Assessing the Equitable Use of Formulary Drug Tier Systems: Consequences for Geriatric Patient Population Access and Accessible Medication

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Abstract

Background: This study examines the implications of formulary drug tier systems on the accessibility and affordability of medications for the elderly/geriatric population within the New York metropolitan area. By systematically reviewing the Medicare insurance formularies and evaluating the most prescribed medicines with reported beneficial outcomes for ailments frequently experienced by the geriatric population, this research identifies disparities in drug tier placements and the cost of dispensing that may affect patient outcomes. The focus is on five prevalent conditions: Alzheimer's dementia, Chronic Obstructive Pulmonary Disease, Rheumatoid Arthritis, Ischemic Heart Disease, and Diabetes Mellitus Type 2 (T2DM). The findings aim to highlight the need for more equitable healthcare policies that consider the financial and medical needs of the elderly population.

Methods: This study reviewed the formulary tier systems used by Medicare, the primary insurance provider for the elderly in New York City. The research focused on medications prescribed for Alzheimer's disease, COPD, rheumatoid arthritis, ischemic heart disease, and diabetes. Data on tier placements were extracted from Medicare Part D formularies, with a detailed examination of the criteria for tier assignment. The study identified the three most prescribed medications for each condition, using data from relevant health organizations and literature. An economic analysis was conducted to compare the costs associated with these medications, assessing the financial burden on patients.

Results: The study revealed a prevalence of chronic conditions among New York City's elderly population. Medications commonly prescribed for these conditions were reviewed, with a focus on their placement within the Medicare Formulary Tier system and associated costs. The analysis highlighted substantial variations in cost and tier placement, affecting patient affordability and adherence. For example, Alzheimer's medications like galantamine and rivastigmine were found in higher tiers, leading to increased out-of-pocket expenses, while COPD treatments such as Symbicort and Trelegy Ellipta, although in preferred tiers, still imposed significant financial burdens. Rheumatoid arthritis drugs showed a wide cost range, with Humira in Tier 5 presenting the highest financial challenge. Similarly, ischemic heart disease and type 2 diabetes medications varied in affordability, with drugs like Eliquis and Steglatro positioned in higher tiers, significantly impacting patient costs and potential treatment adherence.

Conclusion: Elderly patients in the United States, especially those dealing with chronic conditions are facing a substantial financial strain due to the increasing prices of prescription medications. Even with recent initiatives like the Inflation Reduction Act aimed at lowering expenses, the financial burden persists, causing issues with treatment adherence and negative health results. The results highlight the pressing requirement for more effective policy actions that support price transparency, promote the utilization of cost-effective generics, and deter the unwarranted classification of generic drugs in higher formulary tiers. It is crucial to handle these problems to guarantee fair access to medications for all elderly individuals, specifically those who qualify for both Medicare and Medicaid.

Keywords: drug formulary, economics, health outcomes, chronic illness

Introduction

As the global population ages, the prevalence of chronic diseases among the elderly becomes a significant public health challenge, necessitating effective management strategies to improve quality of life and reduce healthcare costs. In New York City, where a diverse elderly population relies heavily on medication for chronic conditions, the insurance formulary tier system plays a crucial role in determining the accessibility and affordability of these treatments. This tiered system categorizes medications into different levels based on cost-sharing requirements, which can significantly influence treatment choices and patient outcomes.

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Statistically, New Yorkers who are aged 65 and older account for 16.2% (1,373,495 people) of the city's population in 2021, an increase by a factor of 4.1% from 2011. The older adult population saw a minimum increase of 32 percent in every borough over the past ten years, with Queens leading in growth at 39.3 percent. In the Bronx, one out of four older adults is currently living in poverty, making it the state's highest rate. Additionally, the poverty rates for older adults in Brooklyn and Manhattan exceed 15 percent, at 20.9 percent and 16.3 percent, respectively. Moreover, Staten Island saw a 63 percent rise in the number of older adults in poverty, from 5,132 in 2011 to 8,380 in 2021.[1] With the number of older adults in NYC growing at a considerable rate, there is a correlation between the increase in age and the rise in medical issues and limited daily activities within this population sample. As such, the complexity of care is increasing at an alarming rate, with the risk for hospitalization

and supportive care rising with the number of people aged 60 and over with functional impairments expected to grow over 20% by 2025 according to the New York State Office For the Aging.[2]

This rise in the number of elderly individuals within New York City is further compounded by the increasing poverty level expected to rise within the population. In New York City, more than 40% of households led by seniors rely on government programs such as Social Security for over half of their income, with over 30% depending on these programs for at least 75% of their income. Compared to the general population, a higher proportion of seniors benefit from government assistance programs like nutrition assistance (25.5%) and Supplemental Security Income (14.6%), versus 20% and 7.8% respectively for the broader population.[3] Additionally, elderly individuals are more likely to spend over 30% of their income on housing, whether renting or owning. Specifically, six out of ten senior renters allocate more than 30% of their income towards rent, in contrast to about half of the overall renting population. This makes the senior population particularly vulnerable to changes in city and state funding, which can significantly impact their financial stability, with the possibility of a waterfall effect which would affect their ability to upkeep their physical health.[3]

More specifically, as previously mentioned, earlier statistics showed that those within the age group of 65 and older are rising, along with an increasing demand for financial supplementation. This is a non-favorable situation when avenues such as medical spending plays a significant role, given that many of the elderly populations are enrolled within the Medicare insurance system, which, may have a drug formulary tier system which would effectively play as a barrier to their continual care in their health.[4] These tier systems categorize medications into different levels based on cost-sharing requirements, which can significantly influence treatment choices and patient outcomes. In 2024, like previous years, Medicare Part D enrollees will encounter significantly higher cost-sharing for brand-name and non-preferred drugs (which may include both brand-name and generic medications) compared to drugs listed on a generic tier. The cost-sharing structure consists of a combination of copayments and coinsurance across different formulary tiers.5 The standard five-tier formulary design in Part D encompasses tiers for preferred generics, generics, preferred brands, non-preferred drugs, and specialty drugs. According to the Kaiser Family Foundation, among all PDPs, median standard cost sharing in 2024 for different types of drugs is[5]:

- Generics: $0 for preferred generics and $5 for other generics for a monthly supply of a specified medication.
- Preferred brands: a monthly copayment of $47 or either a coinsurance of 21% for preferred brands (up from $44/17% in 2023)
- Non-preferred drugs: 46% coinsurance for a month's supply of a non-preferred drug, which can include both brands and generics (an increase from 45% in 2023; the maximum allowed is 50%). For example, if a Non-preferred drug costs, $200, $92 would be the co-insurance required to be paid.
- Specialty drugs: A monthly 25% coinsurance for specialty drugs upon pickup (the same as in 2023; the maximum allowed is 33%). For example, if a specialty drug costs $500, $125 would be the co-insurance required to be paid for this medication.

A comprehensive study by Avalere analyzed the trends in formulary tier assignments, patient out-of-pocket costs, and negotiated prices for Medicare Part D over several years. This study focused on a selection of generic drugs listed in Part D formularies in 2011, 2015, 2019, and 20216. This specific group of medications was chosen to track changes in tier placement for generics that had been on the market for an extended period, excluding those newly introduced during the study period. The findings revealed a significant increase in the proportion of these generic drugs moved to higher formulary tiers from 2011 to 20216. Concurrently, patients' out-of-pocket expenses for these generics rose faster than the average negotiated prices and total costs of the drugs. The sharpest rise in costs occurred between 2011 and 2019, with minor changes in tier placement, out-of-pocket spending, and pricing from 2019 to 20216. This highlights the growing financial burden on elderly patients due to escalating costs of generic medications in higher tiers, underscoring the need for measures to ensure equitable access to essential medications.

The New York State Department of Health also reported that there is a prevalence of a quantity of long term health issues rising within the city's elderly population, specifically within the categories of [2]:

- Alzheimer/Dementia; Individuals with Alzheimer's dementia are at a higher risk of hospitalization compared to those without the condition. The hospitalization rate for older adults residing in high-poverty neighborhoods is significantly higher (5,273.9 per 100,000 population) than for those in low-poverty neighborhoods (2,974.9 per 100,000 population)
- Chronic Obstructive Pulmonary Disease; COPD has a prevalence of 12% of those age 65 years and older experiencing this chronic ailment.
- Rheumatoid Arthritis; 51% of those age 65 and older are afflicted.
- Ischemic Heart Disease; The likelihood of adults experiencing a heart attack, angina/CHD, or stroke rises with each decade of life and is notably higher among: individuals who are 65 years old and above (17.7%)
- Diabetes Mellitus Type 2; Older adults living below the federal poverty level have a higher rate of diabetes (41%) compared to those with the highest income (14%)

The findings within this paper are done with the intention of strengthening policy interventions to prevent the rising statistics of cost of care within those ages 65 and over within the New York metropolitan area, along with the possibility of fortifying the formulary of insurance companies to facilitate more affordable care which would lead to a trickle down effect and reduce the overall cost of care provision by effectively reducing the pressure placed on a strained healthcare system.

Materials and Methods

This research employed a systematic and comprehensive approach to investigate the formulary tier systems used by the primary insurance provider within New York City for the elderly population (Medicare). The methodology was designed to address complexities such as medication adherence, pharmacy access and formulary restrictions associated with drug accessibility, and affordability among the elderly demographic, focusing on medications prescribed for five major geriatric ailments.

Formulary Review and Data Extraction

A detailed examination of multiple sources providing the Medicare insurance formulary was conducted to gather data on the tier placements of popular medications used to treat Alzheimer's dementia, COPD, Rheumatoid Arthritis, Ischemic Heart Disease, and Diabetes Mellitus Type 2. Formularies were sourced from Medicare PDP based plans which were open to providing this formulary list, with those involved within this research conducting a step by step review of each of the formularies to ensure consistency within the document. Specific attention was given to the criteria for tier assignment, as these reveal the insurer's valuation and categorization strategies for medications based on cost effectiveness and clinical efficacy.

Medication Selection Criteria

The study identified the three most frequently and effective prescribed medications for each condition, ensuring a focus on those with significant clinical relevance and usage rates. This selection was received via a stringent approach which involved retrieving data from each of the previously mentioned ailment's respective organizations (Alzheimer's Association, American Lung Association, Arthritis Foundation, American Heart Association, and American Diabetes Organization) followed by a follow-up investigation of the rate of these medications being dispensed by a review of previously mentioned journal articles which detail the efficacy of these medications.

Economic Analysis of Drug Costs

An economic review was conducted to determine the monthly costs associated with each selected medication. This involved sourcing pricing data directly from insurance websites and verifying these against secondary sources such as pharmacy retail price lists and healthcare databases. The analysis provided a comparative insight into the financial burdens placed on patients, factoring in both the base cost of drugs and the associated out-of-pocket expenses as determined by their tier placement, as well as the cost of production for each of these medications, with the intent of highlighting price disparity within the population group.

Comparative Analysis of Tier Implications

The core of the study involved a critical comparative analysis to assess how tier placements impact medication accessibility and affordability. This was achieved by mapping out the cost distributions and identifying patterns that suggest economic disparities among the chosen drugs. The analysis also considered the broader implications of these tier placements on treatment adherence and patient outcomes, drawing on existing literature and case studies that document patient experiences and health trajectories influenced by medication affordability.

Results

The New York State Department of Health has reported an increase in long-term health issues among the city's elderly population. Specifically, there is a notable prevalence of Alzheimer's disease and dementia, chronic obstructive pulmonary disease (COPD), rheumatoid arthritis, ischemic heart disease, and diabetes mellitus type 2.

Based on the prevalence of these ailments within the present investigative population, a systematic review of medications commonly prescribed for these ailments were obtained and investigated to inquire about their efficacy within treatment of these ailments. Furthermore, further exploration aimed to investigate their placement within the Medicare Formulary Tier system, cost of dispensing, and their impact on patient outcomes

Table 1 below provides a summary of the chronic conditions experienced by those ages 65 and older within the NYC metropolitan area, and the medications which were noted to have increased efficacy, along with their tier placement within the Medicare Formulary Tier System.

Alzheimer's dementia medications, such as galantamine, rivastigmine, and memantine, vary significantly in cost and formulary placement, impacting patient affordability and adherence. Galantamine, classified as a Tier 3 medication, costs Medicare beneficiaries an average of $102.61 per month, leading to an annual expenditure of $1,231. Its non-preferred status increases out-of-pocket costs, potentially hindering treatment adherence. Rivastigmine, although in Tier 4, has a lower monthly cost of $3.69, or $44.28 annually, due to competitive pricing among generic manufacturers, but its placement may still pose financial barriers for some patients.

Similarly, memantine, also in Tier 4, costs $3.09 per month and $37.08 annually, yet its non-preferred classification could discourage consistent use, affecting health outcomes.[27,28,29]

Table 1: Chronic Conditions Experienced by those aged 65 and older in New York City, and the 3 most effective medications used in therapy management along with their place in the Medicare Formulary Tier.

Chronic Condition	Medication	Tier Placement[27,28,29]
Alzheimer's Dementia	Galantamine[7,8]	3
	Rivastigmine[9,10]	4
	Memantine[11]	4
Chronic Obstructive Pulmonary Disorder	Symbicort [12]	3
	Trelegy Ellipta[13,14]	3
	Breztri[15,16]	3
Rheumatoid Arthritis	Naproxen[17]	1
	Methotrexate[18]	2
	Humira[19]	5
Ischemic Heart Disease	Eliquis[20]	3
	Plavix[21]	2
	Entresto[22]	3
Diabetes Mellitus Type 2	Basaglar[23,24]	3
	Steglatro[25]	3
	Jardiance[26]	3

In treating chronic obstructive pulmonary disease (COPD), medications like Symbicort, Trelegy Ellipta, and Breztri are categorized in Tier 3, indicating preferred brand-name status but still resulting in substantial out-of-pocket expenses. Symbicort has a high monthly cost of $281.14, leading to an annual expenditure of $3,373.68, while Trelegy Ellipta and Breztri, with lower monthly costs of $124.81 and $123.65, respectively, still represent significant financial commitments over a year.[27,28,29]

Rheumatoid arthritis treatments such as naproxen, methotrexate, and Humira show diverse cost profiles. Naproxen, a Tier 1 drug, is highly affordable, costing just $2 per month, or $24 annually. Methotrexate, in Tier 2, incurs a moderate cost of $9.35 monthly and $112.20 annually, reflecting its status as a more expensive generic or preferred brand-name drug. Humira, placed in the high-cost Tier 5, presents significant financial challenges, with a monthly cost of $277.21 and an annual expense of $3,326.51, highlighting the burden of specialty drug costs. [27,28,29]

For ischemic heart disease, Eliquis is positioned in Tier 3 with a monthly cost of $154.39, totaling $1,852.72 annually, reflecting its higher out-of-pocket requirements. In contrast, clopidogrel, a Tier 1 medication, is far more affordable at $2 per month and $24 annually. Entresto, another Tier 3 drug, costs $70.83 per month, amounting to $850 annually, further illustrating the financial impact of preferred brand-name medications. [27,28,29]

In managing type 2 diabetes, Basaglar, Steglatro, and Jardiance, all placed in Tier 3, present varying financial challenges. Basaglar costs $78.33 per month, leading to an annual expenditure of $939.96. Steglatro, however, has a significantly higher monthly cost of $428.40, resulting in an annual expense of $5,140.80, while Jardiance incurs $100.54 per month and $1,206.46 annually, underscoring the financial burden of these preferred brand-name treatment. [27,28,29]

Discussion

Over the last decade, the significant increase in prescription drug expenditures in the United States has posed considerable challenges, especially for the elderly. This trend is driven not only by the rising costs of high-profile specialty drugs but also by the steady price hikes of commonly prescribed medications for chronic conditions such as arthritis, diabetes, COPD, and heart disease. These medications are crucial for the management of conditions prevalent among the elderly, yet their escalating costs are straining family budgets and limiting access to essential treatment.

The financial burden is major, as almost a quarter of Americans are struggling to pay for their prescription drugs. Moreover, around 30% acknowledge not following their prescribed treatment plans because of worries about costs. The effects go further than just households, as taxpayers face higher costs for programs like Medicare and Medicaid, straining government budgets[30].

Recently, there has been an increase in the assignment of generic drugs to higher formulary tiers by Medicare Part D plan sponsors[30]. These levels usually have higher cost-sharing demands, resulting in higher out-of-pocket (OOP) costs for patients who need specific generic drugs[6]. This is particularly concerning for the elderly population in the New York metropolitan area, who often rely on fixed incomes and are disproportionately affected by these cost increases.

For a more comprehensive understanding of these trends and their effects on patient expenses, Avalere carried out a thorough examination of shifts in formulary tier assignments, out-of-pocket costs for patients, and negotiated prices in Medicare Part D across different time periods. The research concentrated on a particular group of generic medications included in Part D formularies in 2011, 2015, 2019, and 2021. This group was chosen to study shifts in tier positioning for generic drugs that had been on the market for a while, not including those recently released during the research timeframe[6].

Between 2011 and 2021, the study showed a notable rise in the percentage of cohort generics that were moved to higher formulary tiers while still being available for sale. Similarly, patients' out-of-pocket expenses for these generic medications increased more rapidly than the average agreed-upon cost and the total amount of these drugs. The increase in costs peaked from 2011 to 2019, with little variation in tiering, out-of-pocket spending, and pricing between 2019 and 20216.

This research emphasizes the increasing financial strain on elderly patients, caused by the escalating prices of generic medications in higher formulary tiers. It is essential to address these trends in order to guarantee fair access to necessary medications for every patient.

Table 2 on page 10 offers a detailed look at the costs associated with medications for managing various chronic conditions, illustrating the economic impact on patients and healthcare systems. This research highlights the significant impact of formulary tier systems on the financial burden faced by elderly patients. By examining changes in tier assignments and out-of-pocket costs over time, it is evident that the rising cost of generic medications in higher tiers is a critical issue. For instance, the out-of-pocket expenses for drugs such as Symbicort, Humira, and Steglatro are substantial, making them less affordable for many elderly patients.

The data underscores the need for policy interventions aimed at improving the affordability of medications. Policies should focus on promoting price transparency, encouraging the use of cost-effective generic medications, and ensuring that essential treatments remain accessible to all patients, particularly the elderly. Healthcare providers must also adopt holistic approaches that involve educating patients about cost-effective treatment options and providing robust support systems to enhance medication adherence. Despite the fact that nearly all individuals aged 65 and older have health insurance, with less than 1 percent of this population being uninsured, affordability challenges remain prevalent4. Many older adults are forced to skip or postpone necessary healthcare services due to out-of-pocket costs like premiums, copayments, and deductibles[2]. Notably, 12 percent of older adults report difficulty affording their medications[2]. While pandemic-era coverage protections, such as the continuous enrollment provision in Medicaid and enhanced subsidies in the Marketplace, have reduced the overall number of uninsured individuals, the financial strain on the elderly persists. This is particularly true for low-income older adults, who, despite qualifying for additional support through Medicaid, may still struggle to manage the costs associated with their healthcare needs[31]. This situation underscores the urgent need for policies that not only ensure coverage but also address the affordability of care for the elderly.

The information highlights the necessity of policy interventions to enhance the affordability of medications. Policies need to concentrate on:

- Encouraging Price Transparency: Require transparent reporting of drug prices for patients and healthcare providers to make informed choices.
- Promote the use of affordable generic medications: Provide rewards for doctors to select generics instead of brand-name drugs when suitable, and guarantee generics are included in cheaper formulary categories.
- Establish rules to avoid generic medications being placed in more expensive tiers without reason, ensuring that placement is determined by both effectiveness and cost.

Conclusion

Over the past decade, the United States has witnessed a significant rise in prescription drug spending, driven by the increasing costs of both high-priced specialty drugs and commonly used treatments for chronic conditions like arthritis and diabetes. This surge in costs has left about one-fourth of Americans struggling to afford their medications, leading to non-adherence to prescribed treatment plans. Additionally, the financial strain extends to government programs like Medicare and Medicaid, as generic medications are increasingly placed in higher, more expensive formulary tiers, raising out-of-pocket expenses for patients.

President Biden took action in August 2022 by signing the Inflation Reduction Act, with the goal of improving Medicare through increased benefits, lowered drug expenses, and better sustainability through the price negotiation of 10 medications per year[32]. For the first time, the law permits Medicare to haggle prices for specific expensive medications with no generic or biosimilar alternatives[32].

Under the Inflation Reduction Act, around four million Medicare seniors now have a monthly cap of $35 on insulin costs, resulting in savings of hundreds of dollars for some seniors starting in January[33]. Eli Lilly, the biggest insulin producer in the U.S., cut insulin prices by 70% and set a maximum limit of $35 for out-of-pocket expenses, which could help countless Americans with diabetes across the country[33].

Yet, this research underscores the severe impact on elderly individuals who rely on costly medications for managing chronic conditions such as Alzheimer's Dementia, COPD, Rheumatoid Arthritis, Ischemic Heart Disease, and Type 2 Diabetes. The financial burden of medications like Symbicort and Humira often results in poor adherence to treatment regimens. The challenges are compounded by a lack of transparency regarding costs and the overall high price of medications.

Furthermore, the NYSDOH published a preliminary version of the New York State Dual Eligible Integrated Care Roadmap on March 3, 2022, for feedback from the public34. The Roadmap highlights the State's focus on enhancing integrated care for individuals eligible for both Medicare and Medicaid, and details collaborative efforts to enhance integrated care choices statewide[34].

People who are enrolled in both Medicare and Medicaid, known as dually eligible individuals, are especially impacted by the increasing costs[35]. These people frequently get Medicare Part A and/or Part B in addition to full-benefit Medicaid and/or Medicare Savings Programs (MSPs). Medicare usually covers services before Medicaid, with Medicaid being the final payer[35]. In New York, dual eligibility criteria include being enrolled in Medicare Part A and/or Part B, full coverage Medicaid, or an MSP. Eligibility extends to individuals under 65 who qualify due to disability or special circumstances and those 65 and older who receive additional state assistance. To qualify for Medicaid in New York, individuals 65 and older or disabled must meet income eligibility levels, which range from $20,000 to $30,000 for a household of one[36]. Medicaid's payment structure for prescription drugs is governed by federal regulations and the Medicaid Drug Rebate Program (MDRP)[37]. While Medicare has no income eligibility requirements, its Part D drug plans involve various payment structures, including copayments, coinsurance, premiums, and yearly deductibles[38,39]. These complexities highlight the importance of careful financial planning for dually eligible individuals.

A 2016 study revealed that while Medicare, supported by Social Security, is presumed to cover all individuals aged 65 and older, significant coverage discrepancies are evident, particularly in New York City. Here, between 16% to 20% of seniors lack coverage through either Medicare or Medicaid40. This gap in coverage is not unique to New York City but may be especially pronounced among certain immigrant groups within the city. This trend underscores a critical dependency on Medicaid as an alternate payer for hospitalization, highlighting the substantial coverage vulnerabilities faced by non-wealthy seniors in New York City who do not qualify for Medicaid in addition to their Medicare benefits. Although the prior article provided data in 2016, accurate statistics on present day individuals who lack coverage is difficult to find. Yet, while Medicare significantly covers the elderly, with less than 1% (approximately 457,000) of those over age 65 being uninsured according to a KFF analysis, the coverage landscape for non-wealthy seniors who are ineligible for Medicaid presents stark contrasts[41,42]. This group faces significant challenges due to gaps in Medicare coverage, which are not supplemented by Medicaid, underscoring the unique vulnerabilities of this demographic.

The United States can also take heed of the examples that foreign nations have set in regards to price negotiations and settings within their healthcare system. For example, within the United Kingdom, the pricing of drugs is governed by the Voluntary Scheme for Branded Medicines Pricing and Access. Through this scheme, the National Institute for Health and Care Excellence (NICE) plays a key role in controlling drug prices[43]. NICE conducts a health technology assessment for each new drug with an active ingredient, comparing its cost-effectiveness with existing treatments to decide whether the National Health Service (NHS) should provide coverage[43]. Closer to home nations such as Canadian drug prices are reviewed by the government through several different processes. For brand-name drugs with patents, the federal Patented Medicine Prices Review Board (PMPRB) sets the maximum allowable prices. However, the final prices are determined at the provincial level, where drug companies negotiate with each province [31,43]. Additionally, the Canadian Agency for Drugs and Technologies in Health (CADTH) provides recommendations on the cost-effectiveness of certain medications, much like how NICE operates in the UK [43].

To mitigate these issues, it is essential to promote price transparency and the use of generic medications. These measures are vital in helping elderly patients manage their financial responsibilities and maintain adherence to their treatment plans, ensuring they have access to the necessary medications without undue financial hardship.

Although steps like the Inflation Reduction Act and talks on drug prices show improvement, they are considered somewhat weak and stronger interventions are needed. The data emphasizes the need for policy measures to improve the affordability of medications. Policies should focus on:

- Promoting Price Transparency: Mandate clear disclosure of drug prices to empower patients and healthcare providers in decision-making.
- Encourage the utilization of inexpensive generic drugs: Incentivize doctors to choose generics over brand-name medications when appropriate, and ensure generics are listed in more cost-effective formulary tiers.
- Set guidelines to prevent generic medications from being categorized in higher price tiers without justification, guaranteeing that placement is based on both efficacy and price.

Beyond regulatory efforts, empowering healthcare providers, patients, and caregivers is essential in ensuring cost-effective medication access and adherence. Physicians can play a pivotal role in promoting affordability by prioritizing generics when clinically appropriate and leveraging real-time benefit checks within electronic prescribing systems to assess medication costs at the point of care. Pharmacists can also further support this initiative by collaborating with prescribers

to optimize formulary selections and educating patients on cost-saving alternatives and financial assistance programs. Strengthening interdisciplinary communication between providers ensures that patients receive clinically effective and affordable treatment options.

Equally important is increasing patient and caregiver awareness of available resources that can significantly reduce out-of-pocket costs. Programs such as Consumer Reports Best Buy Drugs offer transparent cost comparisons, while discount services like GoodRx and Mark Cuban's Cost-Plus Drugs provide direct savings on prescription medications [44,45]. Integrating these tools into electronic health record (EHR) systems would streamline cost-saving recommendations at the point of prescribing, enabling both providers and patients to make more informed financial decisions.

Additionally, community-based initiatives can play a crucial role in improving affordability by expanding education on navigating formulary systems and utilizing financial assistance programs. Partnerships between healthcare organizations, pharmacies, and non-profits can help distribute educational materials and advocate for policy measures that enhance price transparency and equitable drug pricing. By equipping providers, patients, and caregivers with these tools, the healthcare system can mitigate financial barriers, improve medication adherence, and promote equitable access to essential treatments, particularly for underserved populations.

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Table 2: Summary of Results

Chronic Condition[2]	Medication	*Average Monthly Drug Cost* (Qty. of 30-Day Supply)	**Average Yearly Drug Cost[27,28,29]	Tier Placement[27,28,29]
Alzheimer's Dementia	Galantamine	$102.61	$1,231.32	3
	Rivastigmine	$3.69	$44.28	4
	Memantine	$3.09	$37.08	4
Chronic Obstructive Pulmonary Disorder	Symbicort	$281.14	$3,373.68	3
	Trelegy Ellipta	$124.81	$1,497.68	3
	Breztri	$123.65	$1,483.78	3
Rheumatoid Arthritis	Naproxen	$2	$24	1
	Methotrexate	$9.35	$112.20	2
	Humira	$277.21	$3,326.51	5
Ischemic Heart Disease	Eliquis	$154.39	$1,852.72	3
	Plavix	$2	$24	2
	Entresto	$70.83	$850	3
Diabetes Mellitus Type 2	Basaglar	$78.33	$939.96	3
	Steglatro	$428.40	$5,140.80	3
	Jardiance	$100.54	$1,206.46	3

* The average monthly drug cost represents the amount paid if a patient had the same drug costs each month. The actual cost each month could be higher or lower than this amount depending on the coverage stage you're in.

** The estimated annual drug cost includes the copays, coinsurance, deductibles, and out-of-pocket costs a patient may pay each year for the drugs they've entered with coverage from the plan they selected.