Interview with Dr. Anthony Fauci, NIH – AIDS TIME:10.11
{RESTRICTIONS: NONE}

VOA INTERVIEW WITH DR. ANTHONY FAUCI, DIRECTOR,
NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES
BY VOA'S JAMES BERTEL – 7 JULY 2004

MR. BERTEL:
As you know, the U.N. came out with a new report yesterday that finds the AIDS pandemic is growing at an alarming rate. Is this an anomaly, or is the fight against AIDS spiraling out of control?

DR. FAUCI:
No. I think the statement that the epidemic is still out of control -- and particularly in regions of the world where it has not yet peaked -- it's alarmingly getting out of control, is something that was really predictable. If you look at the evolution of HIV/AIDS over the last two decades-plus, it has always been a situation in which there has been an iceberg effect, and you're just looking at the tip of the iceberg. And then you have problems that evolve in developed countries, such as in the United States and in Western Europe.

We saw it, for example, in Sub-Saharan Africa, when, at the time that we were aware of the explosion of cases in the developed world, the general opinion was that it wasn't necessarily that bad in developing nations. And then you had the explosion of cases, which is still going on, in Sub-Saharan Africa, where you have up to 15 percent or more of the adult population in several African countries are infected.

Now we have a situation where the next wave almost certainly is going to be in Asian countries and in Eastern Europe -- Asian countries in which the populations are enormous. Countries like China, countries like India, in which you have a billion people, where, if you have even a minor increase, of doubling from 1 percent to 2 percent, or a half a percent to 1 percent, that spells out in tens of millions of people. So we are still in a very precarious situation globally with HIV.

MR. BERTEL:
In many of these countries where AIDS/HIV are spreading, there is a perception that the disease belongs to Africans, it belongs to prostitutes, drug addicts, homosexuals. What is the face of HIV/AIDS?

DR. FAUCI:
Well, if you look globally and look at the totality of cases, it's a sexually transmitted disease fundamentally, with obviously injection drug use also but

fundamentally it's a sexually transmitted disease involving men and women, in which 50 percent of the cases in certain developing nations are women, and the majority of cases are heterosexually transmitted.

What we've seen -- and we've seen a repetitive pattern of this; that's why those of us in the public health field can say with a certain degree of certainty of what is going to happen if some dramatic, drastic measures are not taken -- you get the introduction of HIV into a particular country or in a particular subset of a society. It might come in among gay men or injection drug users. And people get the false impression that it's going to stay confined to that group. Then it goes out in a concentric way among young individuals who are heterosexually active, particularly when you have the mix of injection drug use with the heterosexual population. Then you have the broad general population getting involved, first, people who are generally socio-economically deprived because of certain economic and other factors that lead to certain types of behavior that might propagate HIV infection -- people going into commercial sex work because of economic conditions that force them into that. And then you get it spilling over into the general population. And then, before you know it, you have a disaster in a country.

That pattern has been repetitive in different regions of the world.

MR. BERTEL:
So how do you prevent it from spreading rapidly, through education?

DR. FAUCI:
Oh, there has to be leadership from the top, with education and behavioral modification. Certainly, in countries in which there has been clear, strong leadership, such as in Thailand, such as in Senegal, such as particularly in Uganda, where the president of the country himself got actively involved in the campaign of education and behavioral modification. So, without the leadership, you can make some progress, but never as much as if you have the full-blown leadership of a country. So we need education, prevention, behavioral modification, and strong leadership from the leadership of the country.

MR. BERTEL:
For those who are already infected, there have been some positive developments. Life expectancy is being extended thanks to medications. What are some of the advances on the medical front?

DR. FAUCI:
Well, on the medical, there are two aspects to it. There is a sociological medical advance and there are basic science, clinical science, medical advances. The social aspects of the medical advances is that now, in the

year 2004, we have the possibility of getting drugs to individuals in certain settings, particularly in developing nations, in which this was almost inconceivable just a few years ago, one because of the price of the drugs and one was because of almost a giving up on whether or not the infrastructure in a particular country would be able to handle the distribution of drug.

With a number of a programs, bilateral programs, such as President Bush's emergency plan for AIDS relief of $15 billion, the Global Fund is up and running, a number of organizations, nongovernmental organizations as well as government organizations, are now putting money into getting drugs to people in developing nations. So a large number of people each day now are going on drug that years ago there wouldn't have been any feasibility for them to do that. So that's the sociological/medical advance -- that we're getting the drugs that we already have and that we do have to people who previously could not have access to those drugs.

The advances scientifically, pure scientifically, are there are now better drugs, drugs that can be given fewer times per day, drugs that can potentially have less toxicities, newer drugs against newer targets. Just this past year and a half we had the introduction of the use and the FDA approval of a drug that inhibits the fusion of the virus to the cell. That drug was T20. It went on some early trials and now is licensed for use.

We have some promising studies in animal on an integrase inhibitor, which is an enzyme integrase which is important for the insertion of the viral segment into the chromosome of the cell, another vulnerable target in the replication cycle for HIV.

So the science is moving along. We are getting better drugs, more user-friendly drugs, at the same time as we have the capability now of getting those drugs to people in developing countries.

MR. BERTEL:
What about vaccines? Are we making progress in developing a vaccine?

DR. FAUCI:
We are, but it's slow. And I think we all have to be honest and admit that. HIV is a very special virus. It has certain characteristics which make it an extremely difficult problem to develop a vaccine, not the least important of which is the fact that the body's ability to make a protective immune response against HIV is certainly not profound. It is something that is puzzling to the scientists. It has to do with the nature of the virus' ability to mutate. But it also has to do with the nature of how the virus presents itself to the body's immune system.

It's a striking fact that of all the tens of millions of people that have thus far been infected with HIV, there isn't a single documented incidence of someone with established HIV infection who has spontaneously eradicated the virus from their body. Whereas if you look at virtually any other deadly public health, high-impact infections, like smallpox and polio and measles, in all of those infections -- take smallpox for example -- 15 to 30 percent of people would die from smallpox. That means 70 to 85 percent of people, their immune system had the capability of completely eradicating the virus from the body. The same thing with polio. Greater than 90 percent of people who get polio do very, very well, with very little deleterious effects, because the immune system handles polio very well.

That's the reason why we have good smallpox vaccines and we have good polio vaccines. The body's immune system does not handle HIV very well. So we've got to devise ways of getting around those obstacles. And when we do, we'll be closer to getting a HIV/AIDS vaccine. But it's a process that's very difficult, a lot of stumbling blocks, and we have a ways to go.

MR. BERTEL:
You've been at the forefront of the battle against AIDS for the past two decades. What is it going to take to win?

DR. FAUCI:
Well, I think it's going to take continued perseverance, resources, both for the science and for the delivery of drugs and other care and prevention, a leadership commitment from the leaders of the countries that are involved, a partnership between the developed world and the developing world to help them. All of those things. It's a complicated, complex problem. It isn't going to be one thing.

You have to support the basic science to keep us going on the right track. You have to take prevention very, very seriously. And you've got to show leadership with prevention. You've got to make drugs and other prevention mechanisms available to people in developing nations. And you have to realize that this is a problem that is the global problem. It is not somebody else's problem. It's the world's problem. And as a global entity, we need to take it very seriously and commit ourselves to getting it under control. And I believe we'll do that, but it's going to take the kinds of efforts that we're just starting to see now, where there is global mobilization.

MR. BERTEL: Dr. Anthony Fauci, thank you for your insight.

DR. FAUCI: You're welcome.

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