

Better Use of Medicines Can Improve Health Outcomes and Reduce the Use of Costly Medical Care

Medicines play a central role in making our health care system more sustainable. Use of medicines can help patients avoid other costlier services, such as emergency room visits, hospital stays, surgeries and long-term care. Yet, despite the many health and economic benefits medicines provide, significant gaps in the appropriate use of medicines remain. This is particularly true for patients with chronic disease. Moving forward, medicines will continue to provide the best opportunity to improve health and drive value and quality in health care.

THE ECONOMIC BURDEN OF CHRONIC DISEASE IS SUBSTANTIAL

Medicines are enabling us to more effectively treat chronic disease, the biggest cost driver. The cost of treating patients with chronic conditions accounts for 90 percent of the nearly \$3 trillion spent on health care in the United States each year.^{1,2} Sixty percent of American adults have at least one chronic condition and 42 percent have two or more. Patients with multiple chronic conditions are a significant driver of health care costs. In fact, the 12 percent of people with five or more chronic conditions account for 41 percent of total health care spending and spend 14 times more on health services than people with no chronic conditions (See Figure 1).³ The number of individuals with three or more chronic conditions is projected to nearly double by 2030, greatly increasing the economic burden of chronic disease on our health care system.⁴

Figure 1 High Cost of Chronic Conditions

Prevalence and health care spending by number of chronic conditions

Population



Total Expenditures



● No chronic conditions ● 1 to 2 ● 3 to 4 ● 5 or more

SIGNIFICANT GAPS IN OPTIMAL USE OF MEDICINES

Nearly 75 percent of American adults do not follow their physicians' prescription orders, including not filling their prescriptions or taking less than the recommended dose.⁵ And just 50 percent of medications for chronic disease are taken as prescribed.⁶ More than one quarter of newly written prescriptions are never brought to the pharmacy to be filled, including those for common conditions such as high blood pressure, diabetes and high cholesterol.⁷

Additionally, failing to prescribe appropriate treatments when indicated is the most common prescribing quality problem.^{8,9} For example, more than one-third of patients newly diagnosed with heart failure do not receive recommended medicines as indicated within a month following diagnosis.¹⁰

Limited access to, or restrictive coverage of, medicines may also contribute to gaps in optimal medication use. The growing use of high deductibles and coinsurance for medicines presents affordability challenges for many patients. Individuals may also face other hurdles to filling prescriptions, such as "fail first" and prior authorization requirements.^{11,12} Patients with chronic conditions with recurring annual costs for medicines are disproportionately affected by declining generosity of coverage. Such access restrictions to medicines can lead to suboptimal utilization of prescribed treatment regimens and poor health outcomes.^{13,14}

BETTER USE OF MEDICINES CAN IMPROVE HEALTH OUTCOMES AND REDUCE HEALTH CARE SPENDING

Fortunately, where there are gaps there are also tremendous opportunities to drive value in our health care system. In fact, better use of medicines could eliminate \$213 billion in US health care costs annually, amounting to 8 percent of the nation's health care costs.¹⁵

A large body of evidence demonstrates how better use of medicines can lead to reductions in other sources of health care spending across a broad range of chronic conditions (See Figure 2). For example, spending \$1 more on medicines for adherent patients with congestive heart failure, high blood pressure, diabetes or high cholesterol can generate \$3 to \$10 in savings on emergency room visits and inpatient hospitalizations.¹⁶

Figure 2 Mounting Evidence Demonstrates the Potential for Savings and Improved Outcomes



HYPERTENSION Better treatment and adherence to antihypertensive medicines could **save nearly 200,000 lives and avert more than 1 million hospitalizations.**¹⁷

MENTAL HEALTH Better management of and adherence to treatment for mental health can **save \$22.8 billion annually.**¹⁸

DIABETES Improved medication adherence among diabetes patients could result in **more than 1 million avoided emergency department visits and hospitalizations annually, for potential savings of \$8.3 billion each year.**¹⁹

MULTIPLE SCLEROSIS Improved persistence to medications **reduces the likelihood of a patient's hospital admission by up to 50%.**²⁰

Savings due to improved use of medicines is also well documented in public programs. In fact, the Congressional Budget Office credits Medicare policies that increase use of medicines with savings on other Medicare costs.²¹ And as a result of seniors gaining Part D prescription drug coverage, Medicare saved \$27 billion due to improved adherence to congestive heart failure medications. The same study estimated that Medicare could save an additional \$22 billion by 2022 if adherence among these patients reached recommended levels.²²

Similarly in Medicaid, research shows increased use of medicines among patients is associated with reductions in expenditures from avoided use of inpatient and outpatient services.²³ For

example, among patients with schizophrenia, improved adherence to antipsychotic medicines was shown to yield annual net savings of up to \$3.3 billion, or \$1,580 per patient per year, driven by lower hospitalizations, outpatient care, and criminal system involvement.²⁴ Another study found if 60 percent of the children enrolled in Medicaid achieved high adherence to asthma treatment in just 14 states, Medicaid could achieve \$57.5 million in savings.²⁵

Patients with less common chronic diseases may also reduce their health care spending by exercising better adherence. For example, Medicare patients with Parkinson's disease, adults with Crohn's disease, children with cystic fibrosis and patients with advanced melanoma have all been shown to achieve health care savings through improved use of medicines.^{26,27,28,29}

In addition to producing savings from avoided medical services, better use of medicines also improves health and overall quality of life, which can lead to improved productivity from lower disability and fewer missed days of work. A study found adults with multiple sclerosis that improved medication adherence by 10 percentage points decreased the likelihood of an inpatient or emergency room visit by 9 to 19 percent and days of work loss by 3 to 8 percent.³⁰ Another study found for workers with asthma or chronic obstructive pulmonary disease, better medication adherence resulted in less time out of work and more than \$3,100 in savings on average per worker annually.³¹

Today and in the future, medicines will play a central role in making our health care system more sustainable. For example, if we do nothing to address the costs of Alzheimer's disease we will be spending \$1.1 trillion on this condition alone by 2050. But if we develop *one new medicine* to delay the onset of the disease by *just five years* we could save the healthcare system \$367 billion by 2050.³² Like Alzheimer's disease, there is a significant unmet medical need for patients with rare diseases which collectively affect 30 million Americans. But only 5 percent of these diseases have available treatment options.³³ In consideration of the many diseases where there is significant unmet need, the development of medicines will continue to be critical in addressing the most costly and challenging diseases of our time.

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