BIOMEDICAL RESEARCH

A Cure for Nation's Ills

Dennis S. Charney, M.D.

The United States will spend an estimated $2.5 trillion on health care this year, yet millions of Americans still battle serious diseases that only more biomedical research can prevent or cure.

There is unequivocal evidence that investing in research can lead to dramatic improvements in our nation's health. A recent analysis by the medical researcher and demographer Kenneth G. Manton, Ph.D., and colleagues found that increases in biomedical research funding by the National Institutes of Health (NIH) correlated with reduced mortality rates for four major chronic diseases: cardiovascular disease, stroke, cancer, and diabetes.

We have the potential to do much more. With the sequencing of the human genome and dramatic advances in technology, we are at the threshold of identifying the genetic susceptibilities or predispositions for many common diseases. It is within our reach to create drugs that could predict, diagnose, and treat some of the world's deadliest and most debilitating diseases. We need to effectively treat congestive heart failure. Stop the progression of diabetes. Predict and prevent Alzheimer's disease. Minimize cancer risk and maximize cancer cures.

Yet, over the past 30 years, the U.S. has allocated only $44 per citizen per year—about 12 cents per day—for biomedical research. And since 2004, NIH funding, excluding stimulus grants, has been stagnant while inflation and costs have continued to climb. The result is a 13 percent decline in real purchasing power since 2003. Meanwhile, other nations have stepped up funding and assumed a larger portion of the world's research investment.

Biomedical research is an economic driver that can reduce health care costs. Investment in basic biomedical research is necessary to spur medical and scientific innovation. The American biotech industry, one of the most important components of the nation's economy, depends on research funding and requires innovation to remain competitive. Not only is the biotech industry critically important for its own sake, but it is also tightly linked to many other growing fields. It creates good jobs in biotechnology, pharmaceutical, and scientific instrument industries and those, in turn, generate more jobs in other sectors.

Economic analysis also reveals that biomedical research saves money and reduces health care costs. It is estimated that improvements in health from 1970 to 2000 were worth $95 trillion, while the U.S. invested $200 billion in the NIH. If 10 percent of that overall health savings, or $9.5 trillion, resulted from NIH-supported research, our investment in medical research then provided a 50-fold return to the economy.

We have already seen such economic benefits from the improved health of our elderly population. NIH-supported research has resulted in positive health effects on chronic disease that have helped preserve the U.S. elderly workforce. This is associated with increased tax revenues and reduced Medicare costs.

The U.S. emerged from World War II as the world's economic superpower, leading to its international preeminence in scientific research. However, history suggests that as a nation's economy declines, so does its support for scientific research.

This is the time to reassert our global leadership in biomedical research. This is the time to make robust and sustained investments in research by dramatically increasing funding of the National Institutes of Health.

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