



**Transcript of virtual press conference with
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and Dr Keiji Fukuda, Assistant Director-General ad Interim
for Health Security and Environment,
World Health Organization**

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Gregory Hartl: With us today is Dr Keiji Fukuda, the Assistant Director-General for Health Security and Environment at WHO, who will give us an update first.

Dr Fukuda: Welcome everybody and thanks for coming again. Actually I was literally on the call – we were having the clinical call that we were talking about yesterday to go over illness and so I don't have any prepared notes for talking today. I was trying to understand what I scribbled down during the talk so literally I will be putting together what we just talked about in the past few hours and to try to make it understandable, both for myself and hopefully for the rest of you.

Just to give a quick assessment of the situation, we continue to see an increase in cases being reported by countries. The numbers that we had as of 2 o'clock this afternoon – but I expect these numbers to change and they will be updated in a few hours – but as of 2 o'clock this afternoon we had 1490 laboratory cases, and 30 deaths. Again the deaths occurring primarily in Mexico with the one other death reported in the United States, the previously reported child. This represents an increase of 405 cases and 4 deaths since yesterday at 18:00. I expect those numbers to increase again later on today or to be updated later today, so I wouldn't be too focussed on the numbers, but just to illustrate again how this situation continues to evolve and how we continue to follow.

Yesterday, one of the things that I said that we would be doing today is to have our second science meeting, which we did, and that was started at 3 o'clock this afternoon. When I came over here that was still going on. It is a virtual conference and so I don't have any prepared notes from that and I was trying to collect my thoughts about what was being said. Similar to the first conference call, this was a call in which the investigators of a number of different countries were reporting what they were seeing and their understanding of the information that they have at this time now, and again we focussed the discussions primarily on clinical illness. We talked a little bit about viruses and those sorts of things but we are really focussing more on the clinical illness.

One thing I think which is true is that so far, among the cases being seen everywhere, including the countries with the large number of cases, is that the people being infected continue to be relatively younger people. In general we are seeing the infections occurring in people who are younger than 60 in almost all countries. There are some exceptions but in general the bulk of infections are occurring in younger people and when the investigators are looking at the average age of people getting infected, this is often in the age range of people around the 20s – mid-20s – a little above or a little below. I want to point out something about this. One of the things about many of the infections are that they are being reported in people who have been travelling and so one of the questions which came up is

whether most of the people travelling right now going to these countries tend to be younger people. So is this really a reflection of the disease or is this a reflection of some of the ways that people are getting infected? So does this naturally reflect a younger age group. One of the alternate possibilities of course is that it is an infection that is primarily going to younger people because there may be something about older people which is preventing them from being infected. And again, with influenza oftentimes we see the infections go to younger people first and then go to older people later. It may be that we are seeing something like that. It also may be that there is something about older people, that they may have some level of protection that younger people do not, that may also be contributing to the reason why we are seeing infections in younger people. I will try to point out the different kinds of possibilities for what we are observing and these are the kinds of questions again that investigators will look at over time to try to tease through.

One of the second things which is pretty clear from all of the countries, is that in general males and females are getting infected at about the same rate. This is not so surprising for influenza. This is what we normally see with influenza but again the data we are seeing now confirms that – or suggests that.

Over the past couple of days we have talked about incubation period – this has come up actually ever since we first saw the disease and if you remember earlier on, some of the estimates were for up to a week or perhaps a couple of days longer, which in an earlier briefing I said was a little bit long for influenza. The more recent estimates are that the incubation period is somewhere from about one day to a week, or one day to five days in general, which is a little bit keeping in closer – or a little bit closer to what we expect for influenza viruses. Again, these estimates will continue to be refined. This is the newer information, so the incubation period being a little bit closer to what we normally see with influenza.

In terms of the illness itself, in the people who are developing generally milder illness, this is similar to the kinds of influenza-like illnesses that we see, so this is typically people developing fever, cough, body aches, headaches, and this is generally in keeping with what the milder spectrum of illness is. It is clear that we are seeing severe illness in at least a couple of countries. For example, in Mexico, as you know, we have been talking about how there have been a number of pneumonia cases and people requiring hospitalizations as well as fatalities. In the United States there are also hospitalizations that have occurred and the essential reasons for the hospitalization have generally been that people have developed severe respiratory illness – either pneumonia or some of these people requiring ventilation. Again the outstanding question – which is not clear yet – is how often is this occurring. But it clearly is occurring not just in Mexico but we now have some people that we know have developed similar illness in the United States. But again the big question is does this occur fairly infrequently or does this occur frequently. This is the kind of information that the investigators will look at more.

There were questions about whether we see infections in health-care workers and in general there have been a few health-care workers infected but it is not certain that they got infected in a health-care setting. This has not been something that has been transmitted to a lot of health-care workers.

In terms of the virus itself, there was some discussion about this and particularly whether there is any sense that the viruses being picked up in different places are the same or different, and again the information as it has been over the past week, is that the viruses look pretty similar that are being identified in different locations.

We still see that the virus is sensitive to the antiviral oseltamivir and the antiviral zanamivir – these are neuraminidase inhibitors – this is one class of antiviral drugs and the viruses continue to show resistance to the other class – amantadine and rimantadine – so no change

in those sorts of features. Let me stop there. It's a fairly short summary because I have not put together notes on everything and let's throw it open for questions.

Caroline Alfonso, Global Mail of Toronto, Canada: I actually have two questions. Would you [unintelligible] China has moved to quarantine people. Do you feel that it is a useful measure. And my second question is there are a number of reports of community transmission in Europe and I am wondering if the WHO has confirmed any of these and whether it will trigger Phase 6?

Dr Fukuda: Let me address both of these questions. We have talked about disease control again in a number of these press briefings and as you know from the guidance put out by WHO for the different Phases, we have laid out the principles and the different disease control actions which can be considered by countries. And then these ought to be applied depending on the situation of the country and depending on the specific circumstances. So right now we are in a situation in which a number of different countries have instituted different kinds of disease control measures. One of the things that we are doing with these countries is contacting them to ask them about the actions being taken and also about the public health justification for those actions. This is under discussion with a number of different countries. I will not go into the specifics of the countries, and again as I have mentioned before, I do not want to talk about any actions taken by any one country.

In terms of the issue of community transmission, there has been a significant number of countries in Europe which have reported cases. The two countries again reporting the most cases have been the United Kingdom and Spain. We have been in very close contact with both of those countries over the past few days, including today, including last night, to make sure that we have a good sense of the situation there. Right now we do not believe that we are seeing community transmission in the same way that we are seeing community transmission in the United States or Mexico. In Spain, the cases are very closely related to travel. In the United Kingdom, there is infection going on in schools related to travel, but again when we talk about community transmission, what we are really looking for, is transmission not just in institutions but out in the broader community and we do not feel that we are seeing that right now. We will continue to work closely with the countries and any other countries reporting cases to make sure that we feel that we have a good handle on that situation.

Emma Alberici, the Australian ABC: Thank you for taking my question. I have two actually. First are you any closer to a conclusion on why some people have had such a severe reaction to this virus, particularly in Mexico, and others have contracted a very mild infection where the symptoms in some cases disappear with no treatment? And my second question is influenza does kill people around the world every year, what is it about this strain that is particularly troubling to you?

Dr Fukuda: These are very good questions. It is probably fair to say with almost any infectious disease that you see a spectrum of illness. And that is certainly true for influenza virus infections. That is even true for H5 infections, which we have been following for the past 4–5 years very closely. In that infection a large number of people have died from the infection. Nonetheless other people have had relatively mild infections. So with this new H1N1 virus again more people have had mild illness than severe illness. The reasons for that are not clear. I do not believe it really reflects differences in treatment, I do not think enough of these people have been treated with oseltamivir, for that to account for the differences that we are seeing. Most of the people did not receive treatment, some people

did. But it is a basic question about any infectious disease. Why do some people do worse? And it is probably a combination of factors having to do with the individual, whether they are healthy, whether they have any underlying conditions, having to do with their immune system, having to do with conditions under which they get infected and so on. These are general reasons for why we see differences in outcomes, but we do not specifically know for this virus yet, and again this is something that investigators should be studying. This is something that is not going to be found out in weeks. This is really something that will take a great deal of study to get a handle on.

The second question is extremely important. Yes, it is true that seasonal influenza viruses kill people every year. Although there are not very precise estimates for the world, it has been estimated that up to about half a million people per year can die from seasonal influenza infections, and so for many of these people it is not a benign infection, so people have this image that seasonal influenza is mild. But the reality is, in fact, lots of people get hospitalized, lots of people die. With seasonal influenza we see that most the people who get really severely sick are either very young or old, or they are people who have different kinds of medical conditions, such as heart disease, lung disease and so on. Now the reason why we are paying so much attention to this virus though, is that the seasonal influenza viruses have been around and have been circulating for many years. And so we understand their behaviour and we know that most people have had previous infections and have some immunity to them; that is what makes them seasonal influenza viruses. But we also know that when a new influenza virus enters into the human population, and people do not have immunity to this virus, then the levels of serious illness and the levels of death can be higher than we see with regular seasonal influenza.

At the beginning of this kind of phenomenon where we are now, you can see that there is a great deal of attention being paid to monitoring the spread, there is a great deal of attention being paid to try to figure out what is the severity of this illness, and I hope you appreciate that we have been very careful to say that we expect the situation to evolve, and we are very careful to say that we do not quite know how it will evolve.

In the past when pandemics have occurred, and pandemics occur when you have a new influenza virus arrive, begin to spread around the world because it is being transmissible among people. We have seen pandemics cause relatively fewer death, and fewer serious illness, this was true in 1968. And we have also seen pandemics cause huge numbers of deaths. In 1918 the most conservative estimates of death, in that one year period, ranged from about 20 to 40 million people dying in one year from that infection. And we also know in that pandemic, it started out mild in the spring time and then over the course of several months became a severe illness.

We want everyone to understand that what we see now is important, but to remember that this is a virus, this is situation in which things that evolve, and which things can evolve quite differently and that is why quite much attention is being taken to pay attention to what is going on. This is why we are jumping so hard on it because if it stays mild and people stay healthy, then that is great, that is the best possible outcome. But if it does turn severe, then this is something that we have to know about it, it is something that we have to be prepared for, and it is something that we have to jump on.

German Press Agency: Yesterday you mentioned the increased amount of patients with diarrhoea symptoms and I was curious as to whether some of that has possibly to do with water and sanitation issues in Mexico and whether you are seeing that as well in the more developed countries that are also reporting these cases? And secondly given the improvement in today's medicine is there really a chance of a repeat of 1918 or is that really not a possibility?

Dr Fukuda: Two good questions again. The reports of diarrhoea vary from country to country. Diarrhoea is being reported not just from Mexico, but for example, there are cases of this new infection associated with diarrhoea in the United States, for example. I think that what does vary though is that in some of the countries, the percentage of people developing diarrhoea is different. I think that this is still being sorted out. While some of the diarrhoea may be associated with other reasons, water, sanitation, I think that this does not really explain the phenomenon.

The second question was given that, our medical technology is just better than it was back in 1918, we have better antibiotics, we have better medical care than we have had, can we really expect to see at some point a repeat of that phenomenon? Hopefully not. But I think that one of the realities of these kinds of global health events, is that the current systems that we have can also be overwhelmed. When we went through the SARS epidemic a few years ago, in the places that were heavily affected we saw that the medical capacities could be overwhelmed easily. And when we see large numbers of people, being injured in other kinds of emergencies we can see the medical systems being overwhelmed also. So the technology is excellent, but that does not assure that the medical systems themselves can handle large numbers of people coming in outside of the usual range. So that is also one of the considerations that we have to work with.

Times of India: I wanted to ask you three questions. One is what does it say about the virus, if the average age of the infection is around 20s. And the second question is that today India was given a tip off by China that one of the passengers who came into India was in aircraft carrying an H1N1 infected person who was isolated in China. So how important is it that countries cooperate like this and give each other information? And the third question is how much do you think is this kind of infection a threat to people with HIV, because India has a huge burden of it.

Dr Fukuda: I think that right now as I started out the description about the clinical conference, we do not understand what is the reason for why we are tending to see younger people infected by this. There are a couple of different possibilities for this and I will just quickly go through them again. One of them is simply because we are early in the phenomenon and a lot of it is associated with travel, it is younger people who are travelling and that is why we are seeing it in younger people. A second possible reason is that in older people we are seeing some kind of protection. Perhaps because they have antibodies from earlier infections that are providing some kind of protection. Another possibility is that with influenza we often see it enter into younger age groups first and then later go into older people. We have not really seen that movement into older age groups yet. So these are all possibilities, I do not think that we have it sorted out right now, although it is relatively clear that we are seeing infections in younger people.

In terms of your second question, it is extremely important for information to be shared by countries. As you know, back in 2005, all Member States of WHO joined together to put into force the International Health Regulations, and one of the essential concepts of the International Health Regulations is that in order to deal with these public health emergencies of international concerns – of which a pandemic would fall into that category or other large infectious or non-infectious disease events – that you need cooperation among countries. One of the things which is essential for cooperation is that you have to make information available, you have to make it available to your neighbours and to other countries because everybody needs that information. That is the heart of the International Health Regulations. How do you deal with these large international events, how do you do it well, and one of the essential ingredients is that information sharing, making available what is known is critical. So this is again part of the reason why we push very hard on these

global conference calls, this is one of the reasons why we are trying to get out information as quickly as we can, so people know. If people know they can deal with things better.

In terms of the third question of HIV, this is a very important question. The world is made up of a large number of groups of people who have different medical conditions. We talked about how chronic heart or lung conditions make people more vulnerable to influenza viruses in general. We know that people who have HIV infections can be susceptible to a number of other infections, and with influenza viruses, HIV infected populations are one of the groups of people who can be somewhat more heavily impacted than people who are healthy. So, another reason for us to monitor very carefully what is going on as this infection spreads. We need to know are there different groups of people who are going to be disproportionately affected.

Christine Chan, Hong Kong: Could you please repeat once again. A formal reporter from India stated that there is a case of H1N1 isolated in China, case who is an Indian.

Dr Fukuda: This I cannot confirm. I do not know the most recent information on that. We can get back to you later on. I cannot confirm right now.

Helen, AP: You said older people might have antibodies from earlier infections. I was wondering if those people infected now by H1N1 virus, if they get immune and that means that in future outbreaks of this type of virus, they would be immune or they would be at greater risk of dying? And also we have not really seen any cases from the African continent. Does that mean that there are really no cases in Africa, or that there is no detection there? Last, could you comment on what US Health Secretary, Kathleen Sebelius said, that the virus appears not to be as strong as feared. Do you agree?

Dr Fukuda: For people who are being infected now and who recover from illness, it would be expected that they would be more protected than other uninfected people in the future, if they get exposed to the virus again. With influenza viruses, when you are infected, it provides some protection against future influenza viruses, similar to the one which infected you. But infection with influenza viruses does not give you protection for a long time. Generally, it will give you protection for a couple of years, and then the viruses themselves change enough so that it is kind of a new virus to your body so that you are susceptible again. The answer is that it would give you some relative protection.

In terms of Africa, yesterday when we were talking, we discussed how most of the infections right now are located in North America. There are infections that have gone to other countries in Europe, in Asia, and in South America, but by and large, most of the infections have still been in North America. When you look at the map you see that there are no large outbreaks reported in the southern hemisphere, but I think this is still very early in the spread of this virus. The southern hemisphere is entering into the winter months and this is one of the areas that we want to monitor most closely because it is quite possible that we will see activity there. At this time, Africa is not reporting any infections, but other countries in the southern hemisphere are not yet reporting any infections. So we will continue to monitor this.

About the strength of the virus, I think the fairest thing to say about the virus right now is that we are assessing it. Clearly many of the infections are mild for the individuals, but what we are really trying to get a handle on is that if large numbers of people get infected, what percentage of those people will develop serious illness or death. The reason why this is so important is that, with influenza viruses, if they spread around the world, you will see hundreds of millions of people get infected. You will see a very large number of people get infected, so if even relatively small percentages of people dying or developing serious

respiratory disease, spread around the world can mean very large numbers around the world. For me, it is a little bit too early to make any pronouncements about what we are seeing. I want to stress that point that we need to monitor it.

Jason Gale, Bloomberg: Can you update us on the production of a seed vaccine? When will it be with vaccine makers and how easy is it to grow this particular strain in a laboratory?

Dr Fukuda: Since the very first appearance of this virus there have been some laboratories like the WHO Collaborating Centre in Atlanta – which is CDC – as well as some other laboratories that have been working on developing suitable viruses, candidate viruses to go into vaccines and there are a couple of different ways that this can be done. As soon as these viruses are ready, they will be gotten out to the vaccine manufacturers. So they can begin to see how well do these candidate viruses work with their production systems. I can't give you a precise date when that will happen, but that is being worked on very hard right now and I expect that, within weeks, these viruses will be out to manufacturers but I cannot give you precise estimates on that.

Gabriella, Notimex, Mexican News Agency: Are all the cases around the world imported from Mexico? Are you sure that not even one case is imported from the United States or Canada? Second question, are there any international regulations on how people held in quarantine should be treated. Seventy Mexicans were held in poor conditions in China: just your comments on that.

Dr Fukuda: I don't believe that all travel-related cases are related to travel just to Mexico. On today's conference call for example, I think we learned of one travel case being related to travel to the United States, but I think that again if people are moving around of course we will expect to see travel-related cases from different countries. This is something that can be expected to be seen.

In terms of your second question, there are two separate aspects to this. One of them is simply the issue of quarantine: when should one do it. I think this is something that is up to different countries, analysing their situation and in some instances, quarantine may be a reasonable control measure. Under any situation, however, and I will just speak very broadly here, under any situation, people who are in quarantine should be treated well. I don't think there is any question about this. Let's separate out the issue of quarantine whether it is a useful manoeuvre to do at that time from the treatment of people who are in quarantine. I think that here it is simply very clear that anyone who is going to be placed in quarantine, of course deserves to be treated well.

Journalist: You said that most of the cases are young people. Is it true about the death cases as well? And what do we know about the dead people, the symptoms and what were the worst symptoms of these people.

Dr Fukuda: Right now I don't have good information on the people who died specifically except to say that in general the investigators are reporting that similar to the other cases, many of the people who died tend to be younger people. But again, I can't give you the age range of the fatal cases or the specifics of that now. Hopefully in the future but I don't have that information now.

The people who have generally developed severe disease have had respiratory disease so these are people who are developing severe pneumonia, these are people who are requiring support on ventilators, their primary illness being respiratory.

Stephanie Nebehay, Reuters: Just going back to the issue of mass quarantines, I think in answer to the question you just gave you said that in some cases it might be a reasonable control measure. Can you maybe tell us a little more about how you would define that because it is happening in places besides China.

Dr Fukuda: Just to talk in general about quarantine, I will remind everybody what quarantine is. Quarantine is when you have people who are not sick, who are not showing symptoms and they go into an area that is quarantined off, so you minimize the contact between them and other people. The instances in which this kind of control measure is taken is, if you are very early in the spread of a disease, you may use quarantine to try to limit the spread of the disease. That is one reason why you may institute quarantine.

Another reason why you may institute it, is that if you know that people have been in close contact with somebody who is sick and you have a highly infectious disease, then it is a good way to identify those people who are at highest risk for getting infected, making sure you can identify them because you know that they are at higher risk for getting infected – making sure that they get treatment and those sorts of things. So there are different reasons when you can apply quarantine. It really depends on an assessment of what is going on and what you are trying to do at that time. So it is not a simple yes or no – you should do it, you shouldn't do it – you need to analyse the situation and then make your decisions about whether to apply quarantine.

Time Magazine: Just one or two clarifications. You said there were roughly 400 more cases now than there were yesterday. Are a lot of these new cases just a matter of a lab backlog going back in and confirming suspected cases, or is there still actually more active spread – are you seeing the reports of new cases slowing down in any way in Mexico or around the world.

Dr Fukuda: I think the increase in cases reflects both. We are seeing testing of specimens that were collected from previous infections and then the laboratory work is catching up to it, but we are also seeing new infections occurring. Both of these things are going on simultaneously. For the update figures for today, I couldn't break it down for you, I don't have it in detail, but we are definitely seeing both of those things go on at the same time.

Journalist: I want to ask about the vaccine production. In what condition will WHO recommend to switch the vaccine production from the seasonal one to the pandemic one? You are not recommending that at the moment and what is the reason for that, and can you tell me whether the pharmaceutical companies have enough capacity to produce both?

Dr Fukuda: There are two important issues about the production of a vaccine against this new virus. The first one is when do you begin production of this new vaccine, and the second part of the issue is when would you recommend stopping seasonal influenza vaccine. Right now we are in a period in which there is work going on to develop a new vaccine. That is going on. It started almost immediately and that will continue to push on. We are not at the point right now where we need to make the decision about whether to produce a new vaccine and whether to stop the seasonal vaccines. This is going to be done by consultation with a number of expert groups. There are some expert groups that advise WHO on immunization issues, vaccination issues, and in addition in this particular instance, getting the input of regulatory agencies, getting the input from a number of other experts and then getting the inputs from industry is all important to get a sense of what are the considerations in this situation, what types of vaccines might be produced and what are the triggers that should point to choosing one option or another, and then what are the

implications of that because there are a number of different choices here that could be made. I can't give you a simple answer when will this be done – but this is the process through which it will be done.

In terms of capacity, there is much greater vaccine capacity than there was a few years ago, but there is not enough vaccine capacity to instantly make vaccine for the entire world's population for influenza. The capacity will also depend, in part, on what kind of vaccines are made so adjuvanted vaccines will stretch out the vaccine supply more than non-adjuvanted vaccines. Again there are different decisions about those sorts of things to be made. It is a complicated area, no simple yes or no answers here either.