

## Health-care aid for developing countries boosts life expectancy, study finds

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(Medical Xpress)—Foreign aid for health care is directly linked to an increase in life expectancy and a decrease in child mortality in developing countries, according to a new study by Stanford University School of Medicine researchers.

The researchers examined both public and private [health-aid](#) programs between 1974 and 2010 in 140 [countries](#) and found that, contrary to common perceptions about the waste and ineffectiveness of aid, these health-aid grants led to significant health improvements with lasting effects over time.

Countries receiving more health aid witnessed a more rapid rise in [life expectancy](#) and saw measurably larger declines in mortality among children under the age of 5 than countries that received less health aid, said Eran Bendavid, MD, an assistant professor in the Division of General Medical Disciplines and lead author of the study. If these trends continue, he said, an increase in health aid of just 4 percent, or \$1 billion, could have major implications for child mortality.

"If health aid continues to be as effective as it has been, we estimate there will be 364,800 fewer deaths in children under 5," he said. "We are talking about \$1 billion, which is a relatively small commitment for developed countries."

The study was published online April 21 in *JAMA Internal Medicine*. The study's co-author, Jay Bhattacharya, MD, PhD, is an associate professor

of medicine. Both authors also are core faculty members at Stanford's Center for Health Policy and Center for Primary Care and Outcomes Research.

## **Does it work?**

Bendavid noted that there is much debate around foreign aid. Critics question whether it's used effectively and reaches its intended recipients. They often argue that it discourages local development and displaces domestic resources that might otherwise be devoted to health. So the researchers devised a statistical tool to address the basic unanswered question: Do investments in health really lead to health improvements?

Bendavid said there are many reasons to suspect the answer would be no, though the findings proved just the contrary, with health-related aid leading to direct, beneficial outcomes.

"I think for many people, that will be surprising," he said. "But for me, it fits with other evidence of the incredible success of public health promotion in developing countries." In a previous study, for instance, he found that hundreds of thousands of lives were saved through the U.S. President's Emergency Plan for AIDS Relief, or PEPFAR, in which the U.S. government invested billions of dollars in antiretroviral treatment and other AIDS-related prevention and treatment initiatives.

In the latest study, the two investigators used data from the Creditor Reporting System of the Organization for Economic Cooperation and Development, the world's most extensive source of information on foreign aid. While aid programs for health grew during the 36-year study period, the largest period of growth occurred between 2000 and 2010, they found.

## Stepped-up investments

It was during this decade that many governments and private groups stepped up their investments in health, including PEPFAR; the World Bank; the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Gates Foundation; and the GAVI Alliance, among others, he said.

As a result, while health aid in 1990 accounted for 4 percent of total foreign aid, it now amounts to 15 percent of all aid, he said. And it's become an important part of health budgets in recipient countries, accounting for 25-30 percent of all health-care spending in low-income countries, Bendavid said.

The researchers found that these funds were used effectively, largely because of the targeting of aid to disease priorities where improved technologies—such as new vaccines, insecticide-treated bed nets for malarial prevention and antiretroviral drugs for HIV—could make a real difference.

They observed the greatest health impacts between 2000 and 2010, when donor investments were at their peak. During the decade, under-5 [child mortality](#) declined from a mean of 109.2 to 72.4 deaths per 1,000, or 36.8 fewer deaths among those children in the countries that received the most health aid, the researchers found (a 34 percent reduction). In the countries receiving the least, under-5 mortality fell from 31.6 to 23.2 deaths per 1,000, or 8.4 fewer deaths per 1,000 live births (a 26 percent reduction), the researchers reported.

## Life expectancy increases

During that period, life-expectancy figures also grew faster in countries with a greater infusion of health aid, Bendavid said. Life expectancy

rose from 57.5 to 62.3—an increase of 4.8 years—among the countries receiving the most aid. Among the countries receiving the least health aid, life expectancy increased by 2.7 years, from 69.8 to 72.5 years.

Bendavid said previous experience has shown that, on average, life expectancy has increased by nearly one year every four years in developed countries. But health-aid programs literally cut in half the time it took to reach this goal in developing countries. "In that same four-year span, they increased life expectancy by two years, rather than one year," he said.

He said the results are not surprising if one considers some of the new health technologies made available to developing nations as a result of foreign aid. Childhood vaccines, including those for diphtheria, tetanus, polio and measles, have all but wiped out what used to be among the top killers of young children in the developing world. Health aid directed to providing insecticide-treated malarial bed nets also has been credited in recent studies with reducing malarial deaths among young children, he noted.

Among both adults and children, aid that has expanded the availability of antiretroviral drugs in the developing world has had a major impact on reducing deaths and improving overall life expectancies, he said. For instance, in a study published in 2012, Bendavid and colleagues found that PEPFAR's health aid resulted in more than 740,000 lives saved between 2004 and 2008 in nine countries.

The researchers also found that the benefits of aid have a lasting effect: The telltale signs of aid's relationship to reducing under-5 mortality were detectable for three years following the distribution of aid. The correlation between health aid and longer life expectancy overall was detectable for five years after the aid was distributed.

With aid commitments flattening amid the economic downturn, Bendavid said donors will have to be that much smarter in how they invest future dollars, focusing on the most cost-effective interventions and technologies.

"To date, there has been little consideration of how to use development aid in the most cost-effective manner," he said. "That will have to change now that the funding level has reached a plateau."

Provided by Stanford University Medical Center

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