

PAN Foundation

ISSUE BRIEF No. 13

MEDICATION ADHERENCE

APRIL 2020



Access to medically necessary healthcare—including prescription medications—is critical for successful patient outcomes, yet patients’ access to care and treatment are often impeded or blocked entirely by high deductibles, co-pays and coinsurance. These out-of-pocket (OOP) costs hit low-income seniors and individuals with disabilities especially hard, and OOP costs are a key reason why many Medicare beneficiaries do not initiate or adhere to treatment. However, other factors also play a role in preventing people from adhering to the medications prescribed by their healthcare providers.

This Issue Brief examines why some patients do not adhere to their prescription medications, how non-adherence impacts these patients, and strategies that have been proposed to improve medication adherence.

The PAN Foundation believes that out-of-pocket costs should not prevent individuals with life-threatening, chronic and rare diseases from obtaining their prescribed medications.



What is Medication Adherence?

Medication adherence is the extent to which patients take their medications correctly as prescribed by their healthcare providers.¹ When people adhere to their prescribed medications, they take their medications:

- In the right dose
- At the right time
- In the right way
- With the right frequency

Medication adherence is important because the risks of worsening health, hospitalization, and death increase when patients don't adhere to their prescribed medications.²

Factors Contributing to Non-adherence

Non-adherence to prescribed medications may stem from one or more of the following reasons:

- Lack of transportation to and from a healthcare provider's office.
- Lack of transportation to and from the pharmacy to drop off prescriptions and pick up medications.
- Perceptions that the treatment is not necessary or that it is not helping.
- Fear of a medication's potential side effects.
- Lack of understanding of how and when to take the medication.
- Inability to manage complicated regimens for multiple medications.
- Experiencing depression.
- Trying to make medications last longer by skipping doses or splitting pills.
- Inability to afford OOP costs for prescription medications.
- Delaying or not filling a prescription because of the inability to cover the OOP cost.



Out-of-pocket Prescription Medication Costs: a Key Factor Impacting Medication Adherence

Many research studies show that OOP drug costs have an unfavorable impact on medication adherence.³ Research demonstrates an inverse relationship between OOP medication costs and patients' ability to access their medications. Not only do high OOP costs reduce the likelihood that patients will initiate treatment, but among patients who fill an initial prescription—especially for an expensive medication—high OOP costs increase the likelihood that they will delay refilling their prescription, that they will stop treatment early, skip doses, or cut pills to make their prescriptions last longer.^{4, 5, 6, 7}

How Many People Have Difficulty Adhering to Treatment?

Data from the Kaiser Family Foundation show that nearly 1 in 4 Americans who take prescription medications say it is difficult to afford them.⁸ It is therefore not surprising that millions of Americans experience challenges with medication adherence, starting with the ability or willingness of patients to fill their prescriptions. Between 20 percent and 30 percent of prescriptions are never filled.^{9,10} Economically vulnerable older adults are at particularly high risk for non-adherence. The Kaiser Family Foundation showed that 29 percent of older adults did not take their medicines as prescribed at some point in the past year because of the cost.¹¹

What are the Consequences of Non-adherence to Prescribed Medications?

A large body of evidence links poor adherence to prescribed medications to unfavorable health outcomes and increased costs.

- **Increased risk of disease progression:** Low medication adherence is linked to increases in the severity of existing disease as well as increased mortality.^{12, 13, 14, 15}
- **Increased risk of hospitalization:** Non-adherence to prescribed medications increases risk of hospitalization for patients with a wide variety of common chronic conditions including diabetes,^{13,14} heart failure,¹² and coronary artery disease.¹⁵
- **Increased costs to payers:** Poor adherence to medications for common chronic conditions like diabetes, heart failure, high cholesterol, and hypertension results in billions of dollars in Medicare expenditures that could have been avoided. A recent study showed that morbidity and mortality associated with non-optimized prescription drug regimens costs \$528.4 billion annually.¹⁶

What Policy Solutions Can Help Vulnerable Adults Adhere to Their Medications?

Research demonstrates the favorable impact of case management, patient education, and behavioral support programs on medication adherence and underscores the need for patients to speak with their healthcare providers if they have problems adhering to their medications for any reason.¹⁷ To have widespread impact, however, interventions aimed at increasing adherence must be amenable to broad implementation. Policies that encourage uptake of these interventions will not only improve patients' health and safety through increased adherence, they will also reduce excess costs to payers. A report by RAND highlights the fact that successful interventions should address barriers to adherence such as regimen complexity, beliefs about the need for medication, and perceptions about side effects.¹⁸

Consistent with a large body of literature, the RAND report also showed that higher co-payments for prescription medications contribute to lower medication adherence. The study indicated that policies that reduce cost-sharing for prescription medications would reduce the extent to which OOP costs act as a barrier to adherence.



The RAND study also emphasized a key point for policymakers:

Potential policy solutions that address one medication adherence barrier must not worsen another.

For example, programs that reduce the complexity of medication regimens should not lead to increased cost sharing.

Several policy solutions have been proposed to address the OOP burden for Medicare beneficiaries who use Part D drug programs to access prescription medications. These options include:

- Placing a cap on annual OOP costs for Medicare Part D beneficiaries.
- “Smoothing” high upfront OOP drug costs more evenly throughout the year.
- Expanding access to the Medicare Part D Low-Income Subsidy program.

Changes to Medicare Part D that reduce OOP drug costs are a particularly efficient strategy to address problems with medication adherence because of the large numbers of older adults who have trouble covering the OOP costs for their medications.

Conclusion

Low adherence to prescribed medications is a common and costly problem in the United States, affecting millions of Americans and resulting in billions of dollars in avoidable health care costs each year. Medication non-adherence is especially prevalent among economically vulnerable older adults who can't afford the OOP costs for their medications. Placing a cap on OOP medication costs, smoothing OOP costs more evenly throughout the year, and expanding the Low-Income Subsidy program are viable, policy-driven strategies to improve medication adherence in populations that are at high risk for non-adherence. Not only will these strategies enhance patient health and safety, they will also eliminate billions of dollars in unnecessary healthcare costs.



The PAN Foundation is an independent, national 501 (c)(3) organization dedicated to helping underinsured people with life-threatening, chronic and rare diseases get the medications and treatments they need by assisting with their out-of-pocket costs and advocating for improved access and affordability.

For more information about this Issue Brief, contact Amy Niles, Executive Vice President, at aniles@panfoundation.org.

Supporting Literature

¹ United States Food and Drug Administration. Are You Taking Medication as Prescribed? Available at: <https://www.fda.gov/consumers/consumer-updates/are-you-taking-medication-prescribed>. Accessed April 3, 2020.

² United States Food and Drug Administration. Why You Need to Take Your Prescription Medications. Available at: <https://www.fda.gov/drugs/special-features/why-you-need-to-take-your-medications-prescribed-or-instructed#:~:text=Taking%20your%20medicine%20as%20prescribed%20or%20medication%20adherence%20is%20important,important%20part%20of%20medication%20adherence>. Accessed April 3, 2020.

³ Di Julio B, Firth J, Brodie M. Kaiser Health Tracking Poll: April 2015. Available at: <https://www.kff.org/health-costs/poll-finding/kaiser-health-tracking-poll-august-2015/>.

⁴ Doshi JA, Li P, Huo H, Pettit AR, Armstrong KA. Association of patient out-of-pocket costs with prescription abandonment and delay in fills of novel oral anticancer agents. *J Clin Oncol*. 2018 Feb 10;36(5):476-482.

⁵ Li P, Wong YN, Jahnke J, Pettit AR, Doshi JA. Association of high cost sharing and targeted therapy initiation among elderly Medicare patients with metastatic renal cell carcinoma. *Cancer Med*. 2018 Jan;7(1):75-86.

⁶ Doshi JA, Hu T, Li P, Pettit AR, Yu X, Blum M. Specialty tier-level cost sharing and biologic agent use in the Medicare Part D initial coverage period among beneficiaries with rheumatoid arthritis. *Arthritis Care Res (Hoboken)*. 2016 Nov;68(11):1624-1630.

⁷ Doshi JA, Li P, Huo H, Pettit AR, Kumar R, Weiss BM, Huntington SF. High cost sharing and specialty drug initiation under Medicare Part D: a case study in patients with newly diagnosed chronic myeloid leukemia. *Am J Manag Care*. 2016 Mar;22(4 Suppl):s78-86.

⁸ Kaiser Family Foundation. Poll: Nearly 1 in 4 Americans Taking Prescription Drugs Say It's Difficult to Afford Their Medicines, including Larger Shares Among Those with Health Issues, with Low Incomes and Nearing Medicare Age. Available at: <https://www.kff.org/health-costs/press-release/poll-nearly-1-in-4-americans-taking-prescription-drugs-say-its-difficult-to-afford-medicines-including-larger-shares-with-low-incomes/>.

⁹ Viswanathan M, Golin CE, Jones CD, et al. Interventions to improve adherence to self-administered medications for chronic diseases in the United States: a systematic review. *Ann Intern Med*. 2012 Dec 4;157(11):785-95.

¹⁰ Park Y, Yang H, Das A, et al. Prescription fill rates for acute and chronic medications in claims-EMR linked data. *Medicine*. 2018;97(44):p e13110.

¹¹ Kirzinger A, Lopes L, Wu B, Brodie M. KFF Health Tracking Poll – February 2019: Prescription Drugs. Available at: <https://www.kff.org/health-costs/poll-finding/kff-health-tracking-poll-february-2019-prescription-drugs/>.

¹² Ruppert TM, Cooper PS, Mehr DR, Delgado JM, Dunbar-Jacob JM. Medication adherence interventions improve heart failure mortality and readmission rates: Systematic review and meta-analysis of controlled trials. *J Am Heart Assoc*. 2016 Jun 17;5(6): pii: e002606.

¹³ Khunti K, Seidu S, Kunutsor S, Davies M. Association between adherence to pharmacotherapy and outcomes in type 2 diabetes: A Meta-analysis. *Diabetes Care*. 2017 Nov;40(11):1588-1596.

¹⁴ Polonsky WH, Henry RR. Poor medication adherence in type 2 diabetes: recognizing the scope of the problem and its key contributors. *Patient Prefer Adherence*. 2016 Jul 22;10:1299-307.

¹⁵ Du L, Cheng Z, Zhang Y, Li Y, Mei D. The impact of medication adherence on clinical outcomes of coronary artery disease: A meta-analysis. *Eur J Prev Cardiol*. 2017 Jun;24(9):962-970.

¹⁶ Watanabe JH, McInnis T, Hirsch JD. Cost of prescription drug-related morbidity and mortality. *Ann Pharmacother*. 2018 Sep;52(9):829-837.

¹⁷ Viswanathan M, Golin CE, Jones CD, et al. Interventions to improve adherence to self-administered medications for chronic diseases in the United States: a systematic review. *Ann Intern Med*. 2012 Dec 4;157(11):785-95.

¹⁸ Gellad WF, Grenard K, McGlynn EA. A review of barriers to medication adherence: a framework for driving policy options. Accessed April 4, 2020. https://www.rand.org/pubs/technical_reports/TR765.html.