

# U.S. can still stop the spread of drug-resistant tuberculosis

by Carol Hugunin

While it may appear to some that acquired immune-deficiency syndrome (AIDS) seems to be under control in the United States, this is clearly not the case globally, and concomitant diseases, such as tuberculosis (TB), will become rampant even in the United States if cuts in health care programs proposed by House Speaker Newt Gingrich and his Conservative Revolution crew go through. Those cuts—in basic health infrastructure, including hospitals in poor areas; and in various programs that provide a necessary margin of support for those of meager means—will throw a barely manageable public health problem into a chaotic, growing epidemic.

Because AIDS suppresses the immune system, it exacerbates the control of other more common communicable diseases. Medically, AIDS patients, especially in conditions of extreme poverty and lack of supportive infrastructure, act as the “weak link” in the general population. Hence, the AIDS epidemic, here and abroad, creates conditions for the spread of previously controlled contagious diseases, and, the development and spread of new diseases, including antibiotic-resistant diseases.

The epidemiological weak link idea was developed by a task force directed by Lyndon LaRouche in the fall of 1974, to study the economic consequences of the International Monetary Fund and World Bank policy of cutting off aid, “triage,” to “Fourth World” areas. Based on this idea, a model scenario for ecological-epidemiological holocaust was elaborated at the Dec. 28, 1974 conference of the National Caucus of Labor Committees in New York City. *EIR* published a *Special Report* in July 1985, “Economic Breakdown and the Threat of Global Pandemics,” which expanded upon the conclusions of the earlier study, and presented an “Order of Battle for a Global War on Disease.”

The interaction between AIDS and TB, in the context of the collapse of public health infrastructure in the United States, has fully reaffirmed the validity of the concept of ecological-epidemiological holocaust, triggered by the weak link in the system. TB was brought under control in the post-World War II period, using an aggressive screening program in schools and city communities (initially X-rays, and, later, skin tests with X-ray followup where necessary); TB wards, in which the impoverished were fed, kept warm,

rested, and provided medication; plus the development of a series of potent antibiotics. However, various short-sighted “cost-effective” measures, including the underfunding of public health infrastructure, especially in areas which can least afford to pay for it; the lack of investment by the pharmaceutical companies in development of new antibiotics; coupled with the emergence of AIDS under conditions of the collapsing standard of living for the average American, and the decay of general infrastructure upon which we all depend, have reversed our capacity to control diseases such as TB in the United States.

## A threat to everyone

TB is a very contagious, airborne disease. Without proper medical care, it is a killer. Although its rapid spread is generally associated with crowded living conditions and poverty, such as are found in marginalized groups in inner cities (the homeless, intravenous-drug users, prisoners, recent immigrants), the TB bacillus is no respecter of property values. There are many cases of the wealthy acquiring TB, or their children acquiring TB from a nanny, a maid, or some other less-well-off help. There are also cases of TB epidemics generated at public schools, bars, and other places where people of different income brackets commonly mingle. Hence, out-of-control TB, and especially out-of-control drug-resistant TB, is an immediate threat to everybody, including the short-sighted fools who are enacting these budget cuts.

According to estimates by Drs. J. Mann and D. Tarantola at the Global AIDS Policy Coalition at the Harvard School of Public Health, 42% of the human immunodeficiency virus (HIV, which causes AIDS)-positive population globally was co-infected with TB as of Jan. 1, 1994. Some 23% of the North American population that is HIV-positive is co-infected with TB. This is a grim reality, for neither AIDS nor drug-resistant TB has a cure, and each epidemic is feeding the spread of the other, fostering ideal conditions for the development of new varieties of contagious diseases, including drug-resistant diseases.

## Infrastructure is lacking

The tragedy here is not only that man faces deadly diseases, but that his thinking is so short-sighted that he fails to

maintain the infrastructure necessary to adequately fight and defeat these diseases. Even with the complication of the AIDS epidemic, TB *could* have been kept under control in the United States, if public health infrastructure, and especially TB-control programs, had had consistent, adequate funding. However, in this era of the short attention span, in which investment in infrastructure is grossly neglected in favor of throwing bandaid amounts of public funding at problems perceived as immediate overwhelming threats, this has not occurred.

A September 1993 Office of Technology Assessment (OTA) report, "The Continuing Challenge of TB," faulted the Reagan, Bush, and Clinton administrations, as well as congressional leaders, for drastically underfunding Centers for Disease Control budgets for TB control. For example, in 1993, CDC requested \$484 million in funding, but only \$111 million was authorized. The OTA study pointed out that TB decreased at an average rate of 6% a year from 1953 to 1974, and 5% a year from 1975 to 1984; and then, when TB funding dwindled down to almost nothing, and TB sanatoriums and TB wards were eliminated, TB began to bounce back. In 1990, TB in the United States increased at a rate of 9.4%. On March 3, 1994, an editorial in the *Journal of the American Medical Association*, entitled the "Failure of Tuberculosis Control," cited the failure of "societal will." That issue of the journal also published a study by Dr. A. Bloch of the CDC, which found that in a national survey conducted in 1991, some 14% of TB cases were resistant to one or more drugs; almost 10% were resistant to isoniazid and/or rifampin, the two drugs of choice for fighting TB; and 3.5% were resistant to both drugs of choice.

The potential for a TB epidemic to explode now, if budget cuts go through, is even greater than in 1993 or 1994. "If Medicaid is cut, if Proposition 187 [in California, which would deny health care to undocumented immigrants, but is currently stopped by court injunction] is allowed to stand, very possibly TB will come back again as a *very* serious problem," stated Tim Brewer, an epidemiologist at the Harvard School of Public Health. "TB is concentrated in marginalized groups—inner-city, prisons, recent immigrants, IV-drug users who are HIV infected, etc., and this makes it very, very sensitive to health care underfunding. . . . Traditionally, epidemiology, and especially TB, have been underfunded."

According to the national survey by Dr. Bloch, immigrants are a very trivial percentage of the total TB problem, but, if proposals like Proposition 187 prevent them from receiving adequate medical care, they could soon become a focus for TB spread—through no fault of their own. Traditional public health measures can successfully combat TB, but if Gingrich succeeds in cutting Medicaid and other public health infrastructure, TB could become as commonplace a killer here as it is in developing countries. And were politicians to wake up sometime in the future to find TB as a

major epidemic raging uncontrolled in the United States, the folly of short-sighted budgetary thinking will come back to haunt them.

Most epidemiologists, and especially those trained in the field of TB control, were trained in the 1950s, and are now close to retirement age. There is no younger generation trained to replace them. "Very few people starting out in [medical] careers are doing work in TB," says Brewer. "It's directly related to issues like funding."

### **TB could be knocked out**

Given sufficient political will to change the situation, TB could be knocked out. The United States does not need to become an epidemiological nightmare in the near future. A study by Dr. E. Telzak at the Bronx-Lebanon Hospital Center in New York City, published in the Oct. 5, 1995 *New England Journal of Medicine*, notes that 96% of multi-drug-resistant non-HIV-positive TB patients respond clinically to aggressive drug treatment. In fact, aggressive treatment has significantly decreased TB in New York City.

In 1991, New York City made up 61% of the multi-drug-resistant TB cases in Bloch's survey of the entire United States. In 1992, according to Dr. Telzak, 10% of New York City's TB patients were resistant to both drugs of choice. At that time, the city had over 400 multi-drug-resistant cases of TB. But now it has less than 100. Part of the success is due to very strict hospital procedures, in which pneumonia patients are isolated immediately, until it is established that they do not carry TB. Part of the success is due to a campaign called "directly observed therapy," in which health workers go out into the field to watch each TB patient take his or her medication. But such a serious approach to TB control is premised on adequate funding and personnel—something that is put into question by the current budget slashing mania in Congress.

Even the drug-resistance problem is not impossible to handle, if public health funding and adequate research funding were to become available. New York City has already demonstrated that, by aggressive use of standard public health measures, it is possible to beat back drug-resistant TB. In addition, to the degree that they can find financial support, laboratories in the United States and abroad are working on more effective TB vaccines, than the current, only 50% effective BCG vaccine. TB research may soon make it possible to develop a whole new class of TB drugs, using drugs that previously were discarded, not because they would not have been very effective, but simply because they, by themselves, could not get into the appropriate cells to become effective. Placed in microspheres made of a biodegradable polymer linked to a segment of a protein that the TB bacillus uses to get itself, as a bacterium, into those cells, these drugs suddenly become very useful in fighting TB. However, this promising line of research is not currently being pursued, because it lacks funding.