



Strengthening Health Systems to Reach the Poor

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Edited Transcript – Cesar Victora

Thank you very much. Great pleasure to be here. I hadn't realized this was a memorial like the other presidential memorials in Washington, some of which I know already. And it's great to be able to come to a memorial and be able to say what you think without having trouble with security.

So I will pick it up from here. Great to be here with Lynn, as well. And you'll see we have very different styles. For example, I use slides and she doesn't. And that reflects our disciplinary backgrounds, too. But I'm pretty sure that we'll come to a lot of common thinking in these two presentations.

The reason I'm so concerned about equity is that I live in one of the most inequitable countries in the world. Brazil is consistently rated among the 10 countries in the world with the widest gaps between rich and poor. We're actually doing a little bit better now; our inequities tend to be decreasing over the last 10 years or so. But it's still a massive gap. And as a public health practitioner, as an epidemiologist in Brazil, this led me to choose equity as one of the main points of interest. And by working together with international organizations such as UNICEF and WHO, I've been able to carry out equity-related work in several different countries.

And I would just like to start by saying that equity is a very broad concept. And I'm sure Lynn will tackle the definitions much better than I do. But the determination of equity has distal determinants, such as of social, political, economic, environment, which lead to social stratification within a society. And social stratification affects child health and nutrition through a number of different pathways.

And I just have this little oval here to say this is what I'm going to talk about. I'm going to talk about access to preventive and to curative innovations, which is only one tiny piece of the whole equity scene. So I decided to focus on that because this is where we who work in the health sector, and we who work in Ministries of Health, and other agencies, that's where



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we can really make a difference in the short term. So we shouldn't ignore the big picture. This is the big picture. But I'm going to talk about this small piece of the whole factors that influence equity and health.

Also, I'm going to be talking about socioeconomic inequities or wealth inequities. And there are many other important types of inequities. There are inequities by gender, by urban rural, ethnic group, education, and these inequities interact and overlap with socioeconomic inequities. So it's [unintelligible] to say that socioeconomic inequities somehow are more important than the other types of inequities. But these are the ones I'm tackling for a number of reasons, one of which is that they're much easier to measure now than they used to be in the past. We now have tools that we can incorporate in surveys that will -- based on the number of household assets and the type of building people live, we can use some fancy statistical techniques to classify people, usually into five groups or quintiles, starting from the poorest 20 percent all the way to the richest 20 percent. And several of my slides will have this type of logic.

Now, there's too much information in this slide. So we're going to tackle it line by line. And my question is, based on the work that I've done in many different countries, as well as on my own work in Brazil, what are kind of things that countries can do, in particular Ministries of Health can do, to reduce inequity? The first point I think is that we have to recognize that we are part of the problem. The health sector is part of the reason why there are health inequities. It's not the whole picture. But it's a pretty sizeable part of the problem. And one slide that I have borrowed from Ted Watting [spelled phonetically], who's hiding in the back here today, and if you have any questions about this I'm sure he'll be happy to answer them.

Dave did a review of recent demographic and health surveys or DHS in many countries. And he took the average. There are over 50 surveys here -- 70 or so, Dave? Seventy or so. And here are the poorest, and here are the least poor. And this is the proportion of all deliveries that are seen by a skilled birth attendant, somebody who's skilled, who's been trained to deliver a baby and who can perform the basic clean delivery procedures.

First thing you notice is that there's a great difference from Europe and Central Asia, where just about everybody's seen by a skilled birth attendant and South Asia, the blue line, where very few people are seen by a birth attendant, except for the least poor. The reason we use least poor here is that in some countries poverty is so widespread that it's not really, doesn't





really make a lot of sense to speak about the richest. But the least poor may be a more appropriate description of this group.

So these are primarily dependent on the health system. Skilled delivery is primarily dependent on the health system, and the health system is in every country used -- and each region is a mean of several countries. It is systematically more common among the rich and the poor. And there are great inequities in some regions, perhaps smaller inequities in others like Europe where just about everybody has a skilled attendant at delivery. But still, the health sector is definitely playing a role here. And if we recognize that, then we're ready to move on and think, how can we help fix this question?

A second point is that we have to prioritize diseases of the poor. This is not enough, but it's an essential first step. As part of the countdown to 2015, which is an effort to monitor the MDGs, MDG4 and 5, particularly, in about 70 different countries, we now have pie charts of causes of death for most countries in the world, which is very new. A few years ago we didn't have that. It's based on new data being collected, as well as on estimates, procedures. And we now know what children are dying from. And now we know that in most countries of the world, pneumonia accounts for about 20 percent of deaths, diarrhea for another 20 percent or so. HIV, this is Mozambique. HIV has a big chunk here at 13 percent, but in most countries more like three to five percent. Neonatal causes a big chunk, as well.

So by knowing our distribution of main causes of death, we can try to do something that Tanzania is now doing, which is our next slide, which is looking at the different programs such -- IMCI, Malaria Control, Safe Motherhood, Sexually Transmitted Diseases, and so forth. And the red bar means the disease burden that the participation of the diseases addressed by this program in the overall burden of disease in this province, this is one district in Tanzania, and the green line is how much that's of the total percent of resources, that district is pending on IMCI diseases. Here we have that 35 percent of the burden of disease is due to IMCI conditions, and yet only five or seven percent are being spent on it.

This is a simplistic graph. You know, some interventions cost more than others. But we go over and over, we go to different places. And we also always find that other diseases that don't account for so much, and these may include cancer, they maybe include other chronic diseases and so forth, they take up a sizeable proportion of the budget. And yet, in terms of global burden in that particular region, they are not so big.





So again, you know, apologies to the economists in the audience, this is a simplistic chart, but it's a first way of plotting where your resources are going and what is the burden of disease in your region. And it starts a discussion. You can't end up spending -- matching things perfectly because some interventions are more expensive than others. But it's very useful to know where your money is going, and what kind of diseases are most prevalent in your situation. And then let's rethink the budget and see if we can do better than that.

Third point, and I want to develop this a little bit longer because this is an issue that I'm really interested in is not all inequities are the same. So there are different patterns of inequities in different societies. And to address that, I made up this index a few years ago called co-coverage. Co-coverage is like we have comorbidity when a child has diarrhea and, at the same time, develops pneumonia, or has measles and then develops diarrhea, or has HIV and gets TB. So comorbidity is the sense that more than one disease is present in the same child at the same time. It also applies to adults, of course. But what we try to do is, there's a basic set of nine interventions that every child should get. And these include having safe water, Vitamin A, basic vaccines, sleeping under a mosquito net treated with insecticide if that child lives in a malaria area, and so forth. So we just listed those.

And for each individual child we went back to the DHS surveys and to the MIX [spelled phonetically] surveys, and we reanalyze the data and say, "Okay, out of these nine, how many interventions is this child getting?" And then we plotted that by socioeconomic status. And here is our graph again. This is Cambodia, and the poorest. And we say, if we wanted to look at the percent of under five children who had all the nine, it was virtually zero in every group except for the least poor. So it was too strict a criterion. You know, having all nine was asking too much. But let's ask, "How many of them get six of the nine?" Okay? And I think this brings a good connection to Lynn's talk, I hope, because it's a human right. I mean, getting all these nine interventions is a human right. Every child should have the right to receive the full package. These are available. They are not terribly expensive. They are available in the country. Every child should get them.

Now, if you go to Cambodia, you find that everybody gets fairly low coverage, grows up with wealth, and then the rich are well above. Still, they're not doing too well. They're still at 60 something percent. But they're well above the rest. Then we go to Brazil. Well, Brazil's different, very different shape. Just about everybody gets 80 percent or more except for the very poor. And then we ran these analyses for many, many countries. No, we actually ran them for over 60 countries. I just have a few here to exemplify.





Brazil and Nicaragua have the pattern that the rich, everybody else is doing pretty well, and the poor are well behind. We call that, for lack of a better word, bottom inequity because the bottom group, the poorest group, is clearly different from all the rest. On the other hand, if you go to Haiti or if you go to Cambodia, or if you go to Bangladesh, it's different. It's top inequity. Most people are doing pretty badly except the better off. And we think that has important implications for policy and programming because if you are here, you'd really target the poor because everybody else is doing pretty well. You're trying to find those very poor, find where they are, in which districts they live. What is the economic cutoff that you're going to use? And you really do something about them.

Now, if you're here, coverage is pretty low except for the very rich. So you really want to disseminate interventions widely so that everybody goes up, including the rich who are not doing too well. And maybe you can do some geographical targeting. You can think, "Oh, these districts are the ones that are not doing so well. Let's help them more than we help the rest." But you're still concerned about raising the whole curve. And if you're in the half, way through like is the case for Malawi, you can see it should continue to disseminate widely because still even the better off are not doing so well. But you have to give special attention to the poor because we have shown that the trend here is that these will go up, and Malawi will become similar to Brazil and to Nicaragua, with the poor remaining behind and everybody going up.

So this is almost like a natural history. When you have a new intervention, you start here. The rich pick it up. Then it's being picked up by the others. And then everybody picks up except the poor. So we have to know where we are in a country so that we can decide whether or not to target and what are the most appropriate ways of improving equity. Very useful distinction, we think, very easy to do this type of analysis given that most countries have this kind of survey nowadays.

Number four, what can countries do? This is really interesting because these are some real examples of countries that are doing it the right way. We were involved in Bangladesh in a big evaluation of IMCI. And during that, we worked with local counterparts, we worked with the government, and we were really evaluating equity, as well as the overall impact of IMCI. And one of our team members, Shrem Arifin [spelled phonetically], who's a principal investigator there, then sat with the government and said, "Bangladesh still doesn't have IMCI."





And in the first year they implemented IMCI, 2002, for those of you who don't know, IMCI is Integrated Management of Childhood Illness, which is a WHO UNICEF initiative to reduce mortality due to common causes of childhood illness. And so, the first thing we did was to get hold of a map here, which shows the under five mortality, red areas being very high mortality, yellow areas intermediate mortality, green areas, low mortality. And if you look hard enough, you'll find such maps for most countries, if not for mortality at least for poverty.

The World Bank and UNDP have poverty maps for countries. We've been using these a lot in helping develop and deploy interventions. But look at that. In 2002, we had two places with IMCI, two clinics. In 2003, it was still going around the place, some in the yellow area, near the green area, some in the red area. And starting -- the group said, "We have to do better than that. We really have to put these clinics where mortality is highest. That's where we can have a bigger impact." And that's what they did in 2004. Look at that, all in the red area; 2005, all in the red area; 2006, they saturated the red area. And then they started moving to the yellow areas. And by 2006, 148 of the 159 districts in the red areas, in the high mortality areas, had already IMCI. So they could do it. You know, it's not impossible. It takes planning. And it takes political will.

Let's look at Brazil now. This is the northeast for Brazil. And this is infant mortality. Red means high mortality. Pink means intermediate mortality. White means very low mortality. By the way, I live way down here.

I'm almost out of Brazil. And I'm not Brazilian -- I'm 100 kilometers from the border with Uruguay. So but anyway, this is the low mortality area of the country. This is high mortality in the northeast mainly, and in the Amazon area.

Now, let's look what happened with tetravalent vaccine. That's when they put the traditional triple bacterial vaccine, diphtheria, tetanus, whooping cough, and they added Hib or Haemophilus influenzae b. So they added a new component, so there was a new vaccine. Look at the red. Red is where the vaccine coverage is very low. It's low in the northeast. It's low in the north. And it's much higher, the green areas mean higher coverage, mostly in the south.





So it's almost like they were putting the vaccine where it wasn't needed. That's what happened. It was going to those kids who needed it least because it's just allowed to disseminate in Brazil. Now, there was no planning. They just let municipalities and state pick up the vaccine and give it to kids. So there's no proactive effort to prove equity.

Now, going back to Brazil, this is still the mortality map, high mortality in the north, northeast, low in the south. And then the government decided to implement a new program called a Family Health Program, basically primarily health care for poorer families. And the government said, "We're going to do it in the poor regions. We're really going to reach the poor because they need it most." And again, dark green is where the program is. Look, what a difference. There's no family health where I live. It's all there. And these are very highly paid teams. You know, my students come out of med school in Brazil, and if they go to work in one of these places they get better salary than I get as a full professor, you know.

So there is a proactive effort. It includes doctors, includes nurses, include community health workers. And it's being deployed exactly in the places where it's most needed. Yeah, there's some exceptions here, okay. You know, it's not perfect, but still there. And this program is far from being perfect. But there's at least a couple of good evaluations in Brazil showing that they really manage to reduce infant mortality with the program because it was deployed in the hard to reach area, and because they were wishing to pay more.

Because it's not easy to live up there. You know, living conditions are not so easy. These are small towns. It's an arid area. It's far away from everything. So it's fair enough that doctors, and nurses, and community health workers should get better pay for living in these areas. And this is what happened.

Now, one more example. Peru is doing some wonderful things in terms of vaccines. Look at what they did. They introduced a pentavalent vaccine, which in addition to all I told you before also has the hepatitis B vaccine in it. And it was first introduced in 40 percent of the country in the poorest districts. So the vaccine was only available in the poorest districts. And after four years, they reached universal coverage because they moved it on to the better off places. So now they have very high coverage. Peru does very well in vaccinations. But it started in the opposite way as Brazil did. Brazil made it available in the richest district, and eventually hoped that it would trickle down to the poor, [unintelligible] the other -- use the reverse logic.





Rotavirus vaccine against diarrhea is being introduced now this year to 20 percent of the population, again in the poorest district. And they now want to introduce a pneumococcal vaccine in the same pattern. So it was a high-level policy decision. "Let's start where diarrhea's more common. Let's start where pneumonia's more common." And these are the poorest districts. So it also makes sense in terms of preventing disease.

Two more things before I finish. Employ the appropriate delivery channels. A delivery channel is a way of getting a vaccine or an antibiotic or a vitamin supplement to the population. You can make these available in hospitals. Then only people who come -- live close to a hospital will get them. You can make them available in health centers. Then people who live close to a health center will get them. But you can also try harder to make them available in the community. And this is a picture I took in Benin a couple months ago, about a community case-management program that is supported by UNICEF, which means that community health workers like this guy here are trained in diagnosing pneumonia, using very simple methods. And he has the antibiotics needed for that.

You know, in many countries, this faces terrible opposition from the medical bodies -- and I'm sure Lynn will talk about that, too -- because they say, "Oh, community health workers can't give antibiotics. Doctors should give antibiotics because they're properly trained." But there are lots of studies, lot of very good data in different studies show that this works and this reduces mortality with very few side effects. So this is one way of insuring that the antibiotics get to the kids who live in this community who would not get them otherwise.

Critical issue, remove financial barriers. Many countries set up user fees, mainly 10, 20 years ago. And they decided it was a good idea to charge people for coming to a health center because people were paying for health care elsewhere so why not charge them, as well. I think it's an idea that didn't really work out. I know this is a hot topic for discussion here. But I have a graph from Dave here that whenever I show that, Dave, I get criticized. But since you are here, maybe you can deal with the criticism.

We took fifty-something, I was a coauthor on this analysis, we took fifty-something countries with DHS and we look, why are the poorest quintile, the poorest 20 percent of the children, getting treatment? And the red bars mean public sector. So of children who had ARI or acute respiratory infection and went for medical treatment, doesn't mean a medical doctor, could be any kind of provider, 25 percent, look at the scale, it's not a whole lot, you know, 25





percent went to the public sector, about eight percent to the private sector. Skilled delivery, 25 percent, five percent.

So in every variable we studied, and we studied several variables, the poor were getting care more from the public than from the private sector. This is very controversial. Okay? There's a whole definition. What is the private sector? What is the public sector? But what we wanted to highlight is, this is the sort of issue that countries have to consider when they are planning to institute user fees. It's not only how much money they'll be making, and how much they'll be recovering from the costs, but also what's going to happen to the poor. And this kind of analysis suggests that the poor are so primarily getting care from the public sector, if you charge here you are likely to affect the poor to a much greater extent than you affect the better off.

Now, last point, I think we're completing the whole cycle here. We talked about planning, prioritizing, deploying services. And now we go to monitoring evaluation. It's very easy to go out and do an evaluation and say, "Mortality reduced by so much," or "Coverage increased by so much." But we should also ask, "Yes, but what happened to the poor? What happened to inequities?" because you can, as Dave Gwatkin has shown, you can reach the MDGs by preferentially increasing coverage and reducing mortality among the rich. You can reach the overall MDG. But the poor will be left behind. And this is an example of something we're just completing now in Mali. It's an evaluation of a UNICEF program known as ACSD. And we have ACSD districts. We had comparison districts in blue before and after.

So if you look at before ACSD was implemented, this is the proportion of the poorest, who had three or more anti-natal care visits, quite a lot of inequities. You know, 50 percent of the better off, still low, I mean, everybody should get that, but about 10 percent of the poor. And this is the comparison district, 20 percent here, 60 here, about the same pattern, not very different. Well, after the program, this is what happened in the ACSD area. They had a number of community-based strategies for reaching the poorest, and they did. The poorest improved much more than the rich did. And in the comparison areas, it improved a little bit overall. But every point moved up. If anything, the poor had less progress than the other groups.

But it shows how you can fairly easily incorporate equity considerations in a program. And I've shown you here a success story. A lot of what we did, even in the ACSD program,





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wasn't so good. But, I mean, this is an example where you could increase coverage and, at the same time, reduce inequities.

Okay, so back to my first slide. These are some things and some examples of things that may be done in practical terms within the health sector to reduce inequities in health. And I would like to finish with this slide, which is about, you know, how can you afford to have your life saved.



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