes. This review provides some evidence that problem areas existed even after the program implementation and there is some potential vulnerability for minority beneficiaries because they tend to have lower income in comparison to whites. More research should be conducted so that policy makers develop appropriate decisions to better ensure that people from all racial and ethnic groups are benefiting equally from all aspects of the Medicare Part D program.

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