740,000 lives saved: Study documents benefits of AIDS relief program

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The U.S. President's Emergency Plan for AIDS Relief, the government's far-reaching health-care foreign aid program, has contributed to a significant decline in adult death rates from all causes in Africa, according to a new study by Stanford University School of Medicine researchers.

Between 2004 and 2008, PEPFAR was associated with a reduction in the odds of death of nearly 20 percent in the countries where it operated. The researchers found that more than 740,000 lives were saved during this period in nine countries targeted by the program.

"We were surprised and impressed to find these mortality reductions," said Eran Bendavid, MD, assistant professor of medicine. "While many assume that foreign aid works, most evaluations of aid suggest it does not work or even causes harm. Despite all the challenges to making aid work and to implementing HIV treatment in Africa, the benefits of PEPFAR were large and measurable across many African countries."

The study is the first to show a decline in all-cause mortality related to the program. It will be published in the May 16 issue of the Journal of the American Medical Association. Bendavid is the lead author of the study.

PEPFAR was begun in 2003 under the administration of President George W. Bush with a five-year, $15 billion investment in global AIDS and a focus on treatment and prevention in 15 countries. It was

reauthorized by Congress in 2008 and has expanded its reach to 31 countries.

To measure the impact of the program, Bendavid and his colleagues analyzed health and survival information for more than 1.5 million adults in 27 African countries, including nine countries where PEPFAR has focused its efforts. The researchers examined data available in the Demographic and Health Surveys, a USAID-funded project that involves a representative sampling of in-person interviews among women in which they discuss their health and the health of their family members. These surveys form the foundation of many health measurements in developing countries.

They found the odds of death from any cause among adults were 16 to 20 percent lower in the PEPFAR-targeted countries.

To bolster the results, the scientists did a separate analysis using specific data on PEPFAR programs in Rwanda and Tanzania. They compared regions of the two countries where PEPFAR's investments led to widespread increases in the number and size of sites providing antiretroviral therapy, with areas where PEPFAR had fewer services available.

"We observed a similar reduction in mortality when exploring PEPFAR's effects using a different lens," Bendavid said. In Tanzania, the odds of death were found to be 17 percent lower and in Rwanda 25 percent lower in the districts with greater support from PEPFAR.

Bendavid speculates that the program's commitment to building health-care delivery infrastructure — including new drug distribution systems and new clinics, pharmacies, laboratories and testing facilities — has been an important factor for its success.

"The scale of PEPFAR's investment was unprecedented," said Bendavid, who is an affiliate at Stanford Health Policy, part of the Freeman Spogli Institute for International Studies. "People working in PEPFAR's focus countries describe working supply chains, stocked pharmacies and staffed clinics."

Although the program was targeted to address HIV, these services could have benefitted patients with a variety of other health concerns. For example, one study found that some uninfected, pregnant women in Ethiopia, Rwanda and Tanzania chose to deliver their babies in facilities supported by PEPFAR, Bendavid said.

Some have argued that focusing resources on a specific disease, such as AIDS, may detract efforts from other diseases and activities, undermining some of the benefits of such programs. But the latest study does not support this argument; indeed, it suggests that PEPFAR helped to prevent additional deaths from causes other than HIV/AIDS.

"Whether disease-specific programs like PEPFAR have synergies with other health improvement efforts — or instead undermine them, as some have worried — is really an open question," said Grant Miller, PhD, MPP, associate professor of medicine and the senior author of the paper. "There are reasons to think either scenario is possible, and more research is needed. We don't find much evidence of PEPFAR undercutting other initiatives; if anything, we see hints of synergies."

Bendavid said the program managed to accomplish the reduction in mortality in the face of enormous challenges — from persuading people to go for HIV testing and treatment to dealing with problems of drug shortages and drug resistance.

Historically, few other large-scale health initiatives have succeeded to such an extent; smallpox, which was eradicated by 1979, is among the

rare and more notable examples.

"PEPFAR's success with HIV … may be considered the clearest demonstration of aid's effectiveness in recent years," the researchers concluded.

In 2009, PEPFAR was folded into a new Global Health Initiative that calls for a broader agenda, with some resources redistributed to other programs, such as maternal and child health. Its budget, which rose dramatically in the early years, has remained relatively flat or declined slightly since then. It reached a peak at $6.8 billion in fiscal year 2010, then declined to $6.7 billion and $6.6 billion in fiscal years 2011 and 2012, respectively, according to figures from the Kaiser Family Foundation. The administration's budget request for the 2013 fiscal year is $6.4 billion.

While the program appears to have had an impact within a few years of its implementation, Bendavid noted that reduced investments in global AIDS, both through PEPFAR and other international aid programs, could have implications for the future of the epidemic.

"We are transforming the face of the epidemic but funding shortfalls will change the road ahead," he said.

More information: *JAMA*. 2012;307[19]:2060-2067.

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