Press conference with Dr Keiji Fukuda, Assistant Director-General for Health Security and the Environment on MERS-Coronavirus, 25 September 2013

Speaker key

KF  Keiji Fukuda
GH  Gregory Hartl
WN  William New
HB  Helen Branswell
EK  Ellen Knickmeier
MK  Masaki Kondo
FD  Frederic Durant
SB  Simeon Bennett
BR  Bob Roos
BD  Barbara Di Chiara
AK  Andrew Katz

KF  Thanks everybody online for your attentiveness and time. So what I’m going to do in a few minutes is try and cover some of the main points coming out of today’s meeting of the Emergency Committee of the International Health Regulations focused on the MERS situation and then we’ll throw it open for questions and answers, as we typically do. So I think, as you know, today was the third meeting of the Committee on the Middle East Respiratory Syndrome or MERS, as we often call it and the Committee concluded its meeting earlier this afternoon and has provided its report to WHO.

Again, I think many of you remember that the Emergency Committee was first formed back in July of this past year and the purpose of forming the Emergency Committee under the International Health Regulations was really to ask a group of outside experts to provide their advice to the Director-General as to whether the current situation related to MERS constituted a public health emergency of international concern. And at that time in the second meeting what they advised the Director-General was that the situation was serious and of great concern but based on the information they had available that the conditions of a public health emergency of international concern were not met.

However, they noted that the Hajj was coming up in the fall time and so they asked to be reconvened in September to reassess the situation in advance of the Hajj and that’s basically what happened today. Today was an opportunity again to look at the situation and to have it discussed by this group.
So basically the Emergency Committee heard the most recent information on the situation. They received information directly from the Kingdom of Saudi Arabia as well as from Qatar and they also had an overview of the situation from the WHO Secretariat. I’ll come back to some of the details and just give you a flavour of some of the discussion and the points made but let me just jump to the bottom line.

So basically the Committee affirmed their assessment that the conditions for a public health emergency of international concern at present have not been met and so basically they were saying that their assessment is similar to their assessment back in July; that right now they are watching the events as they unfold but the conditions do not meet a public health emergency of international concern.

Again, they stressed however that there were some areas that were particularly important to continue strengthening and they wanted to emphasise some key areas. One of these areas was surveillance in countries and especially in countries that are going to be receiving pilgrims coming back from the Hajj.

Another point that they wanted to stress was the importance of supporting countries that are particularly vulnerable and here they specifically pointed out countries in the sub-Saharan African region because of the many challenges in that region. They also stressed the importance of continuing work on getting diagnostic capacities out in countries. They wanted to stress the importance of ongoing investigations, especially finding the source of the virus and especially how are people getting infected, what is actually leading to these human infections?

And the last point that they wanted to stress was the importance of the timely sharing of relevant information with WHO as required under the international health regulations and they also stress the importance of collaborating with WHO in this area. And then finally again the Committee noted that they would like to meet again after the Hajj is ended and after many of the pilgrims have returned back to their countries. They would again like to reassess the situation at that time.

So in terms of the meeting and its basic conclusions these are really the elemental parts of that. Now, in terms of some of the information that was provided to them, let me just go over some of this information. So since 2012 there have now been 130 laboratory-confirmed cases and 17 epidemiologically-confirmed cases. We call them probable cases but these are cases which do not have laboratory confirmation. These cases, these infections have occurred in nine countries and so there have been no new countries since the Emergency Committee met in July but there have been nine countries overall since the beginning that have had some of these cases.

Since the last Emergency Committee meeting there have been 47 laboratory-confirmed cases. All of these occurred in the Middle East. None of these infections have been exported outside the region and importantly, I think that none of these cases have occurred in visitors or travellers going to Saudi Arabia for the Umrah.

Now, overall the infection remains quite serious. The case fatality is about 42% so about 42% of known infections end up in death. More of the infections are occurring in men than in women, about 64% of the infections overall are in men and the median age of people getting infected is about 50 years. Given that as a broad background we
are seeing some important epidemiological patterns. In the months since July we have not seen any let-up in cases so we have continued to see a steady stream of cases occurring at about the same level each month.

About one third of these cases are occurring in communities and presumably from exposure to an unknown source and so we sometimes call these sporadic cases, sometimes...  

Again, as I was saying, about one third of these cases are so-called community cases and so these are people who are getting infected in the community from some unknown exposure at this time. When we look at that group of people they tend to be even more often male, they tend to be on the older end and this is a group of people who more often have some kind of underlying chronic illness or chronic condition and this is a group that tends to have more severe outcomes and so tends to result more often in severe respiratory disease or death.

We have a high suspicion that their exposures are somehow related to animals and as you probably know, there is a lot of research going on in this area and there is some interest in... interesting findings in bats and related to camels but I want to stress that right now the bottom line is that we don’t really understand how animals are related to these infections, we don’t really know what is the exposure leading to these cases and we don’t know what the risk factors are so this remains a very active area of research but we don’t have the answers to that yet.

So among the remaining two-thirds of the cases, these really are people who are having secondary infections so these are people who are in contact with someone who has gotten infected in the community and they represent a form of person-to-person transmission so we are seeing that this kind of infection or transmission is occurring largely in hospital settings and in family settings. And importantly, these infections can sometime lead to clusters or small groups of cases but most importantly, we are not seeing that translate into large numbers of community cases so we do not see infections sweeping through communities at this time.

So in summary, what we are seeing right now over the past few years is that we are in a period where we are seeing the emergence of a new virus. Most of the infections that we know of have occurred in the Middle East but again, we are not clear on whether this is the full picture or not and the reason that we are not clear on that is that we know that surveillance in many areas and in many countries is very limited and so we don’t know whether we really have the full information to understand where these infections occur.

As we have better surveillance however – and it is getting better over time – as we have better surveillance we are seeing more mild cases but I don’t want you to walk away with the impression that, you know, the disease is mild. You know, we still have 42% of infections resulting in death so this is still a quite serious infection.

Now, currently we believe that the infections occurring out in the communities are somehow related to animals but again, we can’t put all the pieces together yet. There are some clues but not the full picture. And then finally in the instances where we think that we see person-to-person transmission, again I want to point out that it
remains limited so we see these small clusters but we are not seeing infection sweeping through communities.

So that’s the overall picture that we’re seeing right now. So let me stop there, Gregory, and throw it open.

GH  Okay, Keiji, can we stop one second please? Because we’d like first of all to apologise to all the journalists listening. We had some audio problems and I know that they could not hear the first part of what you said so we’d ask your indulgence here in the room and if you could repeat perhaps the conclusions down to the end of your first page.

KF  Sure, okay.

GH  Thank you.

KF  For those of you online I’ll try to summarise very succinctly. Again, this is the third meeting of the Emergency Committee convened under the International Health Regulations to advise the Director-General on the Middle East Respiratory Syndrome or MERS virus and today the Committee heard direct input from two countries, the Kingdom of Saudi Arabia and Qatar and they also heard overview information from the WHO Secretariat.

And the bottom line is that after hearing all of the information they affirmed their assessment from July that the conditions for a public health emergency of international concern at this present, at this time, so at present have not yet, or have not been met. However, the Committee took pains to stress the importance of some areas. One of them is that it is very important to continue to strengthen surveillance and especially in countries that are going to be receiving pilgrims returning from both the Hajj and the Umrah.

They stress the importance of providing support to countries that are particularly vulnerable and here they highlighted countries in sub-Saharan Africa, noting the regional challenges there. They stressed the importance of continuing to strengthen and expand diagnostic testing capacities. They stressed the importance of ongoing investigative work, particularly to identify both the source of the virus but also to identify how is it that people are getting infected, what are the exposures, what are the risk factors.

And then finally they stressed the importance of the timely sharing of relevant information as required under the International Health Regulations with WHO and also of coordinating actions with WHO.

So that was, that is really the gist of the report that came out from the Emergency Committee so, Gregory, let me stop there.

GH  Yes, thank you very much, Keiji. All right, so can we open up the floor to questions please, first of all from journalists here in the room if there are any? And if not, can we go to… are there any questions coming online?
We’ll take the first question from… William New from Intellectual Property Watch.

WN        It’s not about intellectual property but just – and it’s probably well-known to others in the room but I haven’t followed maybe closely enough to… Did you say that these cases have never occurred, been found or occurred outside of the Middle East, there hasn’t been a case yet?

KF        No, there have been cases which have occurred outside of the Middle East so, for example, back in the early part of the summer we had some cases in travellers that went from the Middle East to some of the countries in Europe so, for example, the United Kingdom was one of the countries, France was one of the countries, Germany and Italy. And in those instances there were a couple of instances where we saw person-to-person transmission in those countries in a very localised setting so basically with family members.

But since July when the Emergency Committee last met we have not seen any additional cases outside of the Middle East region.

WN        Okay, so just to follow on that, would you say the risk of that remains the same as it was or it seems to be reduced, the risk of any sort of occurrence spreading outside of the region? Is there any way to anticipate that?

KF        Well, I think this is, you know, of all of the questions this is probably the biggest question. I mean, this is why we’re spending so much time and having the Committee meet on, every once in a while to assess, do we think that the risk of it spreading out and becoming a global issue is increasing or decreasing?

GH        Keiji, thank you. Any other questions from the room? If not we’ll move to those online. Remember, for those of you online, please dial 01 if you wish to get in the queue to ask a question. The first question is from Helen Branswell from Canadian Press. Go ahead, Helen, please.

HB        Hi, thanks very much for doing this and for taking my questions. In the release it states that the Committee heard from representatives of Qatar and KSA. I’m wondering why only those two countries. The United Arab Emirates and Jordan have had cases – and relatively recent cases – and I’m wondering why they were not also asked to brief.

And the second question relates to the Emergency Committee’s reference to the importance of sharing timely information under the IHR. Was there any discussion of whether or not information is currently, countries are currently meeting their IHR responsibilities to share data?

KF        Thanks, Helen. Let me address both of those questions. There was an invitation extended to the three countries that have had cases since the last time the emergency committee met. However, the representative from UAE was not able to make this call in the end and so that’s why we ended up hearing from two countries, from KSA and from Qatar.
And then in terms of the second part or the second question you asked, the discussion on the timely sharing was really a general discussion about that. You know, at the end of the, or the latter part of the deliberations among the committee members when they were going over areas that they particularly wanted to stress in the report the general point that it continues to be really important for countries to share information, you know, detailed information as quickly as possible was made. However, there was no specific discussion related to any particular instances but more of a general point that was made. Over.

GH  Okay. Helen, thank you very much. The next question is from Ellen Knickmeir of the Wall Street Journal. Go ahead, please, Ellen.

EK  Hi, thank you for having this press conference. You said that [unclear] strengthen surveillance in the countries that the pilgrims would be returning to. Is that any surveillance going on in any countries right now for returning pilgrims? And obviously a lot of these countries are developing countries that don’t have a great culture [unclear] so is there going to be any help given to them to help surveillance, is there anything concrete planned right now to help increase surveillance on the ground?

KF  This is a very important issue, a particularly important investigative and public health issue. So what was heard is that when you look at the countries in which pilgrims are returning from Umrah, that there has been testing which has gone on in some of the countries from which pilgrims have returned. However, you know, the overall levels of testing is pretty variable and in general, in most of the countries, it’s pretty low, the numbers are not that extensive. And so I think that that helped quantify what most of us have felt which is that the levels of surveillance really remained suboptimal in a number of countries, you know, that may be particularly at risk for infection coming into their countries.

And then in terms of specific work to increase capacity, so there have been a number of meetings on this and there has been, I think, extensive work to develop some of the diagnostic tests to make those available to laboratories, any of the laboratories that wish to have them, and there has also been extensive work in terms of trying to develop some of the epidemiologic tools which are needed to conduct surveillance. And so all of this work has been done but I think it remains clear to us that surveillance still remains suboptimal and so again, the Committee was highlighting the need to keep pushing forward and, in addition, to try to raise awareness in all countries as much as possible so that some of the decisions, you know, that can be made to facilitate surveillance are made. Thank you.

GH  Thank you. Go ahead please from the room. Give your name please, if you would.

MK  My name’s Masaki Kondon from Jiji News

GH  Thank you.
MK The infection cases is, have been fairly stable. Does this mean the peak of the cases, you know, out and as winter approaches we should expect, whether we should expect more cases will follow or not?

And the second question would be, do you plan to have another Emergency Committee in the future? Thank you.

KF So let me address the first question. I think all we can say right now is that compared to, you know, the early part of the summer in the past, say, four, five, six months we have seen more cases but we’ve also had surveillance improve and more case investigations to try to find cases increase. And then in the past four or five months we have had a kind of steady level of cases. We don’t really know whether there is a seasonal pattern or not. I mean, if there is a seasonal pattern it would not be a surprise. We see that with a lot of the viruses but right now we don’t know whether we see such a pattern. I think it’s too early to tell so we don’t know what’s going to happen in the wintertime but because of that we are not treating this like a usual infection, we are keeping, I think, a very high degree of watchfulness over the behaviour of this virus.

And then in terms of another meeting of the Committee, yes, they have requested to be brought back together after the Hajj is ended so we have, we are planning to reconvene this committee some time in late November so I’ll have to look for a specific date based on availability but that is the current plan.

GH Thank you very much, Dr Fukuda. Are there any other questions from the room? If not we will go back to those online. Frederic from NHK. And before Frederic asks his question, if I can remind those online, please, if they wish to ask a question, to dial 01 to get into the queue. Thank you. Go ahead, Frederic.

FD Yes, thank you. It’s again about the Hajj pilgrimage. It seems that the Saudi authorities, health authorities were pretty confident that they would handle well the situation like they did with Umrah. So are the travel advice that were put in July still strong enough according to the Committee or to WHO or is there need for updating this advice?

KF Good question. I think that the Saudi authorities certainly have spent a lot of time thinking about what preparations are needed to be as prepared as possible so I think that they’re aware that they can’t anticipate everything but I know that they have expended a huge amount of time trying to be as prepared as possible. In terms of the travel recommendations that were made back in July, I mean, in essence we made recommendations for people that were planning to go and a lot of those recommendations had to do with how to improve their awareness, what information they needed to know.

There were recommendations for pilgrims who are actually in Saudi Arabia and if they became sick and then there were also recommendations for people returning from pilgrimage as to what to do if they became sick. And so the Committee saw no reason to increase or to make any changes in this level of guidance and so there was no specific push or direction towards changing anything.
Dr Fukuda, thank you. Now we’ll go back to online and that would be Simeon Bennett from Bloomberg. Simeon, go ahead, please.

Hi, good afternoon, Keiji, a couple of questions. First of all, it’s kind of curious to me that there have been no cases outside the Middle East since July and particularly not to, you know, other countries that have large numbers of Muslims because, as you know, people are coming and going from the Middle East to other Islamic countries all the time so it’s kind of curious to me that we haven’t seen any cases in, for instance, Pakistan or other countries like that. Is there any theory as to why, you know, we haven’t seen any more cases outside the Middle East since July?

And then secondly, since the last meeting of the Emergency Committee in July there’s been some more work done on the animal reservoir and a study from Ian Lipkin’s group on… that seems to pinpoint a certain species of bat as the reservoir and more work suggesting that camels might be the intermediate reservoir. Can you just comment on that and, you know, whether there are any steps being taken to try and limit exposure to humans from those two reservoirs? Thank you.

Sure, okay, good questions. Let me start with the first question; you know, is there a good explanation for what we’re seeing in terms of cases in the Middle East and then outside of the Middle East or lack of cases outside of the Middle East? And I think that, you know, anything that I’ll say is pretty speculative or that anyone could say right now is pretty speculative but I think that when you look at the cases that we have now and the epidemiologic patterns that are there, it’s clear that we appear to have two groups of cases; that group of people who are getting exposed and infected in communities and then that group of people who are developing secondary infections after having contact with, you know, that first group of people.

And again, we simply, we don’t understand yet how those people in the communities are getting infected, you know, what’s the exposure, what’s the risk factor? But I think that you can imagine that if you’re a visitor to a country what you do in that country may in fact be fairly different than what people living in the country do and so it’s easy to see that in fact, depending on what the risk factors eventually turn out to be, that you could have a situation where lots of visitors come in but they are not really being exposed to the things which lead to infection so that’s one way to put it together and again it’s just, you know, speculative at this point because we don’t fundamentally know what is the exposure.

That leads to your second question. There is some interesting research and findings going on, some of that suggesting that bats may be a reservoir, some of it suggesting that camels may be a reservoir or may be infected. But again, if we look at these findings they still don’t really tell us whether these findings explain the picture or not. You know, in many instances we have animals who get infected or we find infections in animals but they’re not really a fundamental part of the chain of how people get infected so, you know, for example, with the H5N1 virus we had the situation where many, many animals were found to be infected but they were not really the reason why people were getting infected.

And so here, you know, even if bats turn out to be a reservoir we’re not clear on what the connection is between bats and people and the similar, similarly the findings in
camels. Right now we’ve found antibodies in camels but we actually haven’t found the virus in camels and so, you know, I guess I would say that these leads are promising and they certainly… We certainly have more information than we did a year ago or so but I would say that we’re still pretty early in our understanding of how to put this together and whether these animals are really related to the fundamental chain of how people are getting infected. It’s still pretty exploratory.

Thanks.

GH  Thank you, Dr Fukuda. Okay, we have another question – and once again a reminder, 01 please if you want to ask a question and you’re listening online. So we go to Jennifer Yang from the Toronto Star. Go ahead please, Jennifer.

JY  Thanks, Greg. Hi, Dr Fukuda. Thank you for taking my questions. I think I have three questions related to surveillance. I’m hoping to understand a bit more specifically first of all, I guess, what your, what the Committee’s thoughts are with respect to what an ideal level of surveillance would be within the countries that would expect to be receiving a lot of returning pilgrims.

And secondly, I think you’ve mentioned that sub-Saharan Africa was identified as a particularly vulnerable region. Are you able to tell us at all what capacity they have in that part of the world in terms of surveillance of returning pilgrims?

And finally, apologies if I missed this because I wasn’t able to patch into the early part of the call but are you able to speak specifically as to what type of surveillance activities are currently underway for animals right now in Saudi Arabia? Thank you.

KF  Okay, thanks, Jennifer. So let me try to take these one by one. So what would be ideal surveillance? I think that, you know, in broad brushstrokes, what we would want to see is a level of surveillance which can be sustained so it doesn’t bankrupt the country, it doesn’t exhaust resources but it’s also able to identify and really pick up whether there are infections coming into a country and then importantly, whether there are changes in the patterns and the trends.

So I think there are a lot of different ways do to this. You know, you can do surveillance in hospitals, you can do surveillance in many different places and so I think at that level of detail it really depends on the country that you’re talking about, about what makes the most sense. But in essence, what we would consider to be a good level of surveillance is where the country can sustain it over the long term without exhausting their resources and harming surveillance in other areas and which, in fact, is able to detect the issue and any important trends.

In terms of sub-Saharan Africa, again it’s variable on a country by country basis but the current approach to surveillance is really focused a lot on looking for severe cases, people who are really severely ill and then a lot of it is focused on testing for virus and so it really relies a lot upon laboratory testing capacity.

And so laboratory testing capacity in many of the sub-Saharan countries is not very strong and, you know, this is one of the areas in which, you know, we continue to focus a lot of efforts on strengthening that capacity but strengthening laboratory capacity really is achievable but it really requires a lot of attention both to the training
of staff, to the techniques, to the updating of reagents and materials and those things and so it’s a big task so…

And then in addition to that what you want to have are the communication capacities so that information can get passed around, the epidemiologic risk assessment capacities and so all of these things are needed really to conduct surveillance at the requisite level and so without going into a country by country discussion, I think that in sub-Saharan Africa many of these basic capacities are simply limited and we see that not just for this particular virus but in a number of other infectious diseases.

Then in terms of what’s going on in surveillance in animals I think here I’ll have to defer on this, you know. I will point out that there was a recent mission in which colleagues from FAO visited the Ministry of Agriculture and had a joint mission with them there and this took place within the last few weeks and just concluded a little while ago and so I think that that mission will be very helpful in providing a picture on the current levels of surveillance but I can’t speak to that right now.

GH Dr, Fukuda, thank you very much. We’ll move to our last question and that would be Bob Rus from Cidrap News. Go ahead please, Bob.

BR Thank you for taking my question. I was wondering if, during the briefing, if assessors [?] from Saudi Arabia have said whether they are conducting any case control studies to try to get a better idea of how people are becoming exposed to the virus.

KF Bob, we did not specifically talk about case control studies in Saudi Arabia and so there was no discussion from the representative from Saudi Arabia as to, you know, that kind of study. However, there was general discussion of the need and the importance of those kinds of studies by the Committee and it was mentioned. Specifically this is one of the most important ways to try to get at some of the exposures. So no specific discussion related to the country but general comment on the importance. Thank you.

GH I’m revising what I just said because all of a sudden we’ve had a couple more people jump online so if we can have quick questions then we can maybe try to get in a couple more. So first one; Barbara Di Chara. Go ahead, please.

BD Yes, I wonder if you can repeat the epidemiological datas for me because I could not hear at the start of the conference. Thanks.

GH The update, just the numbers.

KF Sure, okay, let me try to quickly summarise. So since the beginning of the outbreak we have seen 130 laboratory-confirmed cases and 17 epidemiological cases or probable cases and these have occurred in nine countries. Since the emergency committee last met in July there have been 47 laboratory-confirmed cases. All of these cases have been in Middle Eastern countries. We have not seen any infections in that period exported to other countries outside of the region so we have a stable number of countries that have had cases over the past year and these are nine countries.
The case fatality or the percentage of people that are dying from infection is about 42%. We see infections occurring more often in men than in women, 64% in men and the median age of people getting infected is 50 years.

And the other point is just that we are seeing two large patterns. We have people who are getting infected in communities from some unknown exposure and then we have a second group of people – this is about two-thirds of the cases – who are getting secondary infections, presumably person-to-person transmission, from having contact with someone who is one of the community cases. And so these are the large patterns that we’re seeing.

Over the past four, five months we have seen a steady stream of cases, we have not seen a decrease in these cases and so they’re continuing at the same level and right now we don’t know whether we are going to see a seasonal pattern or not. We have not had enough time to really see that.

Dr Fukuda, thank you. By the way, for everyone listening here and online, we will be posting very shortly afterwards an audio file of this press conference online so that all of you can hear all of Dr Fukuda’s remarks, even those of you who missed the beginning – and we’re sorry about that. Next question - Andrew Katz then from Time.

Yes, thank you, Dr, thanks for your time today. I’m wondering; there’s been a lot of criticism against Saudi Arabia for its handling of MERS, be it information-sharing with other countries or surveillance of animals or human cases and a lot of emergencies experts have weighed in on the topic. I’m wondering whether you might be able to comment on whether the Kingdom of Saudi Arabia’s approach since last September has been appropriate or whether there have been instances where better surveillance earlier on or information-sharing might have meant a better understanding today of the virus. Thanks.

Sure. I, you know, usually refrain from commenting on specific country behaviours or actions but I do want to point out here that we have been in close contact with the Kingdom of Saudi Arabia and we know that they have done extensive efforts both to investigate these cases and to get a better handle on things such as how are people getting infected. We have provided essentially all information that we have from the countries that have provided information to us and so the only information that we routinely hold back is information which is very sensitive in terms of being able to identify individuals so if we have that kind of information we make sure that it does not go out. But in general we are providing all of the information that we have.

We are, in general, hoping that all of the countries that are conducting investigations – and those include countries with known cases but also countries that are doing surveillance – to provide us with more detailed information. We would like that, we would like to have more information on the situation so that’s where we are right now.
Okay, thank you very much. Now this really will be the last question. Once again, Ellen Knickmeier from Wall Street Journal. Thank you very much. Ellen.

Yes, thank you. Thank you, Dr Fukuda. Why is MERS still such a mystery one year on where you don’t know where it comes from and how to treat it and what have you, is it because there’s a suboptimal level of investigation going on or has the standard, adequate amount of investigation been conducted and it just still has eluded answer? Has the amount of investigations that have been conducted so far, is it, does it meet the threshold needed and that’s usually carried out in situations like these?

Well, I think, you know, whenever we have a new virus emerge or a new situation emerge I think we’re pretty impatient for understanding everything that we want to know about that situation, you know, and so every time we see something like SARS or H5 or pandemic influenza come up, similar to MERS, there is really a strong push to get information.

And here I think that we’re all feeling like we still don’t understand some of the basic aspects of this virus and for public health purposes there are probably two really important questions; one, how are people getting infected? But probably even more broadly, we don’t understand yet whether, what kind of risk this poses for global spread and this is probably the largest public health global issue that we’re struggling with. And so I think that, you know, again I can’t speak for individual investigations. There are a number of investigators that have been working on this and I think that there is studies which are underway and I’m not quite sure when that information is going to come out.

But, you know, in general it is always a struggle to get out information as quickly as possible and I think the other thing is that, you know, we have become more impatient over time, I mean, we expect more information to come out very quickly but the bottom line is that a lot of these studies, things such as case control studies, understanding, you know, really what are real exposures or what are real risk factors; they’re not such quick studies, they’re not that easy to do.

And in this instance we’ve had a steady stream of cases but we haven’t had an explosion of cases all occurring at the same time and when you look at something like H7N9 where we did have a lot of information come out, we also had an explosion of cases occurring over a very short amount of time so in a certain way there was a concentrated amount of information. But anyways, we, like everybody, are hoping that we have a much better handle on this situation. Thank you.

And thank you all. Remember our WHO website address, www.who.int. There will be a highlight on the front page of the website from where you can link to the audio file in a few minutes if you want to go back and listen to Dr Fukuda again. Thank you very much. Good evening.

Thanks.