

Prescription Medicines: The Costs, the Benefits, and the Promise

Robert A. Ingram

The old adage, “don’t throw the baby out with the bath water,” resonates strongly today in the current debate over healthcare spending in the US, particularly with regard to prescription medicines.¹ As the national health expenditure on medicines exceeds \$192 billion dollars, the answer to the question, “Do we spend more on pharmaceuticals today than we did years ago?” is clearly “yes.”² But in the debate over spending, we often forget the patient and the value that prescription medicines provide by helping us to avoid hospital and nursing home stays, to lessen disability, and to live longer, healthier lives. Perhaps the more relevant question isn’t whether we are spending too much, but whether we’re spending enough to realize the full value pharmaceuticals have to offer. Consider several real world examples.

HIV/AIDS offers one of the most dramatic examples of the value of pharmaceuticals. In the early 1990s, AIDS was a death sentence for patients, many of whom died within two years of diagnosis. By 1996, however, because of pharmaceutical advances AIDS was no longer among the top 10 leading causes of death. Survival rates improved because, in 1984, scientists at Burroughs Wellcome discovered that AZT—the first treatment to fight HIV/AIDS—was active against the virus. In the first 16 months after the introduction of AZT, hospital inpatient care dropped 43 percent.³

Today, with a score of medicines on the market, patients who take their therapy as prescribed do not die of AIDS. Prescribing several AIDS medicines at once to attack the disease can cost \$16,000 a year per patient. Yet, before such therapies were available, one AIDS patient could account for \$100,000 a year in hospital bills, until they died of the disease.⁴

Are we spending more today on AIDS medicines? Yes, but people with AIDS are living longer, healthier, and more productive lives. And, we are saving millions in the overall cost of medical care. The very success of medicines in preserving life has in part led to the current controversy over cost. Contrary to popular perceptions, price increases by industry are not the problem. The \$192 billion we spent as a nation on medicines in 2002 represents an increase of 11.9 percent overall from 2001, according to IMS Health.⁵ Yet only 3.9 percent was due to rising prices; 8.0 percent was due to increased use (volume,

mix, and new products).⁶ The most significant factor is volume growth; the number of patients needing medicines is rising dramatically. Thirty-five million Americans are now over age 65, and in just 30 years, that number will double to 70 million.⁷ Significantly, seniors consume more pharmaceuticals than any other group: nine prescriptions per year between ages 65 and 74, increasing to 12 prescriptions per year for people over age 75.⁸

Despite Increasing Drug Costs, Huge Savings Have Been Realized

Some look at the increasing senior population and the rising drug bill and say their budgets cannot afford this increased spending on pharmaceuticals. But they fail to account for the savings gained by avoiding higher healthcare costs associated with hospitalization, nursing home care, and other more intensive healthcare in addition to the personal and societal benefits of having a healthy senior population.

The Asheville Project provides the perfect example of benefits and value to be realized by looking at healthcare spending as a whole to develop a total picture of value. The City of Asheville, North Carolina, wanted to more effectively manage its healthcare costs. Importantly, the city also wanted to bring real value and benefit to the patient. Partnering with the North Carolina Center for Pharmaceutical Care (NCCPC), the city embarked upon the Asheville Project in 1997. The program had two goals: (1) to develop a model of pharmaceutical care that could be expanded and used in other settings, and (2) to develop a model of pharmaceutical care that would provide measurable clinical and financial benefit to the payers, the City of Asheville and Mission-St. Joseph’s Health System.

Under the project, NCCPC trained community pharmacists in diabetes management and offered pharmaceutical care services for city employees with diabetes. The city agreed to waive employee co-payments on prescription medicines and medical supplies and offer employees other incentives to participate in the program. Employees agreed to go through a formal diabetes education program and to meet regularly with a specially trained pharmacist.

Robert A. Ingram is the Vice Chairman of Pharmaceuticals at GlaxoSmithKline. Mr. Ingram can be reached at GlaxoSmithKline, Research Triangle Park, North Carolina 27709. Telephone: 919-483-2980; Fax: 919-483-0320.

The results of the project are significant and point to the importance of considering the overall value of medicines. Medication costs increased during the project, but the payers realized significant reductions in overall direct medical costs ranging from \$1,622 to \$3,356 per person per year.⁹ Employees reported a greater quality of life and greater success in managing their diabetes, and employers reported decreased absenteeism.¹⁰

Similar examples exist for treating other chronic diseases, like cancer. For example in a study of cancer patients whose immune systems were weakened by high-dose chemotherapy, patients were helped by a pharmaceutical known as colony-stimulating factor. The treatment saved \$30,000 per patient in hospitalization costs for bone marrow transplants.¹¹

Stroke offers one more example. In the 1940s and 1950s, stroke was the number one killer disease in America. Yet many people today are living long, productive lives, even with high blood pressure, thanks to beta-blockers and other medicines. A study by the Agency for Healthcare Policy and Research concluded that greater use of a blood-thinning drug would prevent 40,000 strokes a year, saving \$600 million per year.¹² When they do occur, many strokes are stopped before the brain is permanently damaged because of break-through clot-busting medicines. The end result is not only lives saved, but also lower treatment costs, which are estimated at \$6,000 per patient in the first year.¹³

The Proportion of Total Healthcare Spending for Drugs Has Remained Stable

It is true, the demand for prescription medicines is increasing. More people are relying on medicines for good health, and as demand increases so does spending. But despite increased demand, pharmaceuticals account for only about 10 cents of every healthcare dollar our nation spends.¹⁴ Pharmaceuticals represent a far smaller contribution to the healthcare dollar and total expenditures compared to other categories such as hospital care and physician and clinical services. In fact, as a percentage of total national healthcare spending, pharmaceuticals have stayed at or below 10 percent over the last 40 years.¹⁵

Can our society afford increased spending on medicines, particularly if they reduce patient suffering? Certainly. What our society cannot afford is the far greater cost of catastrophic care for heart disease, diabetes, Alzheimer's disease, and other illnesses among the burgeoning senior age group, costs that will grow substantially as the population ages.

Consider diabetes. Right now, the US is facing an epidemic of type II diabetes. Over 17 million Americans have diabetes – the sixth leading cause of death by disease in the US.¹⁶ Another 16 million are estimated to have pre-diabetes, but most are not taking steps to avoid full onset.¹⁷

People at risk who adopt preventive lifestyles may avoid the need for medicines. But those who suffer with this chronic and progressive disease will not be so lucky; and they face a future of fatigue, foot ulcers and gangrene leading to amputation, blindness, kidney failure, heart disease, stroke, and premature death.

That is certainly frightening for patients. But what will frighten those responsible for paying for the treatment of diabetes is the alarming rise in the number of patients, and therefore costs, expected over the next 50 years. By 2050, at current rates, the number of patients with diabetes will increase by almost half.¹⁸ Today, this nation pays nearly \$132 billion a year to cover the human and economic cost to society from just this one disease, a huge proportion of which is spent for hospital care.¹⁹ Considering the aging population, the increasing incidence of diabetes, and the huge cost associated with it, the national healthcare bank will be broken by just one disease.

That is what society cannot afford. The solution is greater investment in education to prevent diabetes, increased spending on existing medicines to delay and control the disease's effects, and continued research and development (R&D) of newer and better medicines against this disease.

The Need for Substantial Investment in New Drug Development

For such R&D, society turns to the research-based pharmaceutical industry. The industry reinvests more than 18 percent of its domestic sales in domestic R&D, more than any other industry.²⁰ Yet it takes 12 to 15 years, on average, before a new drug makes it through the R&D process to help a patient.²¹ From the time a drug is first conceived until it is available on the market, the average cost of developing that one drug is over \$800 million. But one drug has only a 30 percent chance of generating enough revenue to cover average R&D costs, revenue that must also pay for the 5,000 to 10,000 compounds that fail in the effort to bring just one medicine to patients.²² Because of the high cost and high risk, the best hope for better treatments resides in the pharmaceutical research companies, the only organizations with the size, scale, technologies, and expertise necessary to bring innovative new medicines to market.

Price Controls Are Unwarranted and Detrimental

Despite the obvious need for this high-risk investment and the value it brings to society, critics of the pharmaceutical research industry advocate price controls with the short-term goals of managing the spending on pharmaceuticals and curbing industry profits. They claim such controls are necessary because the industry abuses its profits, spending, for example, more on direct-to-consumer (DTC) advertising than research. Such criticisms are untrue. While the pharmaceutical industry reportedly spent \$2.6 billion advertising in 2002, the industry spent an additional estimated \$29.5 billion on R&D.²³ Yet DTC plays a valuable role in educating patients about treatment options available to them. More than 70 percent of patients who saw those advertisements agreed that DTC advertising educates consumers about the risks and benefits of prescription medicines and has increased their awareness of treatment options.²⁴

Price controls also would have unintended negative consequences, including a loss of capital in the industry, leading to budget cuts, truncated R&D, and diminished hope for medicines against diseases that still have no effective treatment. Conversely, as long as funding is available to support continued research, the future is ripe with possibilities for improved medical care. Today, more than 1,000 new medicines are in development for various cancers; diseases of aging, such as arthritis, diabetes, and depression; neurological disorders like Alzheimer's disease, Lou Gehrig's disease, multiple sclerosis, and Parkinson's disease; and heart disease and stroke.

Pharmaceuticals Are Part of the Bright Future of Medical Science, Patient Care, and Prevention

In fact, with so many new breakthroughs on the horizon, researchers are standing at the cusp of a new era of medical innovation, particularly given new understanding about genetics

and genomics, and growing knowledge of cell and tissue growth. In addition to better treatment with pharmaceuticals, R&D efforts are likely to lead to improvements in disease prevention and even allow physicians to screen for susceptibility long before symptoms develop.

Now and in the future, using the right medicines and diagnostic tools can lead to dramatic improvements in health and decreases in overall healthcare spending. But that future is built today, within the framework of a healthy, thriving pharmaceutical industry focused on discovering and developing innovative medicines for improved patient health.

That's the true cost – and value – of medicines.

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