

Cardiovascular Health Medication Adherence

ACTION STEPS for Public Health Practitioners

“Increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments.”¹

– Haynes et al., World Health Organization, 2003

Medication nonadherence* is a major public health concern, especially as it relates to chronic disease prevention and management.¹ Approximately 20% to 30% of medication prescriptions are never filled, and patients do not continue treatment as prescribed in about 50% of cases. Annually in the United States, medication nonadherence accounts for 125,000 deaths, 11% of hospitalizations, and \$100 billion to \$300 billion in additional spending.²

Public health practitioners have an opportunity to partner with patients and health care systems, including providers, medical practices, pharmacies, hospitals, community health workers, and insurers, to prevent and control complications of chronic conditions through promoting improved medication adherence. Numerous strategies have been shown to improve adherence, but because there are many reasons for nonadherence, there is no single gold-standard solution.¹ A combination of the evidence-based strategies and emerging practices is likely the best approach to increasing medication adherence.¹

The Role of Public Health in Medication Adherence

Public health practitioners, including state and local health department personnel, are critical to identifying community needs affecting health status, performing chronic disease surveillance, and identifying at-risk populations.³ These professionals provide services aimed at assuring that the environment is conducive to preventing disease and improving the health of the population.³ As it relates to improving medication adherence, public health practitioners



“Drugs don’t work in people who don’t take them.”

– C. Everett Koop, Former Surgeon General

can improve cardiovascular disease outcomes through data collection, analysis and reporting, informing policy decisions, promotion of evidence-based medication use processes and effective medication-taking behaviors, information dissemination, and stakeholder engagement.⁴ Tactics that can be employed include the following³:

- Monitoring medication nonadherence.
- Detecting and investigating reasons for medication nonadherence.
- Conducting research related to improving medication adherence.
- Developing and implementing health strategies that reduce nonadherence.
- Supporting the implementation of non-adherence prevention strategies.
- Promoting safe and effective medication-taking behaviors.
- Fostering a safe, healthy, and effective medication use process.
- Providing leadership and training in medication adherence initiatives.

*The World Health Organization defines adherence to long-term therapy as “the extent to which a person’s behavior—taking medication, following a diet, and/or executing lifestyle changes—corresponds with agreed recommendations from a healthcare provider.”¹



Did you know?

Almost 1 in 3 U.S. adults (29.3%—about 75 million) has high blood pressure, and almost half of these individuals don't have their condition under control (46.0%—about 34 million).^{5,6} Adherence to blood pressure medication is associated with 45% greater odds of blood pressure control compared with being nonadherent.⁷ Improvements in blood pressure control may decrease the burden of heart disease and stroke.

The table below describes actions public health practitioners and organizations can take to improve medication adherence. For each “Example Action,” references that public health practitioners can use are available on page 3.

Strategies	Example Actions
Monitor medication nonadherence in populations	Routinely estimate and publish medication adherence values (e.g., Proportion of Days Covered ^{8–11} [PDC]) for populations such as Medicaid, Medicare, and commercial health plan beneficiaries.
Detect and investigate reasons for medication nonadherence	Use monitoring data to identify populations with high medication nonadherence rates and collaborate with patients, physicians, pharmacists, nurses, community health workers, insurers, and other health care professionals to understand their perspectives on the barriers to adherence within those populations.
Conduct research related to improving medication adherence	Partner with researchers from medicine, pharmacy, nursing, insurers, community health, and other health care professionals to evaluate and identify interventions targeted at improving adherence, especially among the groups most at risk for nonadherence. ^{4,12}
Develop and implement public health strategies that reduce medication nonadherence	Encourage elimination of co-pays for chronic disease medications (e.g., antihypertensive, lipid-lowering, and smoking cessation agents). ^{13,14,15}
	Promote dispensing of a 90-day supply, generic, and fixed-dosed combination medications. ^{13,14,16}
	Promote use of pharmacist appointment-based medication synchronization programs. ¹⁷
	Encourage patients to embrace self-management of blood pressure, weight loss, and smoking cessation programs. ^{18,19}
	Promote patient self-assessment ¹⁸ and reporting of blood pressure and medication adherence.
Support the implementation of medication nonadherence prevention strategies at each step of the medication use process	<p><i>Prescribing:</i> simple medication regimens,¹⁶ treatment protocols,²⁰ collaborative practice agreements.^{21,22}</p> <p><i>Processing:</i> use of electronic prescribing.^{23,24}</p> <p><i>Preparing:</i> personalized medication packaging.^{23,24}</p> <p><i>Accessing:</i> no co-pays, and use of generic medicines.^{13,14,15,23,24}</p> <p><i>Administering:</i> daily dosing, fixed-dose combinations, and use of electronic alert reminders.^{23,24}</p> <p><i>Documenting:</i> use of weekly pill boxes and daily reporting journals.^{23,24}</p> <p><i>Monitoring:</i> adherence assessment where patients interact with the health system.^{23–29}</p>
Promote safe and effective medication-taking behaviors	Create awareness about the clinical and financial impact of medication nonadherence among patients, health care professionals, and health-system leaders. ¹
Foster safe and healthy medication use processes	<p>Promote Medication Therapy Management (MTM) benefits for patients with chronic disease.⁴</p> <p>Promote the <i>Pharmacists' Patient Care Process</i> as the standard of care.²⁵</p>
Provide leadership and training on enhanced medication use systems	Promote the use of e-prescribing for medications and bi-directional communication between prescriber and pharmacist regarding a patient's medication adherence rate. ^{23,24}
	Support the adoption and meaningful use of an electronic health record in pharmacy practice. ^{23,24}
	Promote the use of automated notification (of patients who are nonadherent or uncontrolled) to the patient's pharmacist and physician so that timely actions can be taken. ^{23,24}
	Encourage pharmacists and physicians to form collaborative practice agreements to promote team-based care and protocols. ^{19–24}

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Million Hearts® is a U.S. Department of Health and Human Services initiative that is co-led by the Centers for Disease Control and Prevention and the Centers for Medicare & Medicaid Services, with the goal of preventing one million heart attacks and strokes by 2017.