AJPH Podcast: Monkeypox
August 2022
Alfredo Morabia

FK = Farzana Kapadia
DT = Daniel Tarantola

[musical prelude]

FK Hi, good morning! My name is Farzana Kapadia. I'm a deputy editor for the American Journal of Public Health, and I'm here today with Dr. Daniel Tarantola who's an associate editor at the American Journal of Public Health; and he has agreed to join us and talk about the monkeypox pandemic that we are currently experiencing. So, I'll turn it over to Dr. Tarantola to introduce himself and explain how he's involved in this. Dr. Tarantola?

DT Thank you, Farzana. My name is Daniel Tarantola. I studied and lived for a number of years in France, my country of residence. I joined WHO in my early days after my graduation, and I got involved in the eradication of small pox, particularly in Bangladesh where I was privileged to lead the team at some point, and at times, the last case of small pox, major, a major, the worst type of small pox in Bangladesh back in the 70s. I eventually went to Harvard, and after a number of years there I rejoined WHO as a special adviser to the Director General on policies, and at the same time Director of the Department of Vaccines and Biologicals. I would say that monkeypox belongs to the same family as variola, the virus responsible for small pox. It is what is called an orthopoxvirus. It affected humans, particularly in the Congo area in what is today the Democratic Republic of the Congo and was really evidence in the 1970s, particularly because before that there was quite a bit of vaccination against small pox. And the vaccine had the advantage of also being effective against monkeypox. When small pox vaccination was suspended after the eradication in 1981, then more monkeypox cases came out, particularly in

[Sudan] because they have not been vaccinated. The old section of population had been vaccinated against small pox and therefore were at least partly protected. And so it spread largely in the DRC, Democratic Republic of the Congo, and there were also [exploration] of cases in neighboring areas, for example the Camaroon and others. After small pox eradication in 1981, we saw cases in the DRC. We saw cases also being exported occasionally to countries in the northern hemisphere through contacts through travelers and were very few cases were generally not spread locally; and then we saw another focus, monkeypox, in Nigeria starting in 1980s and which basically followed a same pattern of transmission as monkeypox in the Democratic Republic of the Congo. In both places, both subregions of Africa, there were a few differences between viruses—we call them clades—so, there were two clades, one in the Congo which was relatively severe--it could be severe in young children—and the other in Nigeria which [turned out] to be milder than this. Both epidemics, occasional outbreaks, of monkeypox, still occur, and what happened here is that over several years over the last 50 years, post-eradication of small pox, we saw exportations to countries that normally were not, may not fit the usual patterns of tropical countries and whatnot. We saw cases in Europe and we saw cases in the US as well, particularly an outbreak in, recently, where 47 cases were diagnosed, confirmed, with monkeypox, which seem to have been related to the importation of prairie dogs by pet owners and following this outbreak the animal trade coming from overseas in the US, to the US, were regulated as a result of the discovery of those monkeypox [secondary] cases.

FK So, Daniel, may I ask just a question? So, these early cases and these early outbreaks, they were largely confined or they were largely due to animal to human transmission, would that be a correct assessment?

DT Yes, that's why. It's called monkeypox because people were identified as of yet having had contact, direct contact with monkeys either among hunters or consumers of monkey flesh, monkey meat, or [as pets] as well, monkey pets, in Africa. The case fatality in the Congo area was relatively high, around 10% or PSI has 10% of diagnosed cases, but surveillance, of course, was more likely to pick up death from this disease than cases that would occurred [among those] deaths. So, those case fatality rates have to be [in actual] validity. In Nigeria, the case fatality could be around 2-3%, perhaps up to 5%, but again the same issue of surveillance arises there where the determinator of people who have had exposure to and have been infected by monkeypox then more unlikely to be known than the number of deaths have occurred because suspected diagnosis of—the question arises as to what the actual reservoir among the animal population, wild animal population for monkeypox could be. It is assumed today that it probably is among the rodents population, monkeys serving uniquely as a vector between rodents and human populations. But the actual most prevailing source of or reservoir in the animal population has not been asserted yet. So, let's come forward and--

FK Yeah, we can go into the current--

DT Yeah, so in 2022 earlier this year, around April or May, the first cases of monkeypox were reported in Spain and Portugal. They were still being reported in Africa naturally, but I'd like to differentiate the epidemic of the status of monkeypox in other [ ] countries, mostly the Congo area and Nigeria, and the spread of monkeypox in countries that were not endemic for monkeypox where there are no other epidemics. So, the first epidemic, the first outbreaks, were noted in particular and in Spain, actually first diagnosed in the United Kingdom, and they were

assumed to be related to gay [pride] that the Canary Islands and in other, Madrid, and other places in that part of Europe--

FK Pride events?

DT Yes, pride events and other events as well relating to involving the population of men having sex with men, mostly. Then, cases were picked up in other countries in Europe so maybe United Kingdom, France, Sweden, Germany, and basically most countries in Europe today. There are about 70 countries today that have experienced cases of monkeypox. And in all situations, those cases were mostly associated with the population of men having sex with men which belies a set of issues that I will discuss later, and did not seem to spill over to the female population or even to be transmitted from mother to child, mother to fetus, did not seem to have much contact beyond the recognized community which represented 96-97% of the cases of monkeypox that were diagnosed. The transmission occurred through contact, particularly intimate contact, sexual contacts, and that can be shown by the distribution of pox vesicles or pox diagnosable skin effects, and there were for example cases of, many cases of, [poptitus] involving the [anumal] area and so forth which resulted in the suspicion that while monkeypox could transmit through skin to skin contact anywhere on the body, sexual contact was an added risk factor for transmission. So, the disease, we have to say something about its clinical manifestation because it has to be looked at in the context of the international health regulations. Is it a catastrophic disease in the south? Is it in the north? It is certainly in terms of the number of cases that have been reported with monkeypox to date, about 70,000, probably over that, probably close to 100,000 cases, and this is a painful disease. And so, one should not minimize the expression of monkeypox among humans. It is an issue, but the mortality remains very low, close to zero,

really, anywhere, so people will recover after two or three weeks, and everything will be fine again.

FK May I ask a question? The numbers that you referred to earlier, are these known cases or are these known as well as probable cases, given the disparities and inequities in, and just the lack of testing available?

DT Yeah, these are confirmed cases, so people who have been laboratory confirmed with monkeypox, but there are many more who have not and many more asymptomatic cases as well, so it's very hard to really take the actual dimensions of the epidemic that is ongoing. There were cases, the question comes very often as to whether there are healthcare providers can be exposed to monkeypox. Yes, they can, but the evidence as of today is very poor. There are a few male care providers who have been diagnosed with monkeypox, but their own set of personal risks extended beyond being care providers, and therefore the source of contacts is maybe unclear in those cases.

FK May I ask, given all this information, can you give us some insights into the process that the WHO undertakes in order to make a decision declaring a condition of public health emergency of international concern?

DT Yes, I will highlight that, and then we'll also address the issue of why monkeypox raises additional issues that the IHR has not taken into account thus far or moderately. The International Health Regulations were adopted by the World Health Assembly in 2005 at a time when pandemics [ ] the world, and they intended to basically create a legislation that all countries would abide to very promptly notify new outbreaks of diseases that fit three criteria; and those criteria in order to determine this was or had to be declared as a public health

emergency of international concern were that one, it was an extraordinary event, meaning that it was sudden or it was serious or it was unusual or it was unexpected or a combination thereof. Then they would declare that this was an extraordinary event, this was first criteria. The second criteria is that, as the decision to be made as to whether this was public health emergency worldwide was whether it was spreading to countries that had not experienced the disease before, and the third was whether there was any decision to be made about international travel or international trade to prevent the disease from spreading further. And so these were the three criteria. Now, these three criterias when I [survey] them are pretty subjective to personal interpretation and also to factors affecting the spread and the response to the spread of the disease that were not clear at the time of the International Health Regulations. So, in each case, and this has been the case for Covid, this has been the case for SARS, this has been the case for Zika, and several other epidemics, the WHO establishes a commission and I was privileged to become a member of this commission to advise the Director General who has the last word on this, and he's to make the decision, but the advice comes from the commission, that looking at these three criteria determines whether a [fate] should be declared or not. So, the first cases occurred in April or May or the first meeting where the commission was held in June of 20, June 21st, if I remember well. And the commission which has a mix of members specializing in biomedical aspects of the disease, other specializing in epidemiology, some coming from African countries, others from other continents representing a panel that could provide different inputs to the [permissional]. The commission determined at its first meeting that either monkeypox was not necessarily to be declared as a, as a public health emergency of international concern, and I'll explain why. This was published by WHO in its report on the first meeting. The concern, the

most acute concern, was that this disease had been evidenced as being largely associated with homosexual communities and practices. To determine this was a public health emergency adding to the fact that the disease was still called monkeypox the hope that the committee on taxonomy will one day challenge that term which is in a way stigmatizing if not insulting that if we were to declare a public health emergency what would happen to the men having sex with men or homosexual community more broadly, you have to know that in the world today there are 70 countries in the world that still have criminalization in their law on homosexuality, and of those, six have homosexuality as a potential reason for the death penalty. So, to add to this stigma and discrimination, something that would again cast the LGB T+ community as the deep cause of that, [you epitome cause of relish], so we looked at what was being done in countries that were newly affected, and the evidence showed and was published that many countries in the south were still monitoring their monkeypox epidemics which again occasionally bulk out in one way or another at one time or another and had some [agent] prove their surveillance. And my personal opinion now, and I will not share the discussion the commission, but my personal opinion is that surveillance definitely has to be improved. But monkeypox may not be the best entry point, that we are talking about integrated surveillance when you look at newly discovered diseases but also many other diseases that are affecting those countries, so major effort and a major investment should be made to improve surveillance and response capacities in countries in Africa that are endemic for monkeypox. In contrast in the north, countries that were affected by, newly affected by, monkeypox did a pretty good job improving surveillance, applying contact tracing with what was reported in the media as a very active participation of people who infected through providing information for contact tracing. There was no, at the time—might have

changed by now—but at the time there was no extraction of explaining where they were a couple of weeks before the onset of fever and the disease. They were very willing to participate to contract tracing which allowed to warn potential contacts about the fact that they needed to be examined, they needed to be diagnosed, and so forth. So, the theme of adding stigma and discrimination against the population that is chronically, still, stigmatized, discriminated against was in a way acted as a disincentive to declare it as a public health emergency at that point. Between June and July, [the cases], reported cases and confirmed cases rose from 20 to probably around 70,000 cases today in Europe and the US estimated and a second meeting of the committee was called, which is a regular process in the international health organization arrangements. So, the committee met again, and after debate it also concluded again that this was an emergency from a public health perspective of international concern. And again, it's because the stigma, discrimination was still pretty much threatening, present and threatening, again particularly countries that had still a law criminalizing homosexuality. At the same time, we were informed by countries that what they were doing was pretty active and pretty widespread and to control the disease, so we were not clear about what the added value of declaring a public health emergency of international concern would be over and above what was being happening in countries in the endemic world while stigma and discrimination was—yes, please?

FK I was just, but at the same time, the number of cases among men who have sex with men and gay men and another sexual minority men was increasing, and so the desire to not make recommendation to increase stigma was counterbalanced by this also increasing cases of the

same population, and this focus on that population as well as the core group where increasing numbers of cases were being observed.

DT Absolutely--

FK Also further enhanced, further increased stigma in that group--

DT It could definitely, so if you look at the decision made by the Director General who had already called an alert on monkeypox, even before the first meeting of the commission and had, there are a number of documents in the WHO archives that tell countries or advise countries as to what to do to control threatening pandemics, epidemics, but specifically monkeypox as well, and those actions always called for engaging the class community in a response to monkeypox, and this was happening. I have a person outside the commission and outside literature that you can read on that. I've always been concerned that the term, engaging a community, whether LGBTQ+ or other communities in something means you've got to talk to them, just talk to them. That's not good enough. I've worked in HIV over a number of years. What made the difference is when LGBTQ+ communities were not only engaged, but they actually were taking the lead and deciding what to do and doing it, and that was far more powerful to empower these communities and [divulge] resources to them with mutual accountability between governments and community-based organizations that would co-finance to really bring about very positive results. And HIV showed it. We'll not expand on this, but it's enough to look at the history of HIV to have the proof of that. Yes, the number of cases increased; the mortality remain[s] very low. There has not been a single death to date in Europe, nor in the US reported as being caused by monkeypox. So, that should not be the only criteria, but it's just an education that the debate as

to whether it should be a top priority across the world where there are ongoing pandemics that are really severe and killing and whatnot, that is a very difficult dilemma.

FK May I ask, with all of this information, where do we go next? Where, what is our next step in dealing with and addressing, effectively, this pandemic?

DT The next step, actually there are steps that started even before the second meeting of commission of the second announcement by the Director General of WHO, one is to improve surveillance and contact tracing, and it is in endemic countries remarkable what is being done, and that protects confidentiality, and yet provides very valuable data as to the magnitude of the spread and the magnitude of impact of monkeypox on these and other populations. There are surveillance mechanisms that are also focused and other members of the LGBTQ+ populations, for example women having sex with women or bisexual, binary people, and that keeps being an important factor of surveillance as well. Early notification to the WHO is occurring within days of one to two weeks, depending on the complexity and the size of the country, and so there is fairly good monitoring except, as I said, that there are cases that are asymptomatic. There are cases that do not wish to be declared as infected, and so the first thing is to improve surveillance, contact tracing, reporting, and prompt analyzation of data coming from that. The second dimension is facilitated by the fact that vaccines against monkeypox—we had vaccines against small pox that could certainly prevent or reduce the spread of monkeypox. But these vaccines were found a bit more aggressive than they ought to be for a disease that had very little severity, if you will, monkeypox in this case, and so it was not found appropriate to apply the small pox vaccine to contacts of monkeypox cases or persons infected with monkeypox. But, new vaccines against monkeypox with very reduced side [events], [ ], the question is that they are not available

in large quantities and the question of allocating those resources to the most at-risk population is an important one, and it varies from one country to the next depending on the availability and the stockpile of vaccines and the access to communities that are exposed to risk. But, vaccination policy has been promulgated now in many several European countries. It is not yet performed in the two areas in Africa that are most exposed to monkeypox, but there is a scheme similar to the scheme applied to Covid vaccines that are being discussed now, and hopefully those vaccines will soon become available to those two areas of Africa. And there is a treatment, it's not a costly treatment, but its production has been limited thus far. It's been approved by the FDA in the US and by the, its equivalent in Europe, the [EMEA], so it can be used as well. It seems to have some effectiveness on the disease once it's been declared, not major perhaps, but it does improve the course. And there are also all sorts of other treatments alleviating pain, fever, and other symptoms that ensure that people who are already affected can have some comfort as the disease evolves. Then, the other branch of the strategy of, component of the strategy, is to isolate those cases of potential contacts and the isolation should occur for 21 days, and I have a concern here which is that people within the gay community, the [MSN] communities, very often or some people are isolated, they live alone in their home in times are below poverty level or in very hard situations, hard conditions, and if you have to impose the isolation to those people, you have to impose that as was done not sufficiently during the early waves of Covid, that these people are assisted and provided with the essential living--

FK The needs--

DT Supplies that they need. So, that basically what is there, a documented declining trend. There are early signs that in some areas there are, but if you look at a small country, it's easier to

determine there is a declining trend in that country. If you look at the US overall, it seems that the US is affected sort of state after state and so for the epidemics are succeeding, overlapping but succeeding to each other, and so if you look at the general trend in the US, you'll get more probably a flat trend or a rising trend still, but in countries that have been affected for three to six weeks, it seems that the incidents, the new cases, of monkeypox, tend to decline. And so one has to learn more from the behavior of these epidemics and know at what point we are hopeful that it will be declining, and it will decline and be controlled.

FK Thank you, Daniel. I really appreciate this opportunity to discuss this current pandemic, the steps that have been taken by the WHO, and considering its declaration as a public health emergency of international concern, and what further steps we need not only for this pandemic but for future pandemics that we will undoubtedly be witnessing.

[musical postlude]