

11-13-2025

Associations Between Medicare Advantage Supplemental Dental Benefits and Voluntary Disenrollment

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Walden University
2025

Abstract

Associations Between Medicare Advantage Supplemental Dental Benefits and Voluntary

Disenrollment

by

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Services

Walden University

November 2025

Abstract

Dental health is a critical component of overall well-being but is not a mandatory benefit in the Traditional Medicare or Medicare Advantage programs. Few researchers explore whether the generosity of supplemental benefits in Medicare Advantage, such as dental coverage, are associated with better beneficiary experience and retention in the program. The purpose of this quantitative study was to explore the potential associations between supplemental dental benefits generosity and voluntary disenrollment in Medicare Advantage plans. Penchansky and Thomas' theory of access (1981) and Rivera-Hernandez et al.'s (2021) Medicare Advantage plan choice and retention framework were used to understand the associations between elements of access and beneficiary decision-making. One-way analysis of variance (ANOVA) was used to explore the topic, leveraging publicly available data to explore this association. Medicare Advantage contracts were classified into five groups based on the enrollment weighted average of their plan-level supplemental dental benefit generosity. This study found a statistically significant association between supplemental dental benefits and voluntary disenrollment ($F(4) = 8.373, p < .001$). Plans offering no supplemental dental benefits had the lowest mean voluntary disenrollment ($M = .083, SD = .071$) whereas plans with the high generosity had the highest mean voluntary disenrollment ($M = .176, SD = .099$). These findings indicate that supplemental dental benefit generosity may not actually contribute to a positive beneficiary experience and retention, warranting further investigation to understand supplemental benefit generosity and beneficiary experience and satisfaction.

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Chapter 1: Introduction to the Study

Medicare is a government-sponsored health insurance program that covers medically-necessary services for Americans who are over 65 years or eligible due to disability. As of September 2024, 67.4 million individuals were eligible for Medicare, which is expected to reach more than 80 million beneficiaries by 2030 (Center for Medicare Advocacy, 2023; Centers for Medicare and Medicaid Services [CMS], 2024). Two programs are available for Medicare beneficiaries: the traditional Medicare fee-for-service program and Medicare Advantage, which is a managed care model that is offered to Medicare beneficiaries by private insurance companies rather than directly from the federal government.

Access to care for Medicare populations is a critical consideration for policymakers and providers because of concerns regarding quality and costs of care for this growing population. While many beneficiaries have opted for traditional Medicare, some elect to enroll in Medicare Advantage. Medicare Advantage plans are growing in popularity among Medicare beneficiaries, with more than 50% of Medicare beneficiaries selecting Medicare Advantage rather than traditional Medicare as of September 2024 (CMS, 2024). Despite the popularity of such plans, Medicare Advantage plans often see beneficiaries voluntarily disenroll due to availability of new benefits, access to better provider networks, access to plans with better cost-sharing, or generally dissatisfaction with a given plan. Voluntary disenrollment is measured in terms of which beneficiaries leave Medicare Advantage plans voluntarily, either switching to another Medicare Advantage plan or reverting to traditional Medicare. Voluntary disenrollment can involve

involuntary reasons for disenrollment, such as loss of eligibility or moving out of geographic service areas. Addressing voluntary disenrollment rates can lead to insights about which plans may offer better beneficiary experiences and care and have lower rates of voluntary disenrollment. Voluntary disenrollment is more common among beneficiaries with more medical or social needs, and voluntary disenrollment can hinder access to care among beneficiaries leaving plans. Higher rates of voluntary disenrollment are also associated with poorer quality of care, both in terms of process and outcome measures among Medicare Advantage beneficiaries. Benefit generosity is another factor that can influence access to care, beneficiary satisfaction, and voluntary disenrollment.

Benefit generosity may influence what plans beneficiaries select. The fewer out-of-pocket costs beneficiaries must pay and the more service plans are available, the more generous benefits are. Beneficiaries may choose a Medicare Advantage plan based at least in part on generosity of supplemental dental benefits. Supplemental dental benefits are a common factor influencing which Medicare Advantage plans beneficiaries may elect to choose, given lack of coverage of dental benefits in traditional Medicare and potential high out-of-pocket costs for preventive and comprehensive dental care with plans that are purchased to supplement traditional Medicare. While research has explored why beneficiaries may select one type of coverage over the other, it is unclear whether some factors influence their willingness to remain enrolled in plans or disenroll voluntarily.

Researchers and policymakers need to further evaluate access and use of supplemental benefits. Historically, the CMS has not required Medicare Advantage to

report complete supplemental benefit use data. To address this historical data barrier, I presented an alternate means of exploring associations between supplemental dental benefit generosity and voluntary disenrollment. Medicare policymakers are responsible for ensuring Medicare Advantage beneficiaries are not wrongly enticed to enroll in poor-quality plans because of generous supplemental benefits. The body of literature thus far has focused on Medicare Advantage star ratings and enrollment patterns. Researchers have not focused on relationships between supplemental benefit generosity and voluntary disenrollment.

This quantitative study involved expanding current literature and addressing associations between Medicare Advantage supplemental dental benefit generosity and voluntary disenrollment. This has implications for expanding understanding of factors influencing voluntary disenrollment and may also support the need for greater transparency regarding use data in terms of Medicare Advantage supplemental benefits for policymakers and researchers. This study was significant in that it provided further insights regarding Medicare Advantage plans in terms of benefits and voluntary disenrollment with the potential to improve beneficiary access, experiences, and ultimately quality of care. Without understanding associations between supplemental dental benefit generosity and voluntary disenrollment, policymakers and Medicare Advantage plans will have limited visibility in terms of determining how benefit generosity may impact beneficiary plan choice to stay in plans or to disenroll voluntarily.

As traditional Medicare does not yet cover supplemental dental benefits, information regarding associations between supplemental dental benefit generosity and

voluntary disenrollment via Medicare Advantage plans may help inform future policy decisions about level of dental benefits that should potentially be covered in the traditional Medicare program or as a requirement for all Medicare Advantage plans. Understanding these associations is critical to ensuring policy and benefit coverage decisions are being made to provide Medicare Advantage beneficiaries with optimal coverage, promoting beneficiary retention and minimizing voluntary disenrollment.

Given known associations between high rates of voluntary disenrollment and poorer outcomes for Medicare Advantage beneficiaries, this research was essential to optimizing access and quality of care among the growing number of Medicare Advantage beneficiaries in terms of better patient experience and satisfaction, better health outcomes, and better continuity of care.

The research question and hypotheses for this quantitative study were:

RQ: Is there an association between Medicare Advantage supplemental dental benefits generosity level and voluntary disenrollment?

H₀: There is no association between Medicare Advantage supplemental dental benefits generosity level and voluntary disenrollment.

H_a: There is an association between Medicare Advantage supplemental dental benefits generosity level and voluntary disenrollment.

I used the theory of access by Penchansky and Thomas and the Medicare Advantage plan choice and stickiness framework as my theoretical foundation. These frameworks were used to provide a foundation for examining health plan benefit generosity as a component of beneficiary access to care. The stickiness framework

supported the importance of voluntary disenrollment as a dependent variable involving Medicare Advantage beneficiary experiences.

I addressed a meaningful gap in literature on Medicare Advantage. As policymakers, practitioners, providers, and other stakeholders grapple with how best to evolve the Medicare Advantage program, having greater insights regarding how supplemental dental benefit generosity might influence voluntary disenrollment is necessary. Current literature involving this topic is detailed in Chapter 2.

Chapter 2: Literature Review

Medicare Advantage continues to grow as the preferred alternative to the fee-for-service traditional Medicare program. Given the growth of Medicare Advantage, driven in part by its unique capability to provide supplemental benefits such as dental, vision, and hearing that are not covered under the traditional Medicare program, understanding how these supplemental benefits are associated with beneficiary enrollment decisions is important for future policymaking and coverage decisions. This quantitative study involved exploring associations between Medicare Advantage supplemental benefits and voluntary disenrollment. Benefit generosity was the independent variable and voluntary disenrollment rates were the dependent variable.

Literature Search Strategy

I used the following key words in this study: *Medicare Advantage, traditional Medicare, supplemental benefits, benefit generosity, dental benefits, dental care, dental services, theory of access, access, and quality*. The Walden University Library Thoreau database was used for these searches. All sources were published between 2019 and 2025. I addressed relevant literature, including key policy documents involving coverage allowances for Medicare Advantage.

Access to Healthcare Services

Literature has frequently involved evaluating access to care to ensure patients get healthcare services that are required to treat specific medical conditions and maintain general health and wellbeing. Access to care directly correlates with beneficiary use of needed healthcare services and ultimately care and quality outcomes for those

beneficiaries. Availability and reachability positively affect patient healthcare services utilization, as providers that are in closer proximity to beneficiaries are more likely to be used than those that require extensive travel (Jorg & Haldimann, 2023). Patients in rural areas have geographic access disadvantages given lack of proximity to many healthcare services beyond basic primary healthcare. Although geography is a key determinant of healthcare access, literature has not fully explored the role of benefit generosity. This gap highlights the importance of investigating how supplemental Medicare Advantage dental benefits affect access and voluntary disenrollment.

Access has also been explored in more specific patient populations. Lalani and Cai (2022) found addressing financial barriers to access such as better health insurance coverage and community and provider education about palliative care improved access and subsequent use. Geographic access to healthcare services for specific populations is important in terms of understanding how access, use, and satisfaction correlate.

Uninsured and Underinsured Populations

Uninsured and underinsured populations have inadequate access to care, indicating health insurance benefit generosity is an important element of understanding healthcare access. Lipton (2021) found greater benefit generosity was associated with greater care use among Medicaid beneficiaries. Starc and Town (2020) found more generous benefits for Medicare prescription drug coverage were associated with greater use of drug coverage and related medical services, especially for common chronic conditions. Continued study of healthcare access as a factor which is affected by

healthcare insurance coverage is necessary to understand how benefit generosity impacts beneficiary satisfaction and enrollment decisions.

Since adopting the Affordable Care Act, researchers have continued to evaluate the impacts of health insurance coverage and benefit generosity among Americans. Choi et al. (2020) found older Americans between 50 and 64 without health insurance coverage were seven times more likely to postpone or outright forgo needed healthcare services. Wray et al. (2021) found beneficiaries with more generous health insurance coverage reported greater access to care. Public health insurance coverage tended to be associated with greater generosity and coverage, resulting in better access than beneficiaries with private insurance coverage.

While literature has explored the overall importance of health insurance coverage and implications of being underinsured, there is limited literature involving specific nuances of benefit generosity.

Researchers focused on Medicare and Medicare Advantage have also explored different access perspectives for these beneficiaries. Feyman et al. (2019) found health maintenance organizations (HMOs) in urban areas associated with higher incomes and higher density of physicians were more likely to have narrow networks, but coverage was still adequate for beneficiaries in order to have adequate access to care. Raoff et al. (2021) found that many Medicare Advantage beneficiaries in California had health plans with limited access to facilities in their provider networks, and such access was not correlated with overall plan star rating or plan popularity as measured by total enrollment.

There is a lack of information regarding how Medicare Advantage plan benefit generosity influences access and beneficiary experiences.

Focusing on Medicare

Healthcare spending in the United States has long been a concern among policymakers, providers, payers, and beneficiaries. In 2021, the U.S. national health expenditure (NHE) reached \$4.3 trillion, accounting for 18.3% of the U.S. gross domestic product (GDP; CMS, 2023a?). Medicare spending grew by 8.4% to \$900.8 billion in 2021 (CMS, 2023b?). Medicare spending in 2021 also accounted for almost 10% of the entire U.S. federal budget (Cubanski & Neumann, 2023). By 2031, total costs of the Medicare program will surpass \$1.8 trillion due to the continued growth of Medicare-eligible populations and related increases in costs for healthcare and program administration. Policymakers are concerned that the growth of Medicare spending may outpace the ability to finance it, resulting in not just budgetary challenges but potentially limited coverage and access to care for Medicare beneficiaries in the future. Medicare Advantage is also growing, reaching over 50% among Medicare beneficiaries in 2023 (CMS, 2023b?). Cubanski and Neumann (2023) indicated Medicare Advantage payments for Medicare Parts A and B benefits alone (excluding Part D prescription drug coverage) will account for the majority of \$1.8 trillion in 2031, or about \$943 billion. Ensuring quality of care for Medicare beneficiaries can be sustained and optimized is important for empirical research and policy development. This may help ensure that program costs are prioritized and focused on value and need for Medicare beneficiaries.

Financial incentives available to Medicare Advantage plans through risk adjustment and quality bonus payments may paint an artificially favorable picture for the managed care program. Opponents of the Medicare Advantage plan argue that these incentives may drive Medicare Advantage plans to over-invest in the wrong areas, focusing on appealing supplemental benefits offerings (such as vision, dental, and hearing benefits not available in Traditional Medicare) to influence beneficiary plan selection and experience, rather than supplemental benefits that improve quality of care and beneficiary health and outcomes (Meyers et al., 2022). Other opponents argue that despite CMS's ongoing investment in quality measure development and management, many measures are highly subjective and lack sufficient specificity for cost-effectiveness (van Dover & Kim, 2021). Despite these areas of attention, the literature lacked clear rigor regarding how Medicare Advantage supplemental benefits may be associated with quality measures within the Medicare Advantage Stars Ratings.

Evolving Access for Medicare Beneficiaries

Created in 1965, Traditional Medicare provided basic health insurance coverage for elderly adults who likely did not have insurance options and typically had lower incomes due to aging and inability to work, resulting in almost half of all American seniors not having health insurance in the mid-1960s (El-Nahal, 2020). The initial design of Traditional Medicare included Part A (Hospital Insurance) and Part B (Medical Insurance). Over time, the Medicare program has expanded its coverage to a broader range of beneficiaries, with beneficiary eligibility expanding to individuals with disabilities or end-stage renal disease (ESRD) (CMS, 2021; El-Nahal, 2020). The

Medicare program now covers healthcare services for some 58.6 million beneficiaries (Freed et al., 2022). As Medicare grows, policymakers work to optimize access to care for beneficiaries and improve the quality of care.

Medicare Part A provides coverage primarily for inpatient hospitalizations and related services such as skilled nursing facility care, some skilled home health services, and hospice care (El-Nahal, 2020). Medicare Part B covers various outpatient services, including primary care and specialty physician services, outpatient therapy, outpatient diagnostics and imaging, radiation therapy, dialysis, and certain drugs administered in a physician's office (El-Nahal, 2020). Medicare Parts A and B have different cost-sharing paradigms or the various structures for copayments or co-insurances the beneficiary must pay for services received, set by CMS, and updated annually, which can create financial burdens for beneficiaries. Many routine services – like dental cleanings and care, routine vision exams and glasses, and hearing aids – are not covered under Traditional Medicare.

Due to the out-of-pocket challenges associated with Traditional Medicare, some Medicare beneficiaries elect to purchase Medicare supplement (or Medigap plans) (El-Nahal, 2020). A 2021 report from the Medicare Payment Advisory Commission (MedPAC estimated that about 21.7% of Medicare beneficiaries had Medigap plans in 2018 (MedPAC, 2021). While Medigap coverage can be valuable to those beneficiaries who can afford the additional premiums, many beneficiaries must consider alternate coverage options to improve the affordability of their Medicare coverage, including opportunities to enroll in Medicare Advantage plans. Medigap plans only offer coverage

for Traditional Medicare cost-sharing and thus do not address beneficiary coverage for routine services like dental, vision, and hearing.

In 2003, the Medicare Prescription Drug Improvement and Modernization Act (MMA) marked two tremendous developments in the structure and function of Medicare to improve access and affordability for Medicare beneficiaries. First, the MMA allowed some privatization of Medicare by creating Medicare Part C – or Medicare Advantage (CMS, 2021) through private health plans. The creation of Medicare Advantage allowed private health plans to introduce managed care principles, including utilization management and more flexible cost-sharing structures, to better meet the varying needs of Medicare beneficiaries. The private health plan must apply to the Center for Medicare Services (CMS) to participate as a Medicare Advantage plan and annually submit a bid that outlines the benefits covered, costs expected to be incurred, utilization management, and other tactics to manage costs and optimize quality. These private plans are required to include all mandatory benefits covered by Traditional Medicare but with greater flexibility in cost-sharing design. Medicare Advantage plans may also offer supplemental benefits, from vision, dental, and hearing to over-the-counter allowances, transportation, and meal delivery for eligible beneficiaries (2021). The MMA also introduced a new, optional prescription drug benefit to the Medicare program, which went into effect in 2006 – Part D (2021). Over time, most Medicare Advantage plans began offering Part D coverage in addition to Part C, creating a single source of coverage for Medicare beneficiaries. Medicare Advantage has gained popularity among Medicare beneficiaries and has seen dramatic increases in Medicare funding shifting to cover its growing costs.

Such growth has prompted additional attention from policymakers to ensure that Medicare Advantage achieves its goal of improving the cost and quality of care for Medicare beneficiaries.

Optimizing Quality

Significant attention and investments have been made to optimize the quality of care provided by Traditional Medicare and Medicare Advantage. Between 2008 and 2018, CMS invested more than \$1.3 billion in developing quality measures (Wadhera et al., 2020). The growing focus on Medicare Advantage and its complex Stars Ratings program shows an ongoing commitment to evaluating whether the managed services approach to Medicare provides greater quality of care.

Landon et al. (2023) found that Medicare Advantage outperformed Traditional Medicare's management of the use of services and provided better quality of care. The authors found that in both clinical quality measures, such as breast cancer screening completion rates and diabetes retinal exams, and beneficiary self-reported experience measures, including rating of overall care as nine or ten (on a scale of ten) and access to needed care, Medicare Advantage outperformed Traditional Medicare (2023). The authors discussed that an important driver in this better performance of Medicare Advantage was the financial incentive to limit discretionary care (due to risk-adjusted capitation, which pays plans on a per beneficiary per month basis), as well as the financial incentive to optimize quality (to receive additional bonus payments through the Medicare Advantage Stars Ratings quality program) (2023). Such conclusions by Landon et al. (2023) align with previous findings by DuGoff and Tabak (2021) in a systemic

literature review that found that Medicare Advantage consistently delivers better quality of care, better health outcomes, and patient experience, with generally lower spending.

Monitoring Quality: Medicare Stars Rating Program

The CMS utilizes the Medicare Stars Rating as a mechanism for measuring the quality of a Medicare Advantage plan across multiple dimensions. The Medicare Stars Rating uses an aggregated quality rating of 1 to 5 Stars to communicate the plan's quality as assessed by the various quality measures included in the program. CMS also uses this rating to determine the plan's rebate percentage and quality bonus payment eligibility.

Medicare Advantage plans that perform well under the Medicare Stars Rating program framework receive important financial incentives for the quality their plans yield in the form of higher rebates and quality bonus payments. Medicare Advantage plans then reinvest these additional dollars to create benefit designs that are more attractive to Medicare beneficiaries who might be shopping for new plans, including lowering cost-shares for beneficiaries and providing a variety of supplemental benefits, such as dental cleanings and dentures, routine vision exams and corrective lenses, and hearing aids. Nicholas and Wu (2021) explored the association between higher rebates and impacts on Medicare Advantage beneficiary out-of-pocket spending and access to supplemental benefits. They found positive correlations between rebate dollars and supplemental benefit availability but a lack of complete pass-through of rebate savings to beneficiaries, “suggesting that MA plans are not excessively generous in their benefit design” (2021, p. 8). As the performance in the Stars Rating drives the level of rebates and quality bonus payments plans receive to invest in their supplemental benefits, understanding the

association between these benefits and key measures of the Star Rating, such as voluntary disenrollment, is important to ensure that supplemental benefits are being funded in a way that gives a positive experience to Medicare Advantage beneficiaries. This research addressed this literature gap by exploring the association between Medicare Advantage supplemental dental benefits and the Star Rating patient experience measure of voluntary disenrollment.

Voluntary Disenrollment

One of the unique elements of Medicare Advantage is beneficiary choice – or the ability for a Medicare Advantage beneficiary to select a plan to enroll and choose when to disenroll. One of the persistent measures of the Stars Ratings that is present in both the Part C and Part D Ratings is called “Members Choosing to Leave the Plan,” known more commonly among researchers and industry experts as “voluntary disenrollment” (CMS, 2022). The voluntary disenrollment measure captures the percentage of members who chose to leave a specific Medicare Advantage contract during the measurement period (2022). Specific reasons for disenrollment – such as moving out of a plan’s service area or losing Part C eligibility – are considered involuntary as they are beyond the control of the beneficiary (and potentially the plan) (2022). Voluntary disenrollment may occur in two ways: beneficiaries may move from Medicare Advantage to Traditional Medicare or switch between Medicare Advantage plans (Meyers et al., 2021). On average, about nine (9) to ten (10) percent of Medicare Advantage beneficiaries voluntarily disenroll from their Medicare Advantage plans in a given year (DuGoff & Cho, 2019; Martino et al., 2020). Understanding the drivers of voluntary disenrollment and possible implications on

patient experience and continuity of care is essential to fully understanding the Medicare Advantage program's quality.

Researchers and policy experts typically believe that voluntary disenrollment is driven by poor experiences with the Medicare Advantage plan (Rivera-Hernandez et al., 2021). Voluntary disenrollment disrupts the continuity of care as providers in-network for one Medicare Advantage plan may not be in-network for another. Also, because benefit coverage may vary from plan to plan, some services covered under one Medicare Advantage plan may not be covered by another or maybe more costly to the beneficiary (Martino et al., 2020). These potential disruptions to continuity of care caused by voluntary disenrollment are especially problematic among beneficiaries with chronic conditions and associated greater medical complexity and may contribute to higher costs for the Medicare program (2020). Research by Meyers et al. (2019) found that Medicare Advantage beneficiaries with greater medical complexity (or “high needs” beneficiaries) tend to switch more frequently between Medicare Advantage plans or revert to Traditional Medicare, potentially due to limited health literacy and frustrations with access to care across many providers. However, they also found that enrollment in 5-Star rated Medicare Advantage plans caused a 30.1% reduction in the probability of switching among high-need beneficiaries compared to Medicare Advantage plans with lower Star Ratings (2019). Medicare Advantage plans with lower Overall Star Ratings may be more likely to see higher voluntary disenrollment rates (2019). No studies have investigated the potential relationship between supplemental benefit generosity and voluntary

disenrollment. This persisting gap necessitates a rigorous examination, as explored in this study.

High-needs beneficiaries include those with chronic conditions, populations that typically benefit from good continuity of care, yet these beneficiaries are often more likely to disenroll than their healthier counterparts. Chung et al. (2019) found that beneficiaries with chronic diseases in Medicare Advantage plans (such as type 2 diabetes mellitus, cardiovascular disease, chronic obstructive pulmonary disease, rheumatoid arthritis, or breast cancer) were 30-40% less likely to disenroll ($p < 0.001$) than controls without chronic disease. The researchers also found that among chronic disease beneficiaries who did disenroll, the length of enrollment before disenrollment tended to be higher than among matched controls (2.3 to 2.7 years versus 1.5 to 1.8 years, $p < 0.001$). As Chung et al.'s (2019) findings contradict those of Meyer et al. (2019), further research is warranted to understand better what other dimensions might impact a beneficiary's decision to disenroll from their Medicare Advantage plan – such as the role of benefit generosity.

Some researchers have found that a Medicare beneficiary's "newness" to Medicare Advantage may be an important factor in switching behaviors. Dong et al. (2022) evaluated the rate of voluntary disenrollment among Medicare Advantage within one year after enrollment and then again within five years. They found that 15.6% of new Medicare Advantage beneficiaries changed coverage within one year, and almost 50% changed coverage within five years (2022). Medicare Advantage beneficiaries voluntarily disenrolling and switching back to Traditional Medicare were only half that of those who

voluntarily disenrolled and switched to other Medicare Advantage plans (2022). Dong et al.'s (2022) findings provide important insights into changing behaviors among new Medicare Advantage beneficiaries who might be “shopping” and switching more regularly than more tenured beneficiaries. Dong et al. (2022) did not explore possible drivers of this behavior, such as the association between benefit generosity and voluntary disenrollment, which points to a lingering gap in the literature.

Geography may also influence voluntary disenrollment. Park et al. (2021) found that Medicare beneficiaries living in rural areas switched from Medicare Advantage to Traditional Medicare at a rate more than double that of non-rural beneficiaries (10.5% versus 5%, $p < 0.001$). Beneficiaries who were medically complex (or “high needs”) had an even more dramatic differential in switching behaviors. High-needs Medicare Advantage beneficiaries living in rural areas voluntarily disenrolled and reverted to Traditional Medicare at a rate of 11.6% ($p < 0.001$) versus only 6.2% ($p < 0.001$) of non-rural high-needs Medicare Advantage beneficiaries (2021). Rural Medicare Advantage beneficiaries tended to cite their reasons for voluntary disenrollment as related to access to care – such as ease of getting to and from an in-network physician from home, availability of specialists, and out-of-pocket expenses with adjusted switching rates among rural beneficiaries of 19.7%, 12.5%, and 10.1%, versus non-rural beneficiaries of 9.2%, 9.9%, and 9.5%, respectively (2021). This finding indicates that an essential dimension of voluntary disenrollment is tied to accessibility in terms of geographic proximity and benefit generosity. What is not explored in the research by Park et al. is the

degree to which benefit generosity impacts voluntary disenrollment, again supporting a gap in the literature related to drivers of Medicare Advantage voluntary disenrollment.

Associations Between Star Performance and Voluntary Disenrollment

The association between Medicare Advantage Stars Rating performance and voluntary disenrollment has also been explored in the literature; however, the association between supplemental dental benefit generosity and voluntary disenrollment has not. DuGoff and Cho (2019) found that Medicare Advantage plans with high disenrollment tend to have lower Overall Star Ratings than those with average to low voluntary disenrollment. The researchers found that newer plans tended to have higher rates of voluntary disenrollment, with some 37.1% of plans with high rates of voluntary disenrollment being less than five years old, compared to only 8.9% of plans with low rates of voluntary disenrollment (2019). Smaller plans – those with 5,000 members or less – also tended to have higher rates of voluntary disenrollment – representing some 38.2% of plans with high disenrollment compared to only 20.9% of plans with low disenrollment (2019). Subsequent research by Meyers et al. (2021) supports this inverse relationship between Overall Star Ratings and voluntary disenrollment, finding that voluntary disenrollment tends to be less common among Medicare Advantage contracts with higher star ratings (Overall Star Rating of 4 or more), with high performing contracts having 20.8% less voluntary disenrollment than lower performing contracts. While these findings are important to understanding key characteristics of Medicare Advantage plans with high disenrollment – including those plans that are newer, smaller, and with more disadvantaged populations – neither DuGoff and Cho (2019) nor Meyer et

al. (2021) nor other research has explored the associations between benefit generosity and disenrollment, highlighting a persistent gap in the literature for more fully understanding why Medicare Advantage beneficiaries voluntarily disenroll from plans they selected.

Benefit Generosity in Medicare Advantage

Health plan generosity is another essential functional and policy dimension to explore in the context of Medicare Advantage. “Generosity” is a term used in discussing health insurance coverage to explain the covered services and costs (Toth, 2018).

Generosity is sometimes evaluated empirically – by looking at out-of-pocket costs paid by the beneficiaries and other measures of access and benefit richness – and subjectively through measures of beneficiary perceptions of unmet medical services and unmet needs (Toth, 2018). Health plan generosity has policy implications, direct access, and financial impacts on beneficiaries. Health plan generosity can have important implications for beneficiaries and financiers like the federal government. For the beneficiaries, health plan generosity directly impacts the cost to the beneficiary and access to services. As described by Yarbrough, “Plan generosity is an important outcome to both consumers and the federal government. Lower costs mean lower spending for individuals, which could help achieve the [Affordable Care Act] policy’s goal of reducing the number of uninsured and underinsured Americans” (2018, p. 57). Plan benefit generosity is thus an essential dimension of understanding access to care from a health insurance lens. Given the growing prevalence of Medicare Advantage, understanding Medicare Advantage plan benefit generosity is vital for ensuring benefits support beneficiary access.

The limited studies about Medicare Advantage plan benefit generosity have typically examined enrollment based on premiums or out-of-pocket costs. Adrion (2019) evaluated relationships between insurer market structure, health plan quality, and premiums in Medicare Advantage and found variable plan premiums associated with market density and quality. A 2019 study by Keohane and Finch assessed cost-sharing for specific Medicare Part B covered drugs and the implications of plan benefit generosity on utilization behaviors among patients with cancer. Pelech (2019) noted associations between Medicare Advantage competition in each market and out-of-pocket costs, further emphasizing the relationship between plan benefit generosity in the way of cost-sharing and the influence of beneficiary choice. Chernew et al. (2023) modeled how changes to CMS payment to Medicare Advantage plans (known as benchmarks) found that decreases to benchmarks would likely be reflected in reduced plan benefit generosity, with increases to premiums and co-payments. These studies thus demonstrate a possible link between plan benefit generosity and voluntary disenrollment (a specific form of beneficiary choice in Medicare Advantage), but the literature gap persists, warranting the research discussed herein.

Some studies of Medicare Advantage have also looked at some service utilization as an element of plan benefit generosity. Wray et al. (2021) compared Traditional Medicare and Medicare Advantage beneficiaries' self-reported measures of access to care and cost of care. They found that beneficiaries with public health insurance – such as Traditional Medicare and Medicare Advantage – tended to have greater benefit generosity for preventive services and specialty care than those covered by private

individual or employer-sponsored plans. Aggarwal et al. (2022) further explored the role of plan benefit generosity for preventive services. Certain Medicare-covered preventive services have no copayments in Traditional Medicare or Medicare Advantage. They found that utilization of these services was typically high among Medicare beneficiaries, even those with low-income status, because of the more generous plan coverage of the benefits. While these studies again indicate the importance of plan benefit generosity, researchers have not adequately explored how Medicare Advantage supplemental benefits influence beneficiary voluntary disenrollment. As supplemental benefits grow as a major differentiator between Traditional Medicare and Medicare Advantage, understanding whether the investment in such benefits positively impacts beneficiary experience is key for evaluating the Medicare Advantage program.

Supplemental Benefits in Medicare Advantage

Supplemental benefits in Medicare Advantages can include various services or devices needed to ensure access to holistic care beyond traditional medical services. Examples of supplemental benefits that Medicare Advantage plans have regularly offered include routine and comprehensive dental coverage, hearing aids, routine vision exams and glasses, acupuncture, bathroom safety devices, routine chiropractic services, fitness services, enhanced disease management programs, in-home safety assessments, post-discharge meals, over-the-counter allowances, personal emergency response systems, annual physical exams, post-discharge in-home medication reconciliation, remote access technologies, telemonitoring services, transportation, visitor/travel benefits, and worldwide urgent/emergent care (CMS, 2024). The criteria for consideration as a

“traditional” Medicare Advantage supplemental benefits not currently be covered as a Medicare Part A or B service, be an item or service that is primarily health-related, and cause the health plan to incur some direct medical costs.

Supplemental benefits come in various configurations, with plans offering varying degrees of coverage within specific benefit categories (e.g., one plan might offer only routine dental exams and cleanings while another offers coverage for dentures). Plans typically use these as competitive differentiators to influence beneficiary enrollment decisions, including whether a Medicare Advantage beneficiary will elect to stay in the plan they are currently enrolled in or voluntarily disenroll. Supplemental benefits include traditional staples that are increasingly available in most Medicare Advantage plans.

Traditional supplemental benefits in Medicare Advantage have increased in popularity and availability. Most plans offer such benefits as vision, dental, hearing, and fitness benefits (Freed et al., 2022; Kornfield et al., 2021). These “traditional” supplemental benefits have become more prevalent in Medicare Advantage, where key benefit types are gradually increased, including vision, hearing, and dental, with most plans offering some supplemental benefits. Given the growing popularity of Medicare Advantage and the fact that Traditional Medicare does not cover key dental benefits, a focus on supplemental dental benefits generosity in Medicare Advantage is proposed for this research. The importance of such dental benefits is discussed in the next section.

Supplemental Dental Benefits Coverage and Generosity in Medicare Advantage

Supplemental dental benefits coverage and generosity are important considerations for the Medicare population. Despite the growing importance of dental

care, access and affordability remain persistent issues for the Medicare population.

Approximately 65% of Medicare beneficiaries have no dental coverage, with almost half forgoing regular dental care (Freed et al., 2019). Some reports indicate that almost 20% of Medicare beneficiaries who did utilize dental care spent more than \$1,000 in out-of-pocket costs (Freed et al., 2019; Willink, 2020). Freed et al. (2021) conducted a follow-up analysis of their work in 2019 and found that the number of Medicare beneficiaries with no dental coverage had dropped from 65% in 2019 to 47% in 2021, driven by the growing penetration of Medicare Advantage. Willink et al. (2020) found that only 21% of Traditional Medicare beneficiaries purchased private dental insurance, while 62% of Medicare Advantage enrollees had some dental benefits embedded in their plans.

Willink's earlier work in 2019 also showed that Medicare Advantage enrollees had higher rates of dental benefit coverage than Traditional Medicare beneficiaries. Among Medicare Advantage beneficiaries in 2021, 94% of Medicare Advantage beneficiaries in individual plans had access to some degree of dental coverage (2021). While coverage varied among plans, 86% had some preventive and comprehensive benefits, and 78% with more comprehensive benefits had annual dollar limits on dental coverage (with an average limit of \$1,300) (2021). The majority of Medicare Advantage beneficiaries (approximately 64%) whose plans include preventive dental benefits had no copays for these services (such as oral exams, cleanings, fluoride treatments, and some x-ray coverage) (2021). Most beneficiaries with comprehensive coverage had 50% co-insurances for fillings, extractions, and root canals (2021). While access to supplemental dental benefits is growing in Medicare Advantage – as is the generosity of such benefits –

some beneficiaries may still face financial barriers to accessing comprehensive services. Associations between dental benefit generosity and beneficiary experience and satisfaction remain untouched in the Medicare Advantage literature.

Some researchers have found that older adults with poor oral health report poorer overall quality of life, including more frequent chronic conditions, more common challenges with activities of daily living, and more frequent reports of psychosocial challenges (Abbas et al., 2022). Khalifa et al. (2020) also found that oral health-related quality of life (OHRQoL) was lower among patients with poorer oral health: patients with higher degrees of decayed and missing teeth were more likely to report issues with physical disability, physical pain, psychological discomfort, and psychological disability ($p < 0.05$). Some 15% of adults ages 65 or older were edentulous, with the rates being more dramatic among people with low incomes (Freed et al., 2019). Muller et al. (2017) emphasized the need for oral health services and the importance of preventive dental care to optimize natural dentition. They found that aging adults who lose multiple natural teeth may make subtle changes in their food intake patterns, which may result in malnutrition and social challenges interacting at mealtimes with family and friends (2017). Ensuring adequate dental coverage for Medicare beneficiaries is thus an important consideration for oral health and overall well-being.

Oral health has received increasing attention in recent years as researchers have found further support for the link between oral health and overall health and well-being. Good oral health “in old age is beneficial from a structural, functional and psychosocial point of view” (Muller et al., 2017, p. 7). Kotronia et al. (2021) found that oral health

problems were associated with cardiovascular disease and all-cause and respiratory mortality in older adults. They recommended that Medicare policymakers prioritize adequate coverage for dental benefits. Dental services are critical among this population, but access continues to be a multi-faceted issue in the United States. In addition, as the prevalence of diabetes continues to grow among the Medicare population, the compounding issue of lack of affordable dental access in an aging population is especially concerning and needs attention.

Poor dental health is often commonly reported among patients with diabetes. González-Moles and Ramos-García (2021) completed a critical review of the associations between dental health and diabetes and found that in patients with diabetes, dental pathologies – such as periodontitis, fungal infections, and oral cancer – were more common than among non-diabetic patients. Furthermore, common issues in patients with diabetes – such as sensitivity to inflammation and infection and delayed tissue healing – can interfere with common dental treatments (2021). Nazir et al. (2018) investigated the burden of diabetes and the prevalence of oral complications among patients with diabetes and found that more than 90% of patients with diabetes had some degree of oral manifestation. Researchers have found positive correlations between access to dental coverage and increased use of preventative care. Positive correlations between access to dental coverage and increased use of preventative care have been discussed in several studies. Meyerhoefer et al. (2019) found that 55.8% of Medicare beneficiaries with private dental insurance utilized preventative services, 23.8% basic, and 17.4% major, whereas only 37.4% of Medicare beneficiaries without dental coverage paid out-of-

pocket for preventative services, 17.2% for basic, and 11.7% for major services. Moeller et al. (2020) found that older adults receiving routine dental care were likelier to use preventive dental and medical services, such as annual physical exams and flu vaccinations, and have a usual medical care provider. Despite these benefits, access is challenging. Gibson et al. (2022) discussed unique challenges in access to dental services for aging adults, including health burdens and socioeconomic barriers that may limit access to routine and preventive services and participation in dental clinical trials. Older persons' potential for multiple comorbidities and pharmacological therapies further compound some challenges for optimal oral health (2022).

Despite the relationships between oral health and overall physical and mental health, accessing dental services in the United States remains challenging. Traditional Medicare does not cover preventive or other routine and comprehensive dental services – other than instances in which dental care is required to prevent more typical medical issues, such as a tooth removal due to infection to avoid systemic sepsis (Meyerhoefer et al., 2019). Oral health critically impacts physical health, mental health, and overall quality of life among aging adults, yet fails to be covered as part of Traditional Medicare, as policymakers have historically balked at concerns of the additional costs that would burden the Medicare program. Dental benefits are often available within Medicare Advantage but have highly variable coverage and generosity. The literature continues to have a gap in how dental benefit generosity in Medicare Advantage influences beneficiary experience. This research explored the specific associations between

Medicare Advantage supplemental dental benefit generosity and voluntary disenrollment, which helped address this gap in the literature.

Theoretical and Conceptual Frameworks

This study explored the association between the generosity of Medicare Advantage supplemental dental benefits and voluntary disenrollment. The theoretical framework for this research was based on Penchansky and Thomas' theory of access (1981) and Rivera-Hernandez et al.'s (2021) Medicare Advantage plan choice and stickiness framework. Penchansky and Thomas (1981) were the first researchers to formulate a theoretical framework for understanding the different dimensions of patient access in healthcare. They proposed that access includes various dimensions related to access to care.

Penchansky and Thomas (1981) proposed that dimensions of care/access are unique and independent while interrelated in terms of creating access for patients. These dimensions included availability, accessibility, accommodation, affordability, and acceptability. Saurman (2016) expanded Penchansky and Thomas' theory of access to include the role of communication (including communication about the availability of services and health education to imbue the patient to understand why these services are needed). For example, Chinese researchers explored the accessibility of elder care services for China's aging population, applying Penchansky and Thomas' theory of access (Hu et al., 2022). Hu et al. (2022) found that an empirical evaluation of access to elder care services in China showed that barriers to access varied across the different dimensions of access as described in Penchansky and Thomas' theory of access.

Benefit generosity is an important application of the theory of access. In the context of this study, Medicare Advantage plans utilize benefit generosity – especially among supplemental benefits – to enhance competition and influence beneficiary plan election. Supplemental dental benefits are a key need for most Medicare beneficiaries as very few have access to dental benefits if enrolled in Traditional Medicare due to Traditional Medicare’s lack of coverage for such services and the limited affordable options for dental benefits for independent purchase. Given the importance of dental benefits generosity as a differentiator between Traditional Medicare and Medicare Advantage, understanding the potential associations between dental benefit generosity in Medicare Advantage and beneficiary voluntary disenrollment was an important gap in the literature to be filled.

Understanding Medicare Advantage plan offerings can be challenging for some beneficiaries given limited health and health insurance literacy and feelings of overwhelm due to complex benefit documents such as required Evidence of Coverage. Medicare Advantage plans offering supplemental dental benefits are creating access for beneficiaries who might otherwise go without such important care, and the generosity of these benefits may impact beneficiary enrollment decisions. The generosity of a benefit that may sway a beneficiary to enroll in a Medicare Advantage plan may have little practical value if the beneficiary struggles to access that benefit, which may cause a beneficiary to consider voluntarily disenrolling from a plan. Thus, understanding how the theory of access may influence Medicare Advantage beneficiaries’ enrollment decisions,

including whether to disenroll because of plan benefit generosity, is an important progression in Medicare Advantage research.

To better understand voluntary disenrollment and factors influencing beneficiary decision-making, the concept of “plan stickiness” must be explored. Rivera-Hernandez et al. (2021) proposed a new framework for understanding plan switching and stickiness in Medicare Advantage. They utilized a semi-structured qualitative approach to understand how Medicare Advantage beneficiaries decide which to enroll and whether they will stay in a plan or consider switching to another plan (or reverting to Medicare Advantage). Based on their research, Rivera-Hernandez et al. (2021) surmised that the key drivers that influence a Medicare Advantage beneficiary’s enrollment decisions include generosity (including elements of cost such as premiums, copayments, and coinsurance, as well as benefits coverage, such as the inclusion of supplemental benefits), provider network composition, and quality of plan communication of benefits covered. Literacy challenges and sheer overwhelm from marketing messaging from different Medicare Advantage companies can also influence a beneficiary’s decision to enroll or disenroll from a Medicare Advantage plan.

Penchansky and Thomas’ theory of access – informed by the importance of communication and comprehension as described by Saurman (2016) – and Rivera-Hernandez et al.’s (2021) Medicare Advantage plan switching and stickiness framework provide important grounding for the proposed study. Access, plan switching, and stickiness are integral as we look at the possible associations between supplemental benefit generosity and voluntary disenrollment. As Medicare Advantage plans continue

to grow in number and variety of benefit generosity, better understanding the association between access to supplemental benefits and voluntary disenrollment is important for beneficiaries of Medicare Advantage plans.

Summary

The literature showed that access and quality are critical to ensuring patients receive dental care. While dental care is important for overall health and well-being, especially among older adults, Medicare lacks dental coverage, directly affecting Medicare beneficiaries' overall health. Conversely, dental coverage in Medicare Advantage provides a promising opportunity to establish more congruent access to dental coverage for Medicare beneficiaries. The variable coverage in Medicare Advantage results in differing degrees of benefit generosity, which may hamper access and beneficiary experience. Understanding how different factors, including supplemental dental benefit generosity, influence voluntary disenrollment among Medicare Advantage beneficiaries is important as Medicare Advantage grows.

Despite the growing literature about Medicare Advantage, as summarized above, gaps persist, supporting the need for novel research designs to provide new insights into benefit generosity and associations with beneficiary experience. The next chapter will discuss the proposed methods for one such novel approach to explore the associations between Medicare Advantage supplemental dental benefit generosity and voluntary disenrollment.

Chapter 3: Research Method

This quantitative study involved exploring the associations between Medicare Advantage supplemental benefits and voluntary disenrollment. Chapter 3 includes the rationale for the study design, data selection, inclusion criteria, definitions of independent and dependent variables, statistical analysis selection, and study limitations.

Study Design

A quantitative study using one-way analysis of variance (ANOVA) with post hoc tests was used to explore the topic. Given the gap in literature related, the quantitative approach was suitable to address the gap in a way that is easily replicated. Future research needs can be better prioritized involving Medicare Advantage beneficiary perceptions of benefit generosity. Statistical Package for the Social Sciences was used to complete the ANOVA.

Data

I used secondary publicly available data from the CMS, including plan benefit package (PBP) data from 2018 and Medicare star rating data from 2020. Additionally, PBP enrollment data was used from the CMS for 2018. These publicly available sources were important for independent quantitative evaluation of the Medicare Advantage program and informing future practice and policy research needs and opportunities. PBP and contract-level enrollment data for January and December 2018 were also used. I used natural controls for COVID-19-related phenomena, as measurement periods for each variable were from 2018. While the star year rating for 2020 impacts plan payments during that year, the star rating was based on 2018 data for most measures and finalized

and released to the public in October 2019. I therefore did not use any data from during the pandemic.

Inclusion Criteria

The data set for this study included all HMO and PPO Medicare Advantage prescription drug plans (MAPDs) from 2018, including those MAPDs offering special needs plans and those without prescription drug benefits. The following plan types were excluded because of very stringent conditions for enrollment or lack of availability of supplemental dental benefits due to plan type: Program for the All-Inclusive Care of the Elderly plans, cost plans, Medicare Savings Account plans, and private-fee-for-service plans. MAPD plans without a calculated overall star rating or voluntary disenrollment measures were also excluded.

Independent and Dependent Variables

This study involved addressing benefits, benefit periodicity, and coverage of comprehensive services. Medicare Advantage supplemental dental benefit generosity data points were coded as single categorical variables measuring generosity of benefits (0 = no generosity, 1 = very low generosity, 2 = low generosity, 3 = moderate generosity, and 4 = high generosity). Coding was done first for plan benefit packages, and then an enrollment-weighted average was used to calculate overall level of generosity at the contract level. This calculation was necessary given that voluntary disenrollment is measured at the contract level according to public use data sets available from the CMS.

Statistical Analysis

One-way ANOVA is a commonly used statistical method in health services research in which the independent variable is categorical and multilevel, and the dependent variable is continuous (Kim, 2017). While other statistical approaches may have some value, including multivariate ANOVA, lack of empirical evaluation of Medicare Advantage supplemental benefits generosity warrants initial univariate analyses before I examine how variables may interact to influence beneficiary decisions to disenroll voluntarily.

The research question and hypotheses for this study were:

RQ: Is there an association between Medicare Advantage supplemental dental benefits generosity level and voluntary disenrollment?

H₀: There is no association between Medicare Advantage supplemental dental benefits generosity level and voluntary disenrollment.

H_a: There is an association between Medicare Advantage supplemental dental benefits generosity level and voluntary disenrollment.

Limitations

Limitations of this study involved generalizability, data accuracy, data availability, and exploratory study limitations. While the Medicare Advantage population continues to grow, it is not yet representative of the entirety of the Medicare-eligible population. Characteristics of coverage type and benefit generosity for government-sponsored health insurance such as Medicare differ from employer-sponsored and

individually-purchased health insurance plans. As such, findings from this research should not be generalized to populations outside of Medicare Advantage beneficiaries.

Data accuracy and completeness were also a limitation of this study. Categorical levels of benefits data might lack adequate specificity in terms of total generosity of benefits. For example, categories might not reflect specificity of total allowance or alternative and atypical benefits that result from exception requests and thus were not clear in the public use data set. The temporal nature of data was also a limitation. While more recent data were available, the pandemic influenced 2022 and 2023 data. Thus, I used only data from prior to the pandemic in 2020. Another limitation of this study was lack of use data. While associations between supplemental dental benefit generosity and voluntary disenrollment may be explored, such associations cannot be assessed for causality.

No data set was available at the time of this research to determine whether or not beneficiaries electing plans with more generous supplemental dental benefits used those benefits more. Ideally, use data would be the main data set to understand using certain benefits and how those are associated with generosity of benefits. However, at the time of this writing, the CMS has not required Medicare Advantage to report on the totality of their supplemental benefits use, which limited transparency in terms of evaluating the value and impacts on quality of benefits.

Another key limitation of this study was its exploratory nature and methodology. No studies at the time of this writing had tried to specifically explore the association between Medicare Advantage supplemental benefits of any kind and voluntary

disenrollment. Additionally, the novel methodological approach of creating categorical variables informed by various dimensions of supplemental dental benefit generosity was a limitation, given the heterogeneity of the components that create the categorical independent variables. While such limitations should be noted and findings regarded with appropriate caution, this novel approach may help create a new opportunity for further research in which benefit generosity can be more empirically evaluated beyond the basic premises of premium and cost-sharing.

Summary

This quantitative study leveraged secondary, publicly available data from CMS to explore the association between Medicare Advantage supplemental dental benefit generosity and voluntary disenrollment. One-way ANOVA, commonly used in quantitative health service research studies, addressed the research question and hypotheses.

Chapter 4: Results

This study involved exploring potential associations between Medicare Advantage supplemental dental benefit generosity and beneficiary voluntary disenrollment. This could have meaningful impacts on beneficiary experience and access to dental care, which may cause beneficiaries to voluntarily disenroll from specific Medicare Advantage plans. Voluntary disenrollment can contribute to disruptions in continuity of care and thus is an important aspect of the Medicare Advantage quality paradigm. Given known associations between high rates of voluntary disenrollment and poorer outcomes for Medicare Advantage beneficiaries, this research was essential to optimizing access and quality of care among these beneficiaries, including better patient experience and satisfaction, health outcomes, and continuity of care.

The research question and hypotheses for this quantitative study were:

RQ: Is there an association between Medicare Advantage supplemental dental benefits generosity level and voluntary disenrollment?

H₀: There is no association between Medicare Advantage supplemental dental benefits generosity level and voluntary disenrollment.

H_a: There is an association between Medicare Advantage supplemental dental benefits generosity level and voluntary disenrollment.

Chapter 4 includes a review of the data collection methodology, results of data analysis, and a summary of study findings.

Data Collection

Secondary publicly available data from the CMS, including PBP data from 2018 and Medicare star rating data from 2020 were used for this analysis. PBP Enrollment data was used from the CMS for 2018. These publicly available sources were important for independent quantitative evaluation of the Medicare Advantage program and informing future practice and policy research needs and opportunities. PBP and contract-level enrollment data for January and December 2018 were also used. TI controlled for COVID-19-related phenomena, as measurement periods for each variable were from 2018.

Inclusion Criteria

HMO and PPO MAPDs from 2018, including those MAPDs offering special needs plans and those without prescription drug benefits were included in analysis. Specific plan types with very stringent conditions for enrollment or those that did not include supplemental dental benefits were excluded from analysis, including Program for the All-Inclusive Care of the Elderly plans, cost plans, Medicare Savings Account plans, and private-fee-for-service plans. MAPD plans without a calculated overall star rating and voluntary disenrollment measure were also excluded.

Independent and Dependent Variables

Data points for the independent variable included type of benefit that is offered, benefit periodicity, and coverage of comprehensive services; see Table 1).

Table 1

Summary of Supplemental Dental Benefit Generosity Elements and Associated Scoring Criteria

Service	Scoring Criteria
Preventative Dental Covered	Yes = 1; No = 0
Preventative Dental Services Covered	Count of Services Covered = 0, 1, 2, 3, or 4
Oral Exams Covered	Yes = 1; No = 0
Oral Exams Mandatory or Optional	Mandatory = 2; Optional = 1; Not Covered = 0
Oral Exams Unlimited	Yes = 2; No = 1
Oral Exams # if Limited	4+ = 4; 3 = 3, 2 = 2; 1 = 1
Cleaning / Prophylaxis Covered	Yes = 1; No = 0
Cleaning Mandatory or Optional	Mandatory = 2; Optional = 1; Not Covered = 0
Cleaning Unlimited Covered	Yes = 2; No = 1
Cleaning # if Limited	4+ = 4; 3 = 3, 2 = 2; 1 = 1
Fluoride Treatment Covered	Yes = 1; No = 0
Fluoride Treatment Mandatory or Optional	Mandatory = 2; Optional = 1; Not Covered = 0
Fluoride Treatment Unlimited	Yes = 2; No = 1
Fluoride Treatment # if Limited	4+ = 4; 3 = 3, 2 = 2; 1 = 1
Dental X-rays Covered	Yes = 1; No = 0
Dental X-Rays Mandatory or Optional	Mandatory = 2; Optional = 1; Not Covered = 0
Dental X-Rays Unlimited	Yes = 2; No = 1
Dental X-rays # if Limited	4+ = 4; 3 = 3, 2 = 2; 1 = 1
Preventative Deductible Required	Yes = 1; No = 2; Not Covered = 0
Preventative Authorization Required	Yes = 1; No = 2; Not Covered = 0
Preventative Referral Required	Yes = 1; No = 2; Not Covered = 0
Comprehensive Covered	Yes = 2; No = 0
Comprehensive Services Covered	Count of Services Covered = 0, 1, 2, 3, 4, 5, 6, 7
Comprehensive Mandatory or Optional	Mandatory = 2; Optional = 1; Not Covered = 0
Comprehensive - Diagnostic - Mandatory or Optional	Mandatory = 2; Optional = 1; Not Covered = 0
Comprehensive - Diagnostic - Limited	Unlimited = 2; Limited = 1; Not Covered = 0
Comprehensive - Restorative Serv - Mandatory or Optional	Mandatory = 2; Optional = 1; Not Covered = 0
Comprehensive - Restorative Serv - Unlimited Yes or No	Unlimited = 2; Limited = 1; Not Covered = 0
Comprehensive - Endodontics - Mandatory Yes or No	Mandatory = 2; Optional = 1; Not Covered = 0
Comprehensive - Endodontics - Unlimited Yes or No	Unlimited = 2; Limited = 1; Not Covered = 0
Comprehensive - Periodontics - Mandatory Yes or No	Mandatory = 2; Optional = 1; Not Covered = 0
Comprehensive - Periodontics - Unlimited Yes or No	Unlimited = 2; Limited = 1; Not Covered = 0
Comprehensive - Extractions - Mandatory Yes or No	Mandatory = 2; Optional = 1; Not Covered = 0
Comprehensive - Extractions - Unlimited Yes or No	Unlimited = 2; Limited = 1; Not Covered = 0
Comprehensive - Prosthodontics, Other - Mandatory or Optional	Mandatory = 2; Optional = 1; Not Covered = 0
Comprehensive - Prosthodontics, Other - Unlimited Yes or No	Unlimited = 2; Limited = 1; Not Covered = 0

Comprehensive Deductible Required	Yes = 1; No = 0
Comprehensive – Authorization Required	Yes = 1; No = 2; Not Covered = 0
Comprehensive - Referral Required	Yes = 1; No = 2; Not Covered = 0

Before coding, a raw supplemental dental benefit generosity score was calculated using scoring criteria (see Table 2).

Table 2

Raw Supplemental Benefit Generosity Score

Min	0
Mean	25.225
Median	25
Max	81

For each plan benefit package included in the analysis, the raw supplemental benefit generosity score was then coded into a single categorical variable indicative of the generosity of the benefits: 0 = No generosity, 1 = Very low generosity, 2 = Low generosity, 3 = Moderate generosity, and 4 = High generosity (see Table 3).

Table 3

Summary of Supplemental Dental Benefit Generosity Levels at Plan Benefit Package Level

Independent Variable Categorical Level	Count (n)	Percentage (%)
No generosity	1411	42%
Very low generosity	580	17%
Low generosity	643	19%
Moderate generosity	578	17%
High generosity	147	4%
Total (n)	3359	

After the independent variable was coded into the categorical level at the plan benefit package level (or the plan-specific subset of the overall contract), an enrollment-

weighted average was utilized to calculate the overall level of generosity at the contract level. The contract level calculation is necessary given that the dependent variable – voluntary disenrollment – is measured at the contract level in the public use data sets available from CMS (see Table 4).

Table 4

Enrollment by Plan Benefit Package and Contract

Plan Benefit Packages (n)	3359	Contracts (n)	335
PBP Enrollment		Contract Enrollment	
Min	9	Min	18
Mean	5,848	Mean	50,643
Median	1,221	Median	15,797
Max	531,253	Max	1,267,606

Once the enrollment weighted average was applied, each independent variable's categorical level's frequency was calculated (see Table 5). When aggregated and adjusted for enrollment, 30% of contracts fall into the “Low generosity” category, whereas only 19% of plan benefit packages did. Conversely, only 14% of contracts fell into the “No generosity” category, whereas 42% of individual plan benefit packages had limited supplemental dental benefit offerings. This result indicates that more beneficiaries are typically enrolled in plans with some degree of supplemental dental benefit generosity.

Table 5

Summary of Supplemental Dental Benefit Generosity at Contract Level

Independent Variable Categorical Level	Count (n)	Percentage (%)
No generosity	46	14%

Very low generosity	62	19%
Low generosity	102	30%
Moderate generosity	94	28%
High generosity	31	9%
Total (n)	335	

Table 6 summarizes the descriptive statistics when exploring the dependent variable, voluntary disenrollment (which is reported at the contract level). The median voluntary disenrollment rate is 0.10, indicating that in these contracts, 10% of beneficiaries voluntarily disenrolled during the contract year 2018.

Table 6

Voluntary Disenrollment Rate, Contract Level, and Descriptive Statistics

Min	0.00
Median	0.10
Mean	0.12
Max	0.42

Table 7 looks at the average voluntary disenrollment rate by supplemental dental benefit generosity level, with the enrolled weighted average applied to the contract. Interestingly, contracts with higher generosity had higher rates of voluntary disenrollment. Contracts meeting the scoring criteria for “High generosity” had an average voluntary disenrollment rate of 0.18, while contracts with limited to no supplemental dental benefit offerings had voluntary disenrollment rates less than 0.10 (“No generosity” = 0.08, “Very low generosity” = 0.09).

Table 7

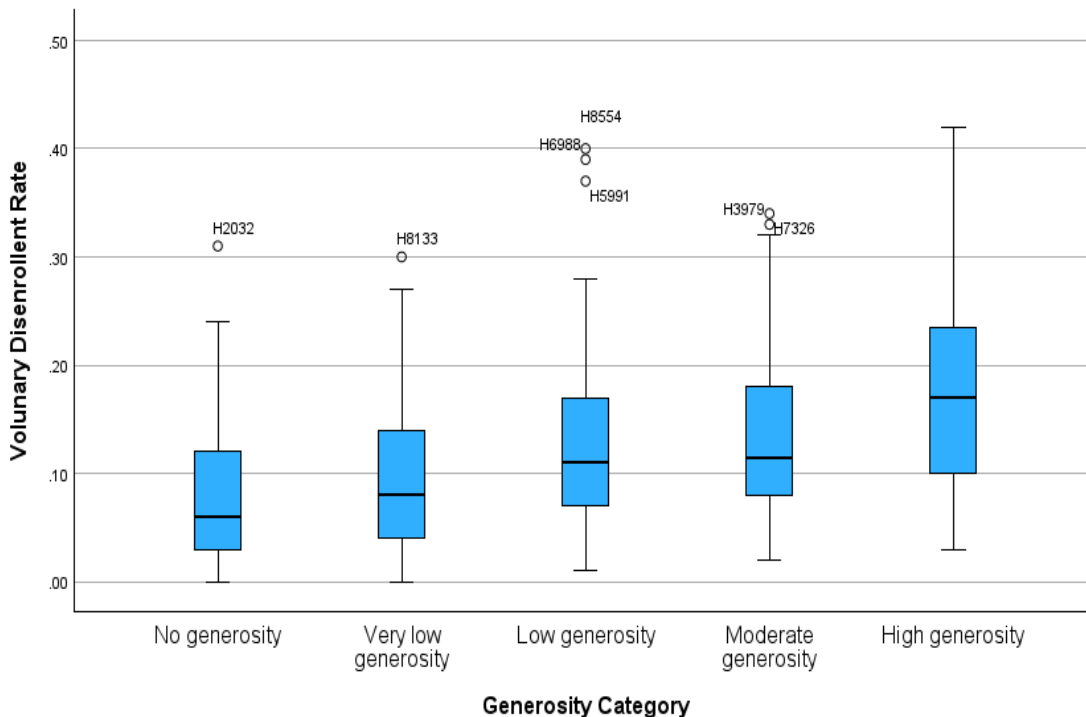
Average Voluntary Disenrollment Rate by Generosity Category Level

Independent Variable Categorical Level	Average Voluntary Disenrollment Rate
No generosity	0.08
Very low generosity	0.09
Low generosity	0.13
Moderate generosity	0.13
High generosity	0.18

Results

A one-way ANOVA was conducted to determine if voluntary disenrollment was different for contracts with different Medicare Advantage supplemental dental benefit generosity. Medicare Advantage contracts were classified into five groups based on the enrollment weighted average of their plan-level supplemental dental benefit generosity: No generosity (n = 46), Very low generosity (n = 62), Low generosity (n = 102), Moderate generosity (n = 94), and High generosity (n = 31).

While several outliers were found, as assessed by inspection of a boxplot, the outliers were not excluded from the analysis.

Figure 1*Analysis of Outliers*

Data were normally distributed, as assessed by the Shapiro-Wilk test ($p = .248$), but otherwise was not normally distributed, with all other groups having $p < .001$. There was homogeneity of variances, as assessed by Levene's test of homogeneity of variances ($p = .308$).

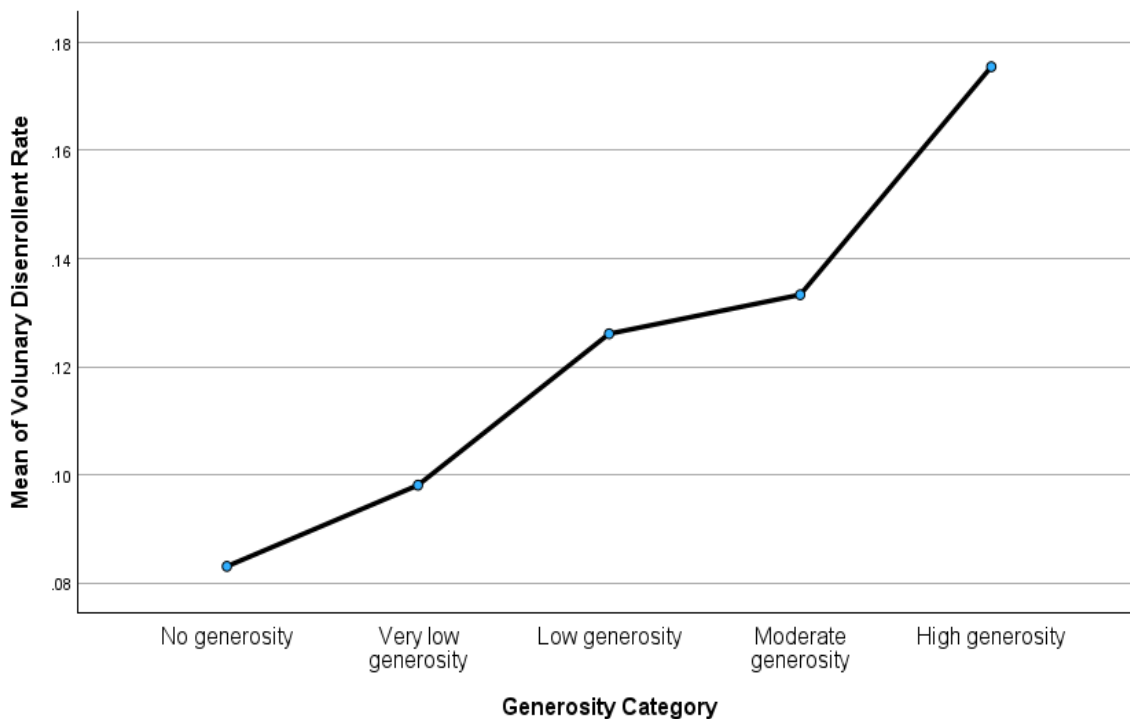
Data were presented as mean \pm standard deviation. Voluntary disenrollment was statistically significant between generosity groups, $F(4) = 8.373$, $p < .001$. Voluntary disenrollment tended to be lowest among the No generosity group ($M = .083$, $SD = .071$). Voluntary disenrollment then increased from Very low generosity ($M = .098$, $SD = .077$) to Low generosity ($M = .126$, $SD = .078$), Moderate generosity ($M = .133$, $SD = .076$), and High generosity ($M = .176$, $SD = .099$), in that order.

Table 8*Descriptives: Voluntary Disenrollment Rate*

Table 8 – Descriptives: Voluntary Disenrollment Rate								
	N	Mean	Std. Dev.	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound	m	m
No generosity	46	.0830	.07124	.01050	.0619	.1042	.00	.31
Very low generosity	62	.0981	.07686	.00976	.0785	.1176	.00	.30
Low generosity	102	.1261	.07825	.00775	.1107	.1414	.01	.40
Moderate generosity	94	.1333	.07645	.00788	.1176	.1490	.02	.34
High generosity	31	.1755	.09919	.01782	.1391	.2119	.03	.42
Total	335	.1216	.08214	.00449	.1128	.1304	.00	.42

Figure 2

Association Between Generosity Category and Mean Voluntary Disenrollment



Tukey post hoc analysis revealed that the mean increase from No generosity to Moderate and from No generosity to High were both significant ($p = .004$ and $p < .001$, respectively). Very low to High generosity was also statistically significant ($p < .001$).

Table 9

Multiple Comparisons: Tukey HSD

(I)	(J)	Mean	Std. Error	Sig.	95% Confidence Interval	
Generosity	Generosity	Difference			Lower	Upper Bound
Category	Category	(I-J)			Bound	

No generosity	Very low generosity	-.01502	.01532	.864	-.0570	.0270
	Low generosity	-.04303*	.01398	.019	-.0814	-.0047
	Moderate generosity	-.05025*	.01417	.004	-.0891	-.0114
	High generosity	-.09244*	.01830	<.001	-.1426	-.0423
Very low generosity	No generosity	.01502	.01532	.864	-.0270	.0570
	Low generosity	-.02801	.01268	.179	-.0628	.0068
	Moderate generosity	-.03523	.01288	.051	-.0706	.0001
	High generosity	-.07742*	.01732	<.001	-.1249	-.0299
Low generosity	No generosity	.04303*	.01398	.019	.0047	.0814
	Very low generosity	.02801	.01268	.179	-.0068	.0628
	Moderate generosity	-.00722	.01126	.968	-.0381	.0237
	High generosity	-.04941*	.01615	.020	-.0937	-.0051
Moderate generosity	No generosity	.05025*	.01417	.004	.0114	.0891
	Very low generosity	.03523	.01288	.051	-.0001	.0706
	Low generosity	.00722	.01126	.968	-.0237	.0381
	High generosity	-.04219	.01631	.075	-.0869	.0025
High generosity	No generosity	.09244*	.01830	<.001	.0423	.1426
	Very low generosity	.07742*	.01732	<.001	.0299	.1249

Low generosity	.04941*	.01615	.020	.0051	.0937
Moderate generosity	.04219	.01631	.075	-.0025	.0869

Summary

This quantitative study showed an association between Medicare Advantage supplemental dental benefit generosity and voluntary disenrollment, with plans with higher degrees of supplemental dental benefit generosity tending to be associated with higher rates of voluntary disenrollment.

These results prompt additional questions about the value of plans investing in and offering more generous supplemental dental benefits. One might hypothesize that more generous benefits should improve beneficiary experience, thus resulting in lower rates of voluntary disenrollment. However, this data analysis from contract year 2018 indicates that the opposite may be true: higher voluntary disenrollment rates are more commonly associated with greater supplemental dental benefit generosity. Further discussion of these findings is imperative to understand opportunities for additional evaluation and implications for policymakers.

Chapter 5: Discussion, Conclusions, and Recommendations

This study involved exploring potential associations between Medicare Advantage supplemental dental benefit generosity and beneficiary voluntary disenrollment. This is increasingly important as Medicare Advantage plans continue to grow in popularity, resulting in increased competition and investment from the federal government to sustain costs of the program. Supplemental dental benefits are a key differentiator between traditional Medicare and Medicare Advantage and may play a role in terms of beneficiary plan selection. What is unclear is whether there are associations between plans with more generous or rich supplemental dental benefits and retention of these members in Medicare Advantage plans. I found an inverse association between supplemental dental benefits generosity and voluntary disenrollment, and Medicare Advantage plans offering more generous supplemental dental benefits tend to have higher rates of voluntary disenrollment.

Interpretation of Findings

Aspects of access such as network adequacy (sufficient dental providers in the contracted network to meet demand of beneficiaries) and actual service use (how many dental services are beneficiaries utilizing with the benefits provided by the plan) may also be required to understand beneficiary experience and thus their likely stickiness to a particular Medicare Advantage plan.

Rivera-Hernandez et al. (2021) stated beneficiary enrollment decisions are often influenced by premiums, copayments, and coinsurance, as well as benefits coverage such as supplemental benefits. While supplemental dental benefit generosity may be a key

factor influencing beneficiary initial plan election given the allure of services that are not covered by traditional Medicare and generous coverage allowances, without adequate networks to meet their access demands, their experiences may be poor and result in seeking alternate coverage options. Nasseh et al. (2025) found that the inherent complexity and restrictive nature of dental benefits offered by Medicare Advantage plans, including inadequate networks, may actually be creating greater unmet dental needs among beneficiaries, as well as additional financial constraints on access to care. This belies the ongoing need for transparent and empirical evaluation of Medicare Advantage supplemental benefits given the potential implications for access and outcomes to needed dental care and other services.

Given complexities of benefit structures and coverage in terms of requiring prior authorizations, referrals, and limited coverage of higher-cost services such as dentures, some beneficiaries may feel misled when they realize what dental services were covered by their Medicare Advantage plan versus what they were led to believe by misleading marketing messaging. For example, beneficiaries encounter a plan that appears to offer generous annual allowance for annual dental services (perhaps one-thousand dollars or more). However, when they attempt to utilize services, they discover that the actual coverage is far more limited than they understood it to be. Simon, Vijicic, and Nasseh (2024) found similar issues in their recent work; dental coverage among Medicare Advantage plans was widespread but very few beneficiaries were in a plan that had an affordable and comprehensive dental benefit. Future research should explore how

intersections between benefit generosity, network adequacy, and beneficiary understanding of services influences beneficiary voluntary disenrollment.

Benefit generosity alone cannot fully explain beneficiary enrollment decisions. Consistent with the theory of access, findings of this study indicate while availability of services was essential, accessibility, accommodation, affordability, acceptability, and literacy may also be inextricably linked to beneficiary experience and enrollment decision-making. In recent research that evaluated the impact of other supplemental benefits on quality outcomes, Tucher et al (2024) found that newly introduced supplemental benefits designed to address beneficiaries' nonmedical and social needs demonstrated only modest effects on overall health plan quality and Star Ratings. However, further investigation is warranted to identify which types of supplemental benefits most effectively improve health outcomes and reduce the cost of care.

Accessibility and accommodation may be explored in terms of network adequacy and use, which were not addressed in this study. For future research, researchers should explore whether or not benefit generosity and network adequacy influence use of services if and when such data are made available. This study did not include information about acceptability and awareness of benefits, which may be important for future research. Such future research could include beneficiary surveys or interviews to explore how Medicare Advantage plan summaries of benefits may be inadequate in terms of making beneficiaries fully informed of supplemental benefits that are included in plans they purchase.

Findings of this study show exploring only benefit generosity and voluntary disenrollment was insufficient to fully understand complex factors influencing Medicare Advantage beneficiary access and experience. Further research is warranted to explore complexities of access and use. At the time of completion of this study, use data for Medicare Advantage supplemental benefits, including dental, were not historically required for submission to the CMS and thus were not available for empirical analysis. However, the Biden Administration announced new requirements for Medicare Advantage plans to begin submitting supplemental benefit use data for plan year 2024 (CMS, 2024). In future studies, researchers may have access to supplemental benefit use data, leading to additional scrutiny regarding complex relationships between supplemental benefit generosity, network adequacy, beneficiary awareness, and use of covered supplemental benefits.

Limitations of the Study

Given specific types of Medicare Advantage plans and coverage type and benefit generosity for government-sponsored health insurance coverage such as Medicare differ from employer-sponsored and individually purchased health insurance plans, findings from this research should not be generalized to populations outside of Medicare Advantage beneficiaries. As traditional Medicare does not at this time provide coverage for preventative or comprehensive dental, findings from this study should also not be generalized to traditional Medicare populations.

I used a categorical means of evaluating generosity of supplemental dental benefits and not actuarial assessments. Thus, the study may be subject to researcher bias as well as potential errors in data sets provided by the CMS.

Results of this study show associations between supplemental dental benefits generosity and voluntary disenrollment. However, given the inherent complexity of benefits design and generosity in terms of Medicare Advantage medical, pharmacy, and supplemental benefits, as well as impacts of member experience, network adequacy, and plan management of member service call centers, no relationship between supplemental dental benefits generosity and voluntary disenrollment should be assumed.

Recommendations

Further exploration of associations between Medicare Advantage supplemental benefits generosity and voluntary disenrollment is necessary. As the CMS began requiring Medicare Advantage plans to submit their use data for various supplemental benefits, future research should explore whether or not use of these supplemental benefits relates to voluntary disenrollment. Network adequacy as another lens through which supplemental benefits should be explored. Future research may also involve other specific benefits, especially those that are offered with specific intent to address social determinants of health.

Implications

This research may affect Medicare Advantage benefit design and policy development. Systematically evaluating associations between supplemental benefits generosity, including dental but also other potential supplemental benefits, in the context

of beneficiary retention is important for understanding member experience and satisfaction. Offering more generous benefits may not optimize beneficiary experience and retention. However, in addition to benefits generosity, health insurers must especially look at both their network adequacy and use data to ensure there is adequate alignment between generosity of benefits, accessibility to beneficiaries via adequate networks, and understanding of access to supplemental benefits.

For policymakers, this research may shed light on the importance of key dental coverage – such as basic preventative care that is offered among plans of lower generosity as well as among those offering more comprehensive benefits – and that a “less is more” approach to provide basic coverage as part of the Traditional Medicare benefit may be sufficient to drive positive health outcomes for a large proportion of the Medicare population. Policymakers could also consider requiring all Medicare Advantage plans to offer at least some degree of dental benefits, focusing again on the preventative services associated with improved outcomes and longevity.

Conclusion

Supplemental benefits are important to providing holistic, person-centered care to Medicare Advantage beneficiaries. As Medicare Advantage continues to grow in popularity – and thus in cost to taxpayers and beneficiaries alike – continued focus on empirically evaluating the Medicare Advantage program to inform future policymaking to improve the program is needed. Understanding the role of supplemental benefits, such as dental benefits (which are further associated with important health benefits for the population),– may also inform future policymaking for Traditional Medicare.

As CMS continues to refine its reporting expectations from Medicare Advantage plans, future studies will be necessary to understand more about the complex associations between supplemental benefit generosity and the role of additional variables such as provider access and utilization data to understand further what influences beneficiary voluntary disenrollment.

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