Nach Corona (After Corona)" Conference
Evangelischen Akademie Tutzing
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English transcript

Udo Hahn: We are now pleased to welcome Professor Karl Lauterbach. He is still arranging the things in front of him so the screen can fit and the microphone is on. Wonderful, welcome dear Professor Lauterbach and Doctor Thierse, you have the floor.

Dr. Thierse: Yes, dear Karl, welcome. I'm so happy to welcome you. Where are you now?

Lauterbach: In Berlin, good morning.

Dr. Thierse: Good morning. Berlin is a very hot city. It was 35/36 degrees yesterday and today it will be that hot again. Ladies and gentlemen, I must introduce Karl Lauterbach. He is much in demand, almost omnipresent, but he is also an almost ideal combination for the time we're in. Dr. Lauterbach was born in Düren, he had studied medicine in Aachen, in Texas, in Düsseldorf respectively. He specializes in epidemiology and health economics, and got a doctorate from Harvard. He is now a medical epidemiologist, health politician, representative and a very eloquent person.

The ideal combination for this time is not only about science and political action but also, importantly, about communicating what is happening, what are the reasons for the decision and what is right or wrong. In other words, we need to know what we have to be afraid of and hope for. Here is Karl Lauterbach, the ideal person to fulfill this important role. So dear Karl you have the floor. We have agreed to deliberate for 10/15/20 minutes so that there is still enough time for the conversation between us and the listeners and viewers. So what is to be learned from the coronavirus pandemic and yes, what kind of knowledge we should know. You have the floor.

Lauterbach: So dear Wolfgang, thank you very much. I would also like to return the compliment to you, for you are also eloquent and have always been a role model for many of us in many ways, and there are more than a few in the Bundestag of the SPD (Social Democratic Party of Germany), we started to miss your presence so therefore many thanks also for this invitation. I appreciate it very much and what you say always has great value to me. So everyone always listened to them, that works for me too.

I would just like to try to stand there for a few minutes very quickly, so to speak, how we got through the pandemic in Germany, what we did well, what we didn't do so well, then I want to conclude by talking briefly about what I think we did very badly and what we have to fear. I'm sorry that in the end I will change the subject to talk about something that is negative. (In) October I thought I'd hate to do that, but I think that with an institution like the 'Evangelische Academy", with which I have been closely associated for many years, it would be appropriate and should be understood again from something with which I can point out, we have a duty here, we still (need to) react, you cannot let go. In principle, Germany got off to a very good start, if you can say that without sounding cynical. We got off to a better start than many other countries.

I witnessed the start of the pandemic in Boston and was a visiting professor at the Harvard School of Public Health. I happened to be teaching in February and I was together with Marc Lipsitch, a relatively well-known epidemiologist. We sat and ate sushi together and just something for ourselves how big it would be, and at the end of the meal it was so clear to me that it would be a catastrophe for humanity, that it would change our lives, that I stayed there for the time being and didn't leave with Marc and then I thought about it again. So it was a freezing cold day but it was already clear to me at the time that it would run for a long time, that it would be difficult. We did well in Germany for four reasons.

On one hand, we were alerted very quickly how unfortunately dangerous COVID would be, because in Germany the pictures came in very early when there are hardly any cases, even then the pictures from Bergamo (a city in Italy) the hand (finger) points at the German population, alarmed, showed the severity of the illnesses and they were very apologetic to those who described very early that this is not always out of the flu.

Or that by way of criminal investigations continued from Bergheim (a city in Germany) and I was dying because priests who were infected at the last sacrament filled up the morgues. It was very clear that it would be very difficult, the population was alarmed and immediately changed their behavior and the contacts went down and which was very open politically for political messages. And although something had set us apart from other countries, for example from the United States, we actually had a fast working PCR test so that we could test ours almost reliably, without many false positives and without many false negatives. So we were able to test with specificity and sensitivity. The test was started up relatively quickly across the border by the German Laboratory Medicine, which is well-prepared for something like this, so we had a functioning test that could be used a lot in the area. Back then, from a subjective point of view, it was always too limited, but it was better than what was run in other countries which helped us.

The third thing we had here that other countries do not have is our extremely well-developed intensive care system. We had about twice the amount of intensive care beds compared to the european average. The european average number of eco devices, supposedly artificial lungs, are having a well-equipped number. We also have intensive care physicians who are experienced in the combination of maximum care consultation and also treatment of coagulation disorders. Therefore, we got through the first wave well because of care, for example in heimstark, even though there was a large outbreak, the mortality was relatively low. It is because we had very strong intensive care capacities in places like Aachen, Eschweiler, Cologne, and Bonn. This is also the center of German respiratory medicine and MERS also plays a major role. We can then provide optimal care during the first round for severely affected patients, especially in the Rhine. We have responded very well in this first wave. The health policy population, as I said, was still being prepared and ready to go along.

Merkel and others have also very quickly closed all relatively consistent blocks which have been prepared from March. It was very consistently enforced over the first wave. We got through the first wave so well that I had to give numerous lectures in the summer, to American and even to Chinese. How did Germany do it? How did we get through it? How do we do it with the low mortality from other countries?

The second wave has not gone well for us or we become careless. There are already some more scientists who said COVID is not so dangerous that we are less aware of the painful, deadly horrible second wave. I will not forgive. It is like a permanent wave to me. We must learn to live with the virus. There was a German scientist who stated that there is possibly never a vaccine and if there is no vaccine then one cannot live permanently in lockdown. It is stated that the risk groups are protected by the people in care facilities in particular. There are also the older properties, if I say that again, this discussion will bring you memories and that was very damaging. We went in relatively poorly prepared for the second wave and we reacted late with the lockdown. We hardly had the population with us who were not ready to go with the lockdown again, the population had heard too much that would be with minimally invasive possibilities, i.e. who is able to save the economy and the younger population from a blockbuster.

People would now concentrate even more on protecting facilities and the multimorbid risk people we have to protect very well. The number of cases has risen from September and more significantly in October. Then we tried a so-called wave break against the University of Warwick. This is an attempt to make a lockdown without needing the children to leave school. We wanted to train the children in particular and thus practice a lockdown without closing the schools. I was also involved in this process that was developed by Christian Drosten, Michael Meyer Hermann and I.

I think Melanie Brinkmann was partly involved, but this wave (breaker?) (inaudible) lockdown - it was for the mentioned because I will not be strong enough. The number of cases remained stable, but it did not go down. We saw that it would not work without the schools closing, in particular some prime ministers stumbled upon us, who then decided to lockdown. We still have the signals that shops could open as it was from the week of the weekend opening of the shops so the talk is of the Black Friday was practiced. It was already nearly Christmas, which then bypassed the closure of the catering services and the swimming pools and the pubs, there were mulled wine stands from which there was a real one about a realistic comparison.

There was nothing in front and in the back, then we discussed again and then we got a brilliant block to build that we then held out for more or less that month. So including the wave cup lockdown. That was the story of the second wave. During the second wave, many people died unnecessarily, it was not possible to protect the care facilities adequately and those who vaccinated so late. The main mistake was that we no longer worked with swords. You no longer worried that they were only used in the care facilities but quick tests are not used in schools or companies. Therefore, the possibility of quickly identifying them with the worst superspreader is not sufficient.

In the second wave, this resulted in many unnecessary deaths, and in the third wave, when variant B1.1.7 (Alpha variant) prevailed, we actually returned to the old virtues, and science was heard once again, and the Minister Presidents did not want a third lockdown, as it were, which meant that they wanted to go along with the use of the test, but did not want to agitate the retail industry even more, and especially with the amounts to be tested, everything was broken.

We have then actually even pulled the legislative competence to the federal government, yes, and the so-called “federal emergency brake” then the federal government has then decided all these things that were scientifically active so as in schools and in companies and must be tested twice that must be tested when you enter the stores, decided, we have therefore decided on measures for the schools, thanks to which we have once again closed, a relatively drastic lockdown, and discussed the data publicly to such an extent that the population was ready for this lockdown and had already significantly restricted their mobility behavior.

The population was further ahead of the politicians, the population was already behaving differently and we then decided on the significant reduction in mobility that the federal government had already presented. So that's what we did overall, so Germany got through the pandemic better than most European countries. We have a very well-done study from Tübingen (a city in Germany) on the basis/concept of mortality and around four percent of that also corresponds to the mortality that was calculated in other studies that have been made on the topic and most of the European ones around, around us who compare with us what in the danger, for example France, for example Spain, Italy, but also England. We have states with a mortality rate of eight to eleven percent, and the Eastern Europeans still have significantly higher mortality rate, and thus Germany is overall stronger instead of getting about half as high as the mortality of countries that have had a similar risk.

So we actually have a result to show what is not, so what is not bad. We could have been a lot better in the second wave. There was a lot more potential (problems) that we didn't fix, but if you look at it over the entire time up to now, I think the high mortality rates will not happen, because the speed is so high and the quality of life is also so high, that we will have the largest part of the population from autumn. I reckon that we will have achieved herd immunity by September.

By mid-September 80 percent of the adults will be double-vaccinated. The only ones who then still go into the risk sadly are the ones who say it is the children who can. That is why the delta variant is so dangerous, because the data is also for children, unfortunately you have to say dangerous. About 1 percent of the children get sick so badly so that the children have to be treated in the hospital and (inaudible). COVID-19 is not uncommon for children after such an infection with the delta variant, about 2, until you get two to seven percent of the children according to the study. So that's not right from my point of view, the children were not sufficiently well protected because of the recommendation of the German Standing Committee on Vaccinations (STIKO). Now I come to the conclusion of what we did not succeed and where we have failed from my point of view and what is not really well distributed or forgiven us in the long term. So when we built up the capacity, we built up the capacity exactly as it was tailored. In the size for what we need ourselves and show that for Europe as well as for the United States. Jan (an individual?) built up capacities for the production of vaccines very early, but we basically only prepared for a position for Europe which might be worse than the USA.

We have not built up any additional vaccine production capacity for the poor countries. So we can essentially cover our own needs and that's how it was aligned, but I really say about the gigantic production capacity, which of course would have been more expensive, but the vaccine would have been produced for the poorer countries of this world, which we have

never done. We simply have that and layers of the count from the start will be able to protect the target date and the unspoken thought was you. If we ourselves are protected and are vaccinated then we can take care of building up our vaccine capacity, for example, i.e. the production capacity either in India or in Europe or in the United States itself.

Essentially, we have not done much to build up capacities for poorer countries like we focused on India and we did it in such a way that we basically didn't see the similar population included. That is to say, the vaccine production capacity that had been built up in India also with the help of Oxford University in particular, essentially the AstraZeneca vaccine. This build-up of what they have is not sufficient to supply only in Switzerland than other countries such as South America, such as Africa. There has been a relatively conciliatory assumption that the people in Africa are young. The average age in Africa is just 18 years and in South America it was assumed that these countries could protect their risk from vaccines because they buy enough vaccines. But a systematic production of vaccines for poorer countries for the entire population has never really been prepared. That was the task of COVAX, a consortium that has very smart, livable people and also very competent people, but with all the means at their disposal, they have been able to buy a single contingent, but has not yet been produced of two billion vaccine doses and that is a contingent for a billion people.

But we have the problem here, that at the end of this year alone we will still have 5 billion people who are completely left out and even if COVAX can deliver that it can only cover 20 percent of those who then still need the vaccination.

And scientists have always assumed and I usually don't think not from school but I worked together as previously in Boston and I remember that we were very early, even more so than me, but actually for both we were of the opinion that very, very, very, very early this game very brutally smashed what is built up in Africa and in South America. And the people there one can imagine the supply.

We have no supply capacities, that was clear, that is at it that there would be variants that are more dangerous than originally thought. If such a (inaudible) encounters a vaccination then it must become more dangerous because otherwise it survived so the selection pressure is not at the beginning because it increases but at the moment where such proportion of the population is vaccinated or where so many are sick and therefore it was quite clear and each manufacturer will continue to try, that will become dangerous, what we us goes now does not say that I come now lies it nevertheless its information comes against service no more but merely must fight around also vaccinated infected twitch and say so contagious it is in a population and no more so many are surrounded nevertheless enough people meets around themselves to be able to spread.

Therefore, it would be expected that a virus becomes more and more contagious when the fears arose because it must then virtually change to the effect that it produces more viral load in a very short time in a human's body to find even times fewer people it can still infect enough people to be able to spread and that happens so the best variant arose and the delta variant is at the same time the white in more viral load it otherwise could not spread more very much more deadly. It is about two and a half more deadly than the Alpha variant, the

British variant, which is already more deadly than the original variant.

So now in principle a much more contagious and diverse variant is striking in Africa and so if you look at the situation in Uganda, for example, then you can see that the whole population has to fight there and the people cannot be cared for, there is no intensive care medicine there that deserves the name, there is not even enough oxygen so it will be, they will also in march fighting to get an oxygen supply, or a condenser where you can get air. (inaudible)]. That is the situation and that we have you expecting something (inaudible) to Southeast Asia that we expect in Indonesia, that we expect in all of Africa, that is expected in all of Latin America, in all of South America and that is a historical failure from my point of view, which from both have been there was, that, the problem was obvious we did little there we are now trying to do something.

Germany, by the way, supports a lot more than other countries, there are very rich countries that get little involved there but what is overall just too little there. And here, Germany is also problematic. Germany is the only country in the European alliance that blocks patents from being released, which could be used here to produce vaccines themselves, so these countries do not have the opportunity to produce the substances themselves. We are currently blocking that, so that's what is negative from my point of view, we have not offered the poorer countries in this world what we rarely have to offer and the outer walls of this knowledge therefore we found that at the time when we were more or less already celebrating have science and I think that is a central failure or a big problem. So maybe I think I have talked for too long, maybe more than really on the pandemic so far it will continue and so, so to speak, an outlook on what is to be expected in poorer countries. I thank you first for your attention.

Thierse: Thank you very much. I'll start with two little questions. First of all, do you still put your hope in CureVac, and secondly, does the study from Tübingen mean that deception occurred?

Lauterbach: Yes, unfortunately this vaccine, which would have been a blessing for poorer countries, has tried to produce mRNA vaccine in such a way that you ... that is, that you can easily produce the messenger RNA yourself and also need a small dose so that this is the ideal and also in a way that the vaccine can be stored for a long time in normal Germany, so the ideal vaccine for admonish, as it was. I believe that this vaccine is not where I have reached (achieved) but I believe that the substance will not regenerate because I believe that the problem that we see here is the design problem.

So the easier vaccine to produce was the messenger RNA so it doesn't have to be manipulated in a way that the so-called second top target has to be introduced at the base, which is kind of an alternative to the normal we target in the field, so that makes it easier to produce. It also means at the same time, that not so much spike protein is produced when the messenger has arrived in the human cell. And what you get, what the messenger produces again, spike protein is not enough for a solid response, immune response, and so I think it's an art is a design problem if that's vaccine. I don't think he (inaudible)... I don't think he will recover. Again, this is my personal opinion and as I said I hope I am wrong.

Udo Hahn: Yes, one more question, keyword ‘patented’, yes, I have a debate about it that the federal government and some other countries are against the transfer of patents or say the right way would be to produce more in Africa and produce elsewhere. So much time but those with the existing patients could produce the current (inaudible) much more and faster. Is that the right alternative or do you think we have to open patents so that it is also produced outside of others?

Lauterbach: You have to keep an eye on different vaccines, not only the messenger RNA vaccines but also so-called spike protein vaccines, the Novavax, which have an extremely strong effect. Novavax is very, very strong and these vaccines can be produced in poorer countries. Polyvalent vaccines are based on DNA and these are also vaccines that can be classically produced in poorer countries, so it isn't all just messenger RNA vaccines.

So the rapid development of production capacities in many countries of this world would of course be superior to the development or production capacity in Europe, for example in the United States, what Moderna or BioNTech or Novavax would need to be able to sell (inaudible) expensive vaccines in countries who are solvent. These production capacities have already been built up, but they are by no means sufficient for vaccinating the poor. We still have the special problem. We will soon go over it, at the latest at the start of the year for those who are born prematurely, we will go over it and be able to have his booster vaccination. And so our production capacities are once again used to full capacity for the vaccination in Europe and in some countries.

Udo Hahn: Can you briefly use a booster ...

Lauterbach: A booster vaccination is practically all on directional vaccination,

Hahn: Well

Lauterbach: A booster vaccination is probably necessary because those who were vaccinated earlier are those who have the highest risk. While the protection will be the first to be weaker, and the delta variant and perhaps other variants that are even more dangerous while therefore speaking through it. We will have older people infected who have already been vaccinated but whose vaccination was a long time ago. And then we will use our production capacity again to vaccinate our population again. And then the question is ... so what happened to the poor ones?

The only production capacities that are really big (inaudible) are worth outside of the United States and Europe happened in India if you ignore Russia and China, and there is also the problem that the Chinese vaccine, surprisingly because the Chinese did not succeed in producing very effective vaccine, since one is no longer used at all, the other Sinovac is still used but apparently it is still growing for those who are just born, not strong enough to protect against the infection with the one with the delta variant also to so on. So we have a situation where we have Chinese and Russian vaccines that are probably not going to be strong enough in the long term, so they will be with a delta variant and then later the next variants and we have the European vaccines and the American vaccines, that is, they are very strong vaccines that I just mentioned also Johnson & Johnson, so we may need the vaccine capacity for ourselves again. That means the build-up of the capacity for poorer countries is still not complete. It doesn't say so yet.

Hahn: I would like to ask you one more forecast question: what is the probability that there will be another wave in the fall after the summer break, perhaps weaker. What role will the Delta play in this and what vaccines would then be helpful, would then have to be used?

Lauterbach: So the probability that there will be another small wave in autumn, this probability is 100 percent, that is there, and that will be the delta variants (inaudible)____. The delta variant will then also establish itself in Germany. I firmly assume that there is only the question of whether it is 80 percent or 50 or more than 80 conceivable (susceptible) about the Delta variant that will prevail and its share will always be strong, so I don't think it can be represented otherwise. The vaccines that we have now used, that is the good news in particular, BioNTech and Moderna and also with reservations of Astrazeneca.

We have made little use of these Johnson and Johnson vaccines. But these vaccines prevent severe diseases and with the Delta variant in 90 percent of cases. That means the vaccinations that we are currently practicing will effectively protect the majority of the German population from the Delta variant. The effect is really very strong, because we have used very high-quality substances, and there would be a breakthrough here and there, but by and large the first will protect. What makes me really worry is that our children are not taking it.

As we have just said, a percentage of the children who are seriously infected with the delta variant have to go to the hospital. I think that is why we go to schools. We want to go back to the regular where we were right now because we are supposed to be in regular lessons there. We will have outbreaks that will be problematic and there is the mindset that is now being said well by the children. I am at risk if they get it and do not infect the teacher and their parents are not yet protected and this is an attitude I personally think is too risky.

Hahn: But which vaccines could even be used in children and down to what age? There is always an argument whether younger children should postpone taking vaccines.

Lauterbach: BioNTech is now letting people older than twelve to take vaccines and it can therefore also be used in Germany.

Hahn: And below it...?

Lauterbach: Not including this but in September, BioNTech and Moderna would most likely approve children aged two and over.

Hahn: Now two more political questions: it has always been criticized from different sides that the criterion of incidence values is too one-sided as a basis for decision-making for political restriction measures. What do you say about it, you adjust the (inaudible)

Lauterbach: Yes, that was wrong from my point of view for two reasons. One content at the time from the age structure of the population one could see the incidence at any point in time. I calculate deaths about five weeks later. Although the entire journey is possible for us as an epidemiologist, you tell me the incidence today, then I'll tell you how many people died in five weeks.

In fact, you could almost calculate and that was very much due to the age structure of the population and thus each country had its own quasi-mortal city measured by the incidence. If I keep the incidence low, then five weeks later the death rate will not be that high. I believe in a higher instance then I will see and immediately there is mortality and those who have argued. Let's pay more attention to mortality, they would always have been five weeks late.

So if I now also respect statehood then I see what mistake I hope was made. The doubt and that has always been wrong was measured by the incidence, how successful our mobility restrictions are. So if I close mobility restrictions, then I don't know how well it actually works. How much does the number of cases actually decrease and thus the incidence was always the parameter that could show us whether our mobility restrictions have to close continuously or not. Imagine not taking the incidence into account and restricting mobility, then there would have been no indicator of whether that was right or wrong. We will then be on the move almost blind. So epidemiological because it is never like that and I don't know any serious epidemiologist idea put forward, let's get away from the incidents.

Hahn: And my last comment is asking other participants to have their say. A constant point of criticism was the issue of the conference of ministers presidents' advice and the question of the effectiveness of federalism in these times. Do you think the demand for more centralism, for more federal competence, including the idea of a federal health institute, an appropriate consequence of the experiences of the past 16 months?

Lauterbach: So because in the last few years you will get the Federal Health Institute ... Federal Health Office, that is interesting and important for completely different reasons not to have anything to do with the pandemic. They simply do not have a facility that systematically deals with the health of the public, but now, and that is not a static facility that, in my opinion, would definitely be correct but is unrelated to the pandemic.

The Prime Minister's Conference had never been involved to cope with the pandemic and it is completely inexperienced. It is not intended to prepare laws that affect the states and the federal government, and where you can in other words, a consensus has to be reached later on in the federal council from April. I believe that the overall construction of the Prime Minister's Conference worked sufficiently well. I've got to know the committee over and over again for so long, they also advised a bit, at least on the SPD side. I always think from the end ... from the end if you look at how we got through the pandemic then we are good - relatively well decayed. In the end, I closed off a bit, that's clear, so then the federal government had to pull in more computers, so that Merkel had then invited, but on the whole, the construction worked. It also worked to the extent that the prime ministers and presidents who participated were so well trained in the material after these two days of meetings and preliminary talks.

As I had never experienced before, in fact, the prime ministers are really well trained.
and they were indeed not always the opinion... the opinion on which one has agreed thus totally they have tried to decide on different special regulations to implement, mostly with the argument that they would not come. Otherwise the regulations by the own parliament of the countries that were mostly faked, but on the whole this construction has been very unpopular but works and whether we would have come through better with a central construction was the doubt. I was very reluctant to criticize individual ministers and also with individual

decision-makers. I once pointed out that many things didn't work out really well, for example purchasing masks and vaccines, purchasing business tests and capacities for the supply of tests. There were only two of them that all decisions are decided by them but not by the Prime Minister's Conference. I doubt that it will be better to get through it with federal competence alone.

Theirse: It is not my impression of the Prime Minister's conference as such, the problem is that after the decisions of the conference, an agreement was reached. The Prime Ministers diverged again relatively quickly and then put different decisions into concrete terms. This upset and confused citizens. They agree and do them differently.

Theirse: So Hahn, what's going on in the chat? What are the questions?

Hahn: There is a lot going on in the chat and I can follow up on the last discussion with a question from the chat room. It says about the second and third waves. I had the feeling that what the participant wrote at this point about the corona issue has become a political playing field. In particular, the Prime Minister and President wanted to make a name for themselves. It was Angela Merkel who repeatedly warned but could not assert itself in the federal system. That put us in the endless lockdown from November to May. Money earlier too.

Lauterbach: I do not think we would have had a lot of room to do something different than the endless lockdown at the moment where we have a little more mobility to breathe. (inaudible) without ifs and buts. Steeply the leeway at low levels and in the end, as it actually was, the limit load of the intensive capacities was no longer possible. It is correct that the profiling of individuals with increasing duration has played a major role for me, but I still believe that it would not have been possible to decide something that awaits us this painful long lockdown.

Hahn: Another remark from a participant on the factors for success that you have described, namely public acceptance and mutual support, which I believe should always be mentioned in addition to all political and medical measures, i.e. that the public has also participated very well, at least in part, and has supported these measures with acceptance and mutual support. Who that only as a supplement otherwise there are many and questions about vaccines and try to work together. Times is a very specific question which vaccine would you use professor Lauterbach: if you are vaccinated after an infection with the following build-up of antibodies, Johnson & Johnson is recommended because it basically needs one vaccination only. You had spoken before Johnson & Johnson already briefly.

Lauterbach: The quick answer is yes, but you have to say that if someone has been through an infection and the infection was not happening more than a year ago, then every vaccine is sufficient to boost your antibody production over the years. Which is so highly protective of all combinations that it is so far the combination in the past infection and then a one-time vaccination Johnson and Johnson or any other vaccine that offers the strongest protection comes (inaudible) always very, very good protection against the delta variant because it almost doesn't matter which vaccine you use, the effect is a little faster with the messenger RNA vaccines, but if you are already using your chances or asthma you achieve very high antibody titers, you are better protected than those that are regularly given twice.

Hahn: You have friends who have said that it is still possible for the approval of a vaccine for children from two years old from autumn. A smaller how it looks with a release and itself relation is on bavaria text newborns from. I add this question to the request to explain to us where the exact medical challenge lies other than that in which age group to be able to use some substance, there I think the reference will still be quite helpful.

Lauterbach: Thank you so much, there is also the vaccinologist. I say that newborns can also be vaccinated with the messenger vaccine, for example, but for various reasons and to be strategic, but for medical reasons, the companies Moderna and from BioNTech initially focus on the group of over, concentrated for two years and at BioNTech at least that is how we expect the results of a registration-relevant study in children over two years old and above by September at the latest. So with the children the problem is, if that is of course, because the children are not (inaudible) not so seriously ill so I have to be extremely careful with the vaccine with the side effects, because I don't want to harm. Therefore, children have side effects yes or no, and with children over twelve years old. I think you can say that well enough now, but the mass vaccination side effects are even more serious, the (inaudible) with vaccinations immediately after the vaccination and that is what you have not observed again in the studies nor in the countries where their substances are used in the over 12 years old namely in the united states and in canada, where they have been evaluated very precisely and no side effects have been seen, that are worrying.

There are also possibilities for very plausible psychological reasons why there is an increasing number of things that we should not see in adults. On the contrary, the children's immune system has more so-called immunity and is actually better able to form antibodies on the basis of a vaccination, and we also have the following situation. The BioNTech and also the Moderna vaccines are used in huge quantities while I indeed have said a total of one year for those who are 18 and 19 and so the idea that the body of an 18-year-old is categorically different from the body of a 14-year-old. It is not medically observed, so it is very unlikely that vaccination side effects will occur in the 14-year-olds that would not have been seen in adult young adults. Most children want to be vaccinated, so German studies also show that the ideas would like to have the vaccination, they just want to get back to normal.

We also want that in the look you want to leave behind you and the children are ready but they are simply missing. So vaccination, and that is problematic in Germany. A lot of doctors vaccinate their own children because I was just there and (inaudible) I can play and that's the problem. My own 14-year-old daughter, for example, knows her way around very well because we have always been together during this time. So we practically lived through the time together and we were really all a strength and support in many ways, but she wanted to (inaudible) and so I have not seen why I can with what argument, I can withhold that from her with what argument I can withhold yes. She wanted to say it seems to me medically justifiable, we then made a decision together, so to speak.

Hahn: A participant asks: what must happen so that the permanent vaccination commission gives a recommendation for children? What hospitalisation risk in children would lead a vaccination recommendation, the STIKO but you could perhaps briefly normal people he has in Germany or the German Vaccination Committee given very differentiated judgment. How do you assess that?

Lauterbach: I can not really assess it well so the STIKO recommends the vaccination of children with risk factors and that is also true. However, a general recommendation for the children or risk factors has not come and there would be most children's doctors and most doctors do not recommend the children to bear the risk.

Hahn: A question about the test strategy in chat, the second last question I have. One more in another chat and then I pass again Dr. Theirse. In the meantime, the participant writes, it has been proven by studies that rapid tests are reliable when it comes to identifying COVID-positive infected persons. Especially at the beginning of an infection, these rapid tests do not reliably identify an infection. Then why are rapid tests still used instead of much more reliable PCR tests in areas where it is important not to detect infected people reliably, for example in schools and kindergartens?

Lauterbach: Yes, the result of the PCR test is supposed to be received first, so too late then I would have to do the PCR test, as it were, I am here I can now come to school if the result would be available so far, but it is also to be observed immediately. Now it is correct that the quick test, the antigen test, turns out negative in four out of ten positive cases, i.e. if you have 10 infected, then four infected are not recognized by the quick test, often those at the early state of infection?

Anyway, this quick test is going to be very strong in order to lower the (inaudible) and have also known it in Germany, because the crucial thing is that the quick test almost always works when someone is a super-spreader. If someone, say, was infected earlier and this super spreader, then he has about ten to 20 times as much as the (inaudible) that he has (inaudible) and can now reinfect the normal from nasal locations. And that catches the quick test and the spread of the delta variant, for example, but also the alpha variant which therefore only runs almost exclusively via the super spreaders. What are the super-spreaders, they infect a lot of people? One has to assume that 80 percent of those infected do not infect anyone anymore even though they are infected and this (super-spreader) addresses the people who test negative from the quick test when they are positive, but the one who is faster to identify the “superstar” so reliably that one can assume, so if I have now compulsorily tested in a school class, then the “superstar” who should have been dangerous was then there be identified and does not endanger the others in the class.

Hahn: The last question from the chat, how does the long-term look from today's perspective, so the long-term illnesses, the long-term effects on the sick. Can you only venture a forecast there?

Lauterbach: Well, long-COVID is difficult to assess, but there are now a few things that we can see more clearly, long-COVID means that the vessels, especially the endothelium, i.e. the smallest vessels that line the organs and are able to bypass the kidney heart in particular. These vessels seem to be damaged by long-COVID, that is not the only thing that will soon happen with long-COVID, but possibly the most important. That means that those who have COVID (inaudible) get long-covid.

On one hand, they have these classic symptoms; on the other hand, so on this longer possibility of this persistent cough, (inaudible) problems that one has blood pressure drops when getting up and blood pressure raises and thus almost dizzy spells develop. These are the classic long-COVID symptoms but the vessels are often not with long-COVID and we

now have to say a very impressive one in a larger study that is also commented me on twitter, we have seen that those who have had COVID, have been ill, are not that severe are sick, that (inaudible) still have a clear risk of developing cardiovascular disease from heart attacks or strokes. There is a significantly increased risk then to switch to diabetes.

There is a clear risk of discovering their weaker ones so that they have small organs then actually damaged moderately and COVID courses and in the months afterwards or years after that, so it plays out and then the consequences spoke in front of them so decide, for example, on one had my sister has a good friend who also had COVID, so she had “long-COVID” symptoms but when playing sports or when going for a walk, which wasn't too distressing, would always came back short of breath, and who now gets a heart attack at the age of 50, and that would have been inconceivable without the damage caused by the COVID.

Sure, she might have been at risk later on, but these are simply processes where you now have to imagine that the tissue, the vascular tissue, is damaged and then comes diseases that you can otherwise not explain, for example in younger men that have a more severe course. After that, the likelihood that you will simply fall ill with diabetes is clear. And these people would be, so years later will develop diabetes, that is very clear, but the consequences of damage in the endothelium over and in the long term we have to assume that those who get cold again at least those who have a severe course that also have one dementia, in particular, have an increased risk of neurodegenerative diseases. So I've always liked what you can't do that randomly, because there is no organ, so to speak, the endothelium still plays a bigger role until the organ invests in the function of the organ, so it depends on the brain, i.e. the function in the brain is very central and is therefore all important hypothesis for the development of dementia, including Alzheimer's dementia, that this is a dysfunction of the endothelium, at least in part to explain the disease.

Hahn: Thank you very much, Professor Lauterbach.

Thierse: I only have two more questions. A somewhat surprising fundamental question: why is there actually no compulsory vaccination when vaccination is the key instrument to fight the pandemic? We have occasionally looked to Asia and China that they supposedly got a grip on what was happening there, also through greater coercion?

Lauterbach: Compulsory vaccination is very difficult to justify ethically. We can represent herd immunity without compulsory vaccination, because the willingness to vaccinate is sufficiently high and those who are not vaccinated later on and take the risk on themselves are free to decide so. They will fall ill, that is quite clear. The delta variant is so contagious that you can simply say the following: …The delta variant will not be the last word, but there will be more to come. There are studies from the University in Haifa that clearly show that there are much more contagious variants from the laboratory trial than the delta variant. (..) in a few years it will be like that, everybody will have either already been vaccinated or already been sick.

Thierse: Without any obligation at all?

Lauterbach: Completely without obligation thus what is the vaccination of the vaccination refusers or vaccination skeptics takes place by the delta variant or successor variant. It is not

so that one can reach here thus a private system with SARS-CoV, thus now slowly thus an infection order of magnitude like with measures and that means that those which do not want vaccination in the long term thus of the infections are not sufficient.

Thierse: Well, but the background argument for the obligation is that you not only fall sick yourself, but also become a risk for others. That was always....

Lauterbach: Yes but only for those who do not let it.

Thierse: Well, and so that it doesn't end my last question, which of course is obvious: when and how will the corona pandemic end?

Lauterbach: So the great horror will end for us in due time this summer. It is very clear that Germany will overcome the great horror of Corona in summer and then go back to a normal life. That's to be expected now, because we actually have 80 percent vaccination rates among adults, we won't encounter any lockdown-needing major outbreaks like we had. And that was something that the population will feel we can have more lockdowns, and the children are protected, but the problem has just been addressed, but nothing can be changed for the world for a long time, it will go on for several years and it is really to be expected that there are still completely different variants that still upset.

The World Bank, the WHO and the World Bank and the WHO, and also the UN have published impressive papers that point out a couple of things. So in this impressive paper, it pointed out that the vaccination rates amid the poorer countries, the offer for the poorest countries, that one would be investments that would bring about for the world as a whole and also for the rich and everyday life is the equivalent of 200 times what it costs somewhere. I would be about 200 times as good in everyday life, and therefore it is also economically probably the worst mistake decision in our history, so a mistake chart of economic mistakes, all human and economic decisions, of this magnitude is unparalleled. What I should say is that this has not been experienced in decades, and that this is likely probably the greatest economic and medical failure of "our lifetime", of this generation, and therefore the pandemic will be with us unnecessarily for many years to come, because we keep seeing the worrying images of foreigners who are not adequately protected, and where life in Europe is practically at breaking-point.

Thierse: Yes with this dichotomous forecast, good times are a hope for us in this country and in this continent and a difficult time for the world as a whole ends these lines. Thank you very much for coming to talk and giving us so much information. I wish you to stay healthy. You are also subject to a lot of hate and agitation, and so I wish you can endure that, hang in there and you can be sure of the solidarity form us. We support you and thank you again. I hope you have a nice weekend but I'm afraid you still have a lot of work to do. So anyway it is a sunny day you may enjoy a little bit. So thank you very much and my ladies and gentlemen there is now a ten-minute break before we begin further. We continue before 10:45. We will have the Federal Minister Jens Spahn, our interlocutor, so until then, in ten minutes 10:45 we'll continue.

Lauterbach: Thank you very much.

1:02:03:

“Die Impfung der Impfverweigerer oder der Impfskeptiker erfolgt durch die Delta-Variante oder nachfolgende Varianten”
“The vaccination refusals or vaccination skeptics will subsequently cause the Delta variant or any other following variants to come.”