

# A TAX CREDIT FOR SALES OF HIV, TUBERCULOSIS, AND MALARIA VACCINES

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Amir Attaran, Michael Kremer, Jeffrey Sachs, and Sara Sievers  
Center for International Development, Harvard University\*

**E**ach year, AIDS, tuberculosis, and malaria kill five million people. These diseases cause immense human suffering, thwart economic development, and exacerbate political instability. The global spread of drug-resistant tuberculosis threatens to bring virtually untreatable TB to America, and if the especially virulent strains of AIDS common in Africa go unchecked, they too may spread to the U.S.

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Yet little research is being conducted to develop effective vaccines against tuberculosis, malaria, and the dangerous strains of AIDS common in Africa. This is in part because most cases are currently in countries with per capita incomes of less than \$2 a day, where citizens cannot pay much for vaccines. Potential vaccine developers fear that they would not be able to recoup the large research and development investments required to create vaccines. Hence, biotech and pharmaceutical firms are reluctant to invest in this research.

A tax credit for sales of future AIDS, tuberculosis, and malaria vaccines would help address the world's need for effective vaccines in a way that harnesses the innovative potential of the free market. Such tax credits would create an incentive for firms to invest in

developing vaccines and would make vaccines more affordable once they were developed. The tax credits would be highly cost effective, potentially saving millions of lives each year for just a few dollars per person protected from disease. And, because the tax credit would be for vaccine sales, no credits would be allocated unless a vaccine were actually developed and delivered. Either a vaccine will be developed, or the tax credit will cost nothing.

The concept of establishing tax credits for sales of new vaccines has received editorial support from the *Washington Post*, the *Economist* magazine, and the *New York Times*. As the *New York Times* has written: "With any luck, the benefits for mankind could be spectacular."

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## The Problem

In 1998, 2.3 million people died of AIDS, and 5.8 million people were newly infected with HIV, 70% of them in sub-Saharan Africa. The strains of HIV now common in the U.S. are believed to have originated in Africa, and the especially virulent strains now common in Africa could also spread to the U.S. Tuberculosis kills 1.9 million people each year. Although at this time the vast majority of

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\* 79 John F. Kennedy Street, Cambridge, MA 02138 USA, 617-496-9683, <http://www.cid.harvard.edu>.

tuberculosis cases are in developing countries, the global spread of drug-resistant tuberculosis poses a major threat to the United States. Each year, malaria kills one million people, mostly infants, children, and pregnant women.

In an interconnected and highly mobile world, health crises in developing countries are a threat to everyone. According to the Global Health Council, during the past 50 years, at least five times as many Americans have died from communicable diseases that have come from the developing world than have died in military conflicts. Malaria, tuberculosis, and especially AIDS also impair U.S. interests by threatening economic development and political stability overseas.

Vaccines have been highly effective in fighting other diseases, and the development of effective vaccines offers the best hope for conquering AIDS, malaria, and tuberculosis. Vaccines led to the eradication of smallpox from the world and are on the way to eliminating polio. Three million lives are saved each year by inexpensive vaccines that reach 74 percent of the world's children.

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Yet little research is being conducted to develop vaccines against tuberculosis, malaria, or the strains of HIV currently widespread in Africa. More generally, commercial pharmaceutical research rarely focuses on diseases that primarily affect developing countries. Of the 1,233 drugs licensed worldwide between 1975 and 1997, only 13 were for tropical diseases. Two of these were modifications of existing medicines, two were produced for the U.S. military, and five came from veterinary research. Only four were developed by commercial pharmaceutical firms specifically for tropical diseases of humans. This is in large part because the market in developing countries is insufficient to justify sufficient investment.

It is in the interests of both developed and developing countries to find vaccines for these diseases which kill millions each year. A vaccine tax credit is a key step to achieving this goal.

## The Proposed Tax Credit for Vaccine Sales

A tax credit that would match each dollar of vaccine sales with a dollar of tax credits is part of a bill introduced by Senators Frist and Kerry and was included in the administration's FY 2001 budget proposal. The tax credit would substantially increase the financial reward for developing new vaccines, giving firms more incentive to invest in research and development.

- To qualify, vaccines would have to be against infectious diseases which kill at least one million people each year. The targeted diseases would include malaria, tuberculosis, and HIV/AIDS.
- Vaccines would also have to be approved by the Food and Drug Administration (FDA), similar organizations in certain foreign countries, or the World Health Organization, after the legislation was enacted.
- The maximum amount of sales eligible for a credit allocation would be \$100 million per year for 2002 through 2006 and \$125 million per year for 2007 through 2010, with a cap for the entire period of \$1 billion.
- Unallocated credits for any year would be carried over and available for allocation until 2020.
- To qualify for the tax credit, vaccines would have to be sold to approved nonprofit organizations or international institutions, such as the United Nations Children's Fund (UNICEF). The Agency for International

Development would allocate the tax credits.

## Advantages of the Proposed Tax Credit

Under the proposal, no tax credits would be given unless an approved vaccine were developed and delivered to a non-profit organization that distributes vaccines in developing countries. Thus there would be no risk that tax credits designed to spur vaccine research and development would be diverted to other uses. The tax credit costs nothing unless a vaccine is developed and delivered.

- Rather than setting up a new government bureaucracy to develop a vaccine, the proposal is market oriented, drawing on private sector expertise. It takes advantage of the technological strength and innovative capacity of the U.S. biotech and pharmaceutical industries.
- The tax credit will make any vaccines developed more affordable, helping ensure that vaccines reach those who need them. Non-profit organizations purchasing vaccines will be able to negotiate more affordable vaccine prices, because each dollar they spend on vaccines will be matched by a dollar in tax credits for the vaccine seller.
- The tax credit helps to catalyze matching contributions from outside the U.S. government. Each dollar of tax credit would be triggered only when a non-profit organization or an international organization, such as UNICEF, spends a dollar on purchasing vaccine. This helps the tax credit go farther than a non-matching program, and helps ensure that private non-profit organizations and the international community will also contribute to the effort to make vaccines available.
- The tax credit complements other initiatives:
  - The World Bank is devoting \$1 billion

to fight communicable diseases.

- The Global Alliance for Vaccines and Immunization is undertaking a major effort to improve utilization of existing vaccines with support from the Bill and Melinda Gates Foundation, European governments, UNICEF, the World Bank, and others.
- The International AIDS Vaccine Initiative is directly supporting vaccine research with support from the Dutch and British governments and the Gates and Rockefeller Foundations, among others.

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The United States has tremendous scientific resources, which – if focused on some of the world’s most pressing public health concerns – could save the lives of millions, at minimal cost. A tax credit offers a market-oriented way to harness these resources. Either a vaccine will be developed, or the credit will cost nothing.

### For more information, please see:

“A Better Way to Spur Medical Research and Development.” *Regulation* 23(2): 34-39.

“Making Drugs, Profits, and Doing Some Good.” *Boston Globe* (city edition): F1. October 25, 1999.

“Creating Markets for New Vaccines.” Forthcoming in *Innovation Policy and the Economy*. Cambridge, MA: MIT Press. Currently available at <http://www.nber.org/books/innovation/vaccine5-23-00.pdf>.

“New Vaccines for the Poor.” *New York Times* March 14, 2000. (late edition; East coast): A22.

“Sachs on Development: Helping the World’s Poorest,” *The Economist* 352(8132): 17-20. 1999

“Science vs. Poverty.” *Washington Post* March 19, 2000. (final edition): B06.