

PANORAMA PEOPLE

Interview with Professor Sir Michael G. Marmot, Director of the Institute of Health Equity (UCL Department of Epidemiology and Public Health) and Chair WHO Commission on Social Determinants and Health (CSDH)



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Throughout your work you have stressed the importance of having high-quality health information and evidence as a prerequisite for addressing health inequalities. Unfortunately, the use of evidence and sound data are increasingly in need of defence: data and evidence seem to have dwindling significance in societies in times of “alternative facts” and alarmingly low measles vaccination rates even in developed countries and well-educated societies. What are the policy measures and health information strategies available for improving the use of health information to achieve health equity in this context?

Let me answer that on two levels. First, whether you are a doctor talking to a patient, or someone like me offering independent advice on policy, or you are working for a government or WHO... If you didn't know the answer to a question how on earth would you in all conscience make a recommendation? The question gives the example of measles vaccination rates

going down; are you going to recommend that every child get vaccinated or not? If you thought “I've read in the news that there may be a link with autism, so, no, I am not going to recommend it”, is that the way forward? No, not for one moment. None of us would feel responsible doing that. We would want to know how good the evidence is on, first, the efficacy of measles immunization, and secondly, on the link with autism. The answer is clearly that there is overwhelming evidence of the benefits to both the individual and the population of measles immunization; and the evidence for harm is close to non-existent. The paper on the link with autism had to be withdrawn from the *Lancet* – it was of low scientific quality in the first place but then had to be withdrawn because of fraud. Hence, the evidence for benefit is strong, and it's on that basis that we feel comfortable making strong recommendations. As individuals, doctors, policy advisers or the like, we would feel impossibly compromised if we were making recommendations for which we did not have the evidence.

The second level of response is that it is important that we be advocates for the importance of evidence. I did a public event recently around my book, *The Health Gap*, in which I was questioned by a philosopher, and then the audience. At the end, the philosopher said: “I hope you’ve noticed that Professor Marmot at times said ‘I do not know’, or ‘I do not have the evidence’. That gives us confidence in the fact that his answers are based on his understanding of the evidence”.

We need to act on the evidence and we need to be seen to be acting on the evidence. It needs to be clear when we are giving the best advice we can, on the basis of the available information; and when we do not know the answer. That should be obvious but, as the question implies, with regard to politics and alternative facts, somehow, we have to make the case all over again. I poured out my frustration with ‘post-truth’ in a Lancet commentary: if a politician says that homicide rates in the US are at an all-time high, and on the basis of that lie he is going to try to make policies, should we listen? What’s the point of those of us who are wedded to health information making our voices heard when a senior politician dominates the airwaves? But what other basis do we have for our argument other than the facts? If a politician says that the homicide rate is at an all-time high, and that is a lie, then we have the responsibility, based on the evidence, to point that out. In the face of alternative facts, the role of health information is even more important than it was in the past. Now, you might say that that’s not enough. But speaking personally, I do not know how to get into the back rooms, what we used to call “smoke-filled rooms”, where political deals are made. That’s not what I do. That’s not what most of us in public health do. What I do is put forward evidence-based policies presented in a spirit of social justice. We need the evidence and we need to argue the strong social and moral case for those policies, based on that evidence.

Our voices need to be heard, if you say, yes, but the politicians, who do not look at the evidence, are heard even more, well, perhaps. But on all of the things that matter, whether it is inequality, trends in health, or climate change, the evidence is absolutely crucial. Take climate change. The reason why we are worried is because of the evidence. And the reason the people on the wrong side of this argument are going to lose is because the evidence will win out. In Britain recently, you have some antiquated politicians denying the reality of climate change, and then you’ve got schoolchildren out in the street saying “this is our future”. These children have the evidence and they want social justice: action on climate change now.

What else can we do against this trend of people who are well-informed using or falling victim to non-evidence-informed

reasoning, other than just taking the traditional WHO approach and providing information.

The whole principle of what I have been doing on the social determinants of health – the WHO Commission on the Social Determinants of Health, European Review of Social Determinants and the Health Divide, and now our PAHO Commission on Equity and Health Inequalities in the Americas – is that informing individuals is important, but it’s not enough. One has to inform government – at different levels – policy-makers, and civil society. My daughter, when still at school, was in a discussion on climate change and the future. She was asked “will people take the actions necessary to avert impossibly damaging global warming by 2050?” She said, “Society needs to take social action to make it easier for people to make the right choices”. That could be economic instruments, taxation, building the externalities into the price, to send the right signals and guide people to make the right choices. It is not simply up to individuals alone to make the right choices. As a concrete example, maybe a third of carbon emissions come from transport, although it varies by country. We can reduce that. Make walking and cycling safer, provide good public transport, introduce congestion charging, green taxes on fuel and the like, and in this way encourage people to make the right choices. I would say, in a democracy, if your government is against the Paris Accord – vote them out.

A few years ago you described the vital relationship between health information and health as follows: “To address inequalities in health in Europe, our first step must be to address the inequalities in health information.... Health information is absent or incomplete just where we need it most. Health information is crucial in all countries, rich or poor”. Has the health information situation improved since then? What are the main issues today?

I want to give you an evidence-based answer to the question, and the evidence-based answer is – it’s patchy, so I can’t give you a blanket yes or no. One of the big problems is obtaining routine data on health inequalities in adults. In Europe, generally, the problem is more serious the further east you go. Most countries have reasonable data on health, but don’t have data on health inequalities. That’s still a major, urgent problem globally. Throughout Latin America and the Caribbean, for example, it is very difficult to get data on adult health inequalities.

The data we have on health inequalities from most countries tend to be on infant and childhood and maybe maternal health, from Demographic and Health Surveys. But there

aren't routine data from most countries on adult health inequalities and that's a significant lack. On the other hand, there are examples where we do have such data: in England we have a public health information system on which you can look up any area of England and find data not only on health inequalities, but also on the key determinants of health inequalities. And you can get that information in real time. The more we see that kind of thing the better.

Health information systems are evolving into “information systems for health”. They are increasingly using data from other sectors and interfacing with a growing number of digital and mobile health applications, including patient records. What would be the key innovations in digital and mobile health relevant to health equity and the requirements for health equity surveillance?

I was on a Lancet commission on global governance for health, led by the University of Oslo. Initially the subject was global health governance, but very quickly we changed the title of the commission to global governance for health. It's analogous to the issue in your question –recognizing that we need global governance in order to get better health, not just health governance. That has to be underpinned by better information systems on the key determinants of health, not just on health, and of course, as I argued a moment ago, on health inequalities. We need disaggregated measures of health. If we are going to address the social determinants of health, we need information on those social determinants, disaggregated to reflect inequalities.

I am currently completing my work with the PAHO Commission on Equity and Health Inequalities in the Americas, and have been struck by the lack of information and particularly disaggregated information on many of the key determinants. My hope is that the situation will improve as countries turn their attention to the Sustainable Development Goals (SDGs), because several of the SDGs could be described as social determinants of health. If countries are serious about having measurements on the SDGs, they will need measurements on the social determinants of health. What's needed is a conceptual measurement framework. I realise this is, at best, an indirect answer to your question. But first we need a proper measurement framework. Then having a digital system can indeed be helpful, especially if available remotely. An app could be useful, but the first thing is to develop the data monitoring systems.

Let me say something more here, which in a way relates to the answer to your first question.

Angus Deaton (winner of the Nobel Prize for economic sciences) said that the press were quite interested when he won the Nobel Prize, but when Ann Case and he published a paper in the Proceedings of the National Academy of Sciences on deaths of despair in the US, the press interest was about 10 times greater. The paper described how in the United States of America, for white men and women aged 45 to 54 years, mortality was going up from “deaths of despair” – poisonings mainly from opioids, suicide, and alcohol-related causes. It was the data, the evidence, that got the press excited. Similarly, when the US Centers for Disease Control in November 2018 released a report saying that life expectancy in the USA had declined for a third year in a row, the press was concerned. In other words, the health of the population and health inequalities are vitally important and of great interest to policy-makers and to the population at large.

Whether we need an app to have readily available digital information systems... Maybe. But I don't think that's the most important thing.

The public has become very aware of such developments as “artificial intelligence”, “machine learning”, and “augmented reality”. As scientific professions, public health and medical research are both driving and driven by these new technologies. Do you believe that these developments are having significant impact on health equity?

I think it unlikely that these developments are having a significant impact on health equity yet. Most innovations tend to increase inequities in the early stages, because initially they are available only to richer people. Think about mobile phones: I was told a while ago that some 80% of the population in India has a mobile phone, and the figure may be even higher by now. If we had been having this conversation when mobile phones first appeared, and you had asked if they were having an impact on health equity, my speculation would have been “well they could be having an adverse impact”. Now, my speculation would be that they could be having a positive impact because people get access where they couldn't get access before.

In the modern world, being connected should be seen as a basic human need, just as we think that shelter, nutrition and health care are basic human needs. Being connected needs to be generally available. That's a slightly different topic to the one you've asked me about but similarly, we need to make sure that artificial intelligence and machine learning are generally available, not only to the most privileged people.

One other thing that many people have said, but I may as well add my voice to it, is that machines will be very good at doing routine tasks – they already are and they will get better and better at them. But it's highly likely that there will still be an important need for human judgement. It may be that machines will be making moral judgements that we flawed human beings cannot make. But I think human judgement is going to continue to be necessary.

This is really an open debate we have at the moment: How far can we go with machine learning? We are at a very early stage here.

At the moment we are thinking about the benefits and how can those benefits be spread, but the disbenefits could come when intelligent machines start making intelligent machines, and get out of control. We know with nuclear technology, for example, that we need to be proactive in making sure that an innovation doesn't cause more damage than it has benefit.

Is there anything else you would like to add?

I've said quite a bit that was not in your questions, but let me just reinforce what I've said in relation to the first question. I am often asked: "Look, people and politicians make decisions without regard to the evidence". Well, OK. But we don't have to go down that route. The evidence is crucial. Our mission is to improve the health of the population and that includes the reduction of avoidable health inequalities. We want the best evidence to support us, because we don't want to spend all our time doing things that are ineffective or harmful. If we see politicians taking decisions that are likely to be ineffective or harmful, we feel we have a responsibility to speak out and that's where good information systems come into place.

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