Hans Rosling: HIV - New facts and stunning data visuals

Talare
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Plats
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AIDS was discovered 1981; the virus, 1983. These Gapminder bubbles show you how the spread of the virus was in 1983 in the world, or how we estimate that it was. What we are showing here is — on this axis here, I'm showing percent of infected adults. And on this axis, I'm showing dollars per person in income. And the size of these bubbles, the size of the bubbles here, that shows how many are infected in each country, and the color is the continent.

Now, you can see United States, in 1983, had a very low percentage infected, but due to the big population, still a sizable bubble. There were quite many people infected in the United States. And, up there, you see Uganda. They had almost five percent infected, and quite a big bubble in spite of being a small country, then. And they were probably the most infected country in the world. Now, what has happened? Now you have understood the graph and now, in the next 60 seconds, we will play the HIV epidemic in the world.

But first, I have a new invention here. I have solidified the beam of the laser pointer.

So, ready, steady, go! First, we have the fast rise in Uganda and Zimbabwe. They went upwards like this. In Asia, the first country to be heavily infected was Thailand — they reached one to two percent. Then, Uganda started to turn back, whereas Zimbabwe skyrocketed, and some years later South Africa had a terrible rise of HIV frequency. Look, India got many infected, but had a low level. And almost the same happens here. See, Uganda coming down, Zimbabwe coming down, Russia went to one percent.

In the last two to three years, we have reached a steady state of HIV epidemic in

the world. 25 years it took. But, steady state doesn't mean that things are getting better, it's just that they have stopped getting worse. And it has — the steady state is, more or less, one percent of the adult world population is HIV-infected. It means 30 to 40 million people, the whole of California — every person, that's more or less what we have today in the world.

Now, let me make a fast replay of Botswana. Botswana — upper middle-income country in southern Africa, democratic government, good economy, and this is what happened there. They started low, they skyrocketed, they peaked up there in 2003, and now they are down. But they are falling only slowly, because in Botswana, with good economy and governance, they can manage to treat people. And if people who are infected are treated, they don't die of AIDS. These percentages won't come down because people can survive 10 to 20 years. So there's some problem with these metrics now. But the poorer countries in Africa, the low-income countries down here, there the rates fall faster, of the percentage infected, because people still die. In spite of PEPFAR, the generous PEPFAR, all people are not reached by treatment, and of those who are reached by treatment in the poor countries, only 60 percent are left on treatment after two years. It's not realistic with lifelong treatment for everyone in the poorest countries. But it's very good that what is done is being done.

But focus now is back on prevention. It is only by stopping the transmission that the world will be able to deal with it. Drugs is too costly — had we had the vaccine, or when we will get the vaccine, that's something more effective — but the drugs are very costly for the poor. Not the drug in itself, but the treatment and the care which is needed around it. So, when we look at the pattern, one thing comes out very clearly: you see the blue bubbles and people say HIV is very high in Africa. I would say, HIV is very different in Africa. You'll find the highest HIV rate in the world in African countries, and yet you'll find Senegal, down here — the same rate as United States. And you'll find Madagascar, and you'll find a lot of African countries about as low as the rest of the world. It's this terrible simplification that there's one Africa and things go on in one way in Africa. We have to stop that. It's not respectful, and it's not very clever to think that way.

I had the fortune to live and work for a time in the United States. I found out that Salt Lake City and San Francisco were different. (Laughter) And so it is in Africa — it's a lot of difference. So, why is it so high? Is it war? No, it's not.

Look here. War-torn Congo is down there — two, three, four percent. And this is peaceful Zambia, neighboring country — 15 percent. And there's good studies of the refugees coming out of Congo — they have two, three percent infected, and peaceful Zambia — much higher. There are now studies clearly showing that the wars are terrible, that rapes are terrible, but this is not the driving force for the high levels in Africa.

So, is it poverty? Well if you look at the macro level, it seems more money, more HIV. But that's very simplistic, so let's go down and look at Tanzania. I will split Tanzania in five income groups, from the highest income to the lowest income, and here we go. The ones with the highest income, the better off — I wouldn't say rich — they have higher HIV. The difference goes from 11 percent down to four percent, and it is even bigger among women. There's a lot of things that we thought, that now, good research, done by African institutions and researchers together with the international researchers, show that that's not the case. So, this is the difference within Tanzania.

And, I can't avoid showing Kenya. Look here at Kenya. I've split Kenya in its provinces. Here it goes. See the difference within one African country — it goes from very low level to very high level, and most of the provinces in Kenya is quite modest.

So, what is it then? Why do we see this extremely high levels in some countries? Well, it is more common with multiple partners, there is less condom use, and there is age-disparate sex — that is, older men tend to have sex with younger women. We see higher rates in younger women than younger men in many of these highly affected countries.

But where are they situated? I will swap the bubbles to a map. Look, the highly infected are four percent of all population and they hold 50 percent of the HIV-infected. HIV exists all over the world. Look, you have bubbles all over the world here. Brazil has many HIV-infected. Arab countries not so much, but Iran is quite high. They have heroin addiction and also prostitution in Iran. India has many because they are many. Southeast Asia, and so on. But, there is one part of Africa — and the difficult thing is, at the same time, not to make a uniform statement about Africa, not to come to simple ideas of why it is like this, on one hand.

On the other hand, try to say that this is not the case, because there is a scientific consensus about this pattern now. UNAIDS have done good data available, finally, about the spread of HIV. It could be concurrency. It could be some virus types. It could be that there is other things which makes transmission occur in a higher frequency. After all, if you are completely healthy and you have heterosexual sex, the risk of infection in one intercourse is one in 1,000. Don't jump to conclusions now on how to behave tonight and so on. But — and if you are in an unfavorable situation, more sexually transmitted diseases, it can be one in 100.

But what we think is that it could be concurrency. And what is concurrency? In Sweden, we have no concurrency. We have serial monogamy. Vodka, New Year's Eve — new partner for the spring. Vodka, Midsummer's Eve — new partner for the fall. Vodka — and it goes on like this, you know? And you collect a big number of exes. And we have a terrible chlamydia epidemic — terrible chlamydia epidemic which sticks around for many years. HIV has a peak three to six weeks after infection and therefore, having more than one partner in the same month is much more dangerous for HIV than others. Probably, it's a combination of this.

And what makes me so happy is that we are moving now towards fact when we look at this. You can get this chart, free. We have uploaded UNAIDS data on the Gapminder site. And we hope that when we act on global problems in the future we will not only have the heart, we will not only have the money, but we will also use the brain.

Thank you very much.

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