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# 日本国際医学協会誌

## INTERNATIONAL MEDICAL NEWS

International Medical Society of Japan

Since 1925



### 第60回国際治療談話会総会 新型コロナウイルス感染症 ～日独の対応～

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60th International Congress on Therapy, 26. Nov. 2020  
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**Covid-19 ~Responses in Japan and Germany**  
新型コロナウイルス感染症 ~日独の対応

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# The 60th International Congress on Therapy **Covid-19~Responses in Japan and Germany**

Chair: **Koichi Ito, MD, PhD** (Managing director, IMSJ)  
Opening remarks: **Masakazu Tsuzuki, MD, PhD** (President, IMSJ)  
Congratulatory remarks: **Toshio Nakagawa, M.D., Ph.D.** (President, Japan Medical Association)  
**H.E. Ms. Ina Lepel** (Ambassador, Embassy of the Federal Republic of Germany Tokyo)

## **Covid-19~ Responses in Japan and Germany**

Medical Lectures Chair : **Taro Kondo, MD, PhD** (Managing director, IMSJ)  
**Georg K. Löer** (Advisory Board Member, IMSJ)

### **Lecture I : Clinical Assessment and Treatment of Covid-19 Infections**

**Norio Ohmagari, M.D., M.Sc., Ph.D.**  
(Director, Disease Control and Prevention Center, National Center for Global Health and Medicine)  
**Univ.-Prof. Dr. med. Oliver Witzke**  
(Director of Department of Infectious Diseases /  
Director of the West German Center for Infectiology (WZI) /  
Essen University Hospital, University of Duisburg-Essen)

### **Lecture II: Issues and Reflections on the Prevention of Covid-19 Infections**

**Koji Wada, MD MSc PhD**  
(Professor, Department of Public Health, Faculty of Medicine, International University of Health and Welfare)  
**Univ.-Prof.Dr. med. Jörg J. Vehreschild**  
(University Hospital Frankfurt, Center for Internal Medicine, Attending Physician /  
University Hospital of Cologne, Dept. I for Internal Medicine, Research Group /  
Leader ("Cohorts in Infection Research") / German Center for Infection Research (DZIF), Speaker AI/IT / Fellow of the European Confederation of Medical Mycology (FECMM) )

### **Discourse: The Impact of Covid-19 Infections on the Japanese and German Economies**

**Dr. Martin Schulz** (Chief Policy Economist, Fujitsu Ltd.)  
Closing remarks: **Dr. Martin Pohl**  
(Counsellor, Labor and Health Affairs, Embassy of the Federal Republic of Germany Tokyo)  
**Kenichi Ishibashi, MD, PhD** (Chairman, Board of Directors, IMSJ)



# INTERNATIONAL MEDICAL NEWS

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### Since 1925

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## Opening Remarks

Masakazu Tsuzuki, MD, PhD  
President, IMSJ

The theme of this Congress is "COVID-19 -- Responses in Japan and Germany".

Infectious diseases caused by bacteria and viruses etc. were once thought to be a thing of the past; however, today the significance of COVID-19 infections has become an issue. It can be said that this is an urgent issue for both Japanese and German medicine.

It is to our benefit that today we can listen to lectures from Japanese and German professional experts about the basic concept of COVID-19 infections, including clinical assessment, actual treatment, epidemic prevention issues and points of reflection, mainly from the medical and therapeutic aspects. After that, as a discourse, Dr. Martin Schulz from Fujitsu will explain the impact that COVID-19 has had on the Japanese and German economies. We believe that they can provide us, the members of the International Medical Society of Japan, with very important information.

## Congratulatory message

Toshio Nakagawa, M.D., Ph.D.  
President  
Japan Medical Association

On behalf of the Japan Medical Association, JMA, I would like to congratulate the opening of the 60th International Congress on Therapy and make a few remarks.

These days, COVID-19 is on the rage all over the world. And yet, despite Japan being the most aging population in the world, we have been able to keep the numbers of patients and deaths significantly lower than those in Europe or the United States.

I believe the reason behind is our Universal Health Coverage. We Japanese have carefully protected and nurtured our UHC as a culture. As a result, the Social Health Insurance System of Japan is rated highly as being most equal and fair in the world.

However, with the declining birthrate and increased

aging of the population, the UHC in Japan is facing a major challenge in ensuring its sustainability. The JMA is trying to protect the UHC while maintaining the scope of benefits in every aspect, for example, by encouraging better ways to seek medical care and introducing technology that enhances quality, safety, and productivity in medicine.

Prime Minister Suga, who started his cabinet on September 16, stated "Self-help, mutual help, and public help and "kizuna" (bonds) are the vision of society I aspire for".

The UHC system, on which the social security of this country is founded upon, indeed consists of self-help, mutual help, and public help. The JMA has and will continue to work to firmly preserve our UHC while balancing these three.

The JMA shares information obtained through exchanges in the field of global health such as the World Medical Association, Confederation of Medical Associations in Asia and Oceania, the National Medical Associations, WHO Regional Office for the Western Pacific, and Japan External Trade Organization New York office. The JMA will continue working with National Medical Associations and healthcare professionals including physicians to fight against COVID-19.

COVID-19 will come to an end. But first, we need to bring it under control. To that end, the JMA will use all means to reach out to the government in order to prevent the breakdown of the healthcare delivery nation-wide.

Last but not least, I would like to express my sincere wishes for the success of this congress, for continuing growth of the International Medical Society of Japan, and for the good health of all attendees.

Thank you.

## Congratulatory message

Ina Lepel  
Ambassador

Embassy of the Federal Republic of Germany Tokyo

Dear managing director Dr. Ito,  
dear president Dr. Nakagawa,  
dear guests of honor,  
Ladies and gentlemen,

It is my great pleasure to open today's event in the Chancellery of the German Embassy in Tokyo. The International Medical Society of Japan was founded 95 years ago in 1925, by the grandfather of the present chairman of the Society, Dr. Choei Ishibashi, who was its president from 1934 to 1981. Since the day of its foundation, the Society's symposia have played a central role in its work: Japanese medical practitioners are to deal with the latest knowledge. I have been very impressed to learn that the Society has organized almost 450 events, and the Society's journal "International Medical News" appeared in the 500th issue this year in March.

And another thing was important to Dr. Choei Ishibashi: the connection to Germany. He said of himself: "Ishibashi means 'stone bridge'. And my bridge is an integral part of the people of both countries". This tradition is continued in the third generation by his grandson Dr. Kenichi Ishibashi.

Once a year the society organizes a "Congress on Therapy". We are pleased and honored that the International Medical Society of Japan is holding its 60th Congress today at the German Embassy in Tokyo. A very warm welcome!

When the first planning for this event began a year ago, we thought from the very beginning about adding speakers from Germany via the Internet. This planning proved to be far-sighted: what a year ago was still an exception and for some people had a rather "exotic" character is now the rule: symposia entirely via the web or in hybrid form, with speakers from all over the world. We are delighted that the "German Center for Research and Innovation" is supporting this event and making this elaborate technology possible. NRW Global Business has

contributed much to this evening with its know-how - both German speakers come from this federal state.

The world has changed a lot this year. The change was triggered neither by politics nor by business, but by a virus. This underlines how important medicine is not only for the individual, but also for the community around the world. No state, no economy, can escape this development. For diplomacy, this was a challenge of a kind never seen before in this generation.

In 2017, the health ministers met for the first time under the German G-20 Presidency and adopted the Berlin Declaration: "Together Today for a Healthy Tomorrow". In 2019, the finance and health ministers met for the first time for a joint meeting on the fringes of the Osaka Summit. And at the G-20 Health Ministers' meeting in Okayama, the Japanese Presidency let the ministers themselves go through a one-hour case study that anticipated much of what became reality a year later: Exchange of information, assistance with medical supplies, coordinated travel restrictions. That shows that Japan and Germany have been far-sighted on the one hand, and that there is room for even closer cooperation on the other.

So it stands to reason that in times dominated by a virus, it is also the focus of this evening's discussion at the German Embassy in Tokyo. This is in the express hope that the event will help to promote German-Japanese professional exchange. But also to honor and consolidate the linkage between the International Medical Society and Germany that goes back almost one hundred years.

I am very much looking forward to the interesting speakers from Japan and Germany and wish the event every success.

## Grußbotschaft

Jürgen Kessing  
Oberbürgermeister der Stadt  
Bietigheim-Bissingen



## Grußwort für Internationale Medizinische Gesellschaft Japans

Sehr geehrte Damen und Herren, dem 60. Internationalen Therapiekongress der Internationalen Medizinischen Gesellschaft Japans sende ich im Namen der Stadt Bietigheim-Bissingen, ihrer Bürgerschaft wie auch persönlich die besten Grüße. Es ist mir eine besondere Ehre, Ihnen zu der 95-jährigen Gründung der Internationalen Medizinischen Gesellschaft Japans dieses Grußwort zukommen zu lassen.

Das Thema „Coronavirus-Infektionskrankheit: Japan und deutsche Maßnahmen im Vergleich“, das für dieses Jahr ausgewählt wurde, ist besonders relevant und sorgt bestimmt für einen reichhaltigen Erfahrungs- und Informationsaustausch. Ich bin mir sicher, dass die Vorträge einen entscheidenden Beitrag für die Zukunft leisten werden.

Seit 1962 sind wir unserer Partnerstadt in Japan, Kusatsu, freundschaftlich verbunden. Wir sind uns nach wir vor darin einig, dass wir die Begegnungen zwischen den Bürgern unserer Stadt fördern, der jungen Generation die Aufgabe der Völkerverständigung vermitteln und damit einen Beitrag für den Frieden in der Welt leisten können. Städtepartnerschaften leben davon, dass die Menschen beider Städte zu Freunden werden. Wir können also nichts Besseres tun, als es den Bürgern unserer Städte und insbesondere unseren jungen Bürgern auch weiterhin zu ermöglichen, in persönlichen Begegnungen viel voneinander zu erfahren.

Gute Beziehungen zwischen unseren Ländern, zwischen Japan und Deutschland, gibt es schon seit einigen Jahrhunderten. Während der Meiji-Zeit, von 1868 bis 1912, wurde der Wissensaustausch dann intensiviert. In dieser Zeit reiste auch Erwin von Baelz,

ein junger Mann aus Bietigheim, als Arzt nach Japan. 1876 übernahm er die Aufgabe, an der Universität von Tokio Medizin zu lehren. Doch er widmete sich weit mehr Aufgaben: er studierte die japanische Kultur, Geschichte und Gesellschaft, er würdigte traditionelle japanische Weisheiten ebenso wie die westlichen Erkenntnisse. Seine Aufgeschlossenheit, seine Unvoreingenommenheit gegenüber den Menschen jeder Gesellschaftsschicht hinterließ einen tiefen Eindruck.

Heute gibt es enge Kooperationen zwischen unseren Ländern, sowohl wissenschaftlichen Austausch wie auch auf der Ebene von Studenten und natürlich im wirtschaftlichen Bereich. Unser großer Sohn, Erwin von Baelz, hat uns gezeigt, welcher Fortschritt mit einem offenen Blick auf die Menschen und die Verhältnisse, in denen sie leben, erzielt werden kann. Wir können ähnliches erreichen, wenn wir weiterhin offen an die Dinge herangehen, wenn wir uns damit auseinandersetzen, wie der Alltag in anderen Ländern bewältigt wird. Gerade auch auf dem Gebiet der Medizin ist der Erfahrungsaustausch eine wichtige Methode zur Entwicklung der Wissenschaft.

In diesem Sinne wünsche ich der Internationalen Medizinischen Gesellschaft Japans weiterhin erfolgreiches Wirken und ein gutes Gelingen anlässlich ihres 95-jährigen Jubiläums. Die Stadt Bietigheim-Bissingen wird ihren Freunden in Japan stets eng verbunden bleiben.

Mit freundlichen Grüßen



Jürgen Kessing  
Oberbürgermeister

## Grußbotschaft



Dr. Reiner Austermann  
Bürgermeister der  
Alten Hansestadt Lemgo

Sehr geehrter Herr Dr. Ishibashi,  
sehr geehrte Damen und Herren der  
Internationalen Medizinischen Gesellschaft Japan,

im Namen von Rat und Verwaltung der Alten Hansestadt Lemgo übermittle ich der Internationalen Medizinischen Gesellschaft Japans unsere herzlichsten Grüße und wünsche der Jubiläumsveranstaltung einen guten und erfolgreichen Verlauf.

Das diesjährigen Thema ;

„Coronavirus-Infektionskrankheit: Japanische und deutsche Maßnahmen im Vergleich“, verspricht spannende Erkenntnisse und wertvolle Informationen, von denen die Menschen in unseren Ländern profitieren können.

Die Auswirkungen der Corona-Pandemie haben uns alle schwer getroffen. Die medizinischen, wirtschaftlichen und gesellschaftlichen Folgen sind dramatisch. Bis zur Verfügbarkeit eines Impfstoffs oder eines Medikamentes bedarf es aller Anstrengung die Fallzahlen niedrig zu halten.

In der Hoffnung auf ein baldiges Wiedersehen in der Alten Hansestadt Lemgo wünsche ich Ihnen alles Gute und vor allem Gesundheit.

Mit herzlichen Grüßen

Ihr



Dr. Reiner Austermann  
Bürgermeister der Alten Hansestadt Lemgo

## Grußbotschaft

Dr. Frank Mentrup  
Oberbürgermeister der  
Stadt Karlsruhe



### Grußbotschaft von Oberbürgermeister Dr. Frank Mentrup für den 60. Internationalen Therapiekongress der Internationalen Medizinischen Gesellschaft Japans

Der Internationalen Medizinischen Gesellschaft Japans übermittle ich zu Ihrem 60. Internationalen Therapiekongress im Namen der Stadt Karlsruhe, ihres Gemeinderats und ihrer Bürgerinnen und Bürger, aber auch ganz persönlich die besten Wünsche. Anlässlich der 95-jährigen Wiederkehr ihrer Gründung tagt die Internationale Medizinische Gesellschaft in diesem Jahr – Corona bedingt – nicht in der Fächerstadt, sondern in der Botschaft der Bundesrepublik in Tokyo.

Die intensiven Verbindungen mit der Stadt Karlsruhe freuen mich ebenso wie die engen Bande, die es zwischen der deutschen und der japanischen Medizin seit langem gibt. Dafür stehen namhafte Ärzte wie Dr. Erwin von Bälz und Dr. Engelbert Kämpfer. Der ehemalige Präsident der Internationalen Medizinischen Gesellschaft Japans, Professor Dr. Choei Ishibashi, hat sich, ebenso wie später sein Sohn Chosei und heute sein Enkel Dr. Kenichi Ishibashi, stets aktiv für die guten Beziehungen zwischen den Medizinerinnen und Medizinern Japans und denen der Fächerstadt eingesetzt. Ich wünsche mir daher sehr, dass diese

Tradition mit dem alljährlichen Therapiekongress in Karlsruhe im nächsten Jahr wieder fortgesetzt werden kann.

In Karlsruhe sind japanische Lebensart und Kultur in vielfacher Weise präsent. Dies ist vor allem das Verdienst der sehr engagierten Deutsch-Japanischen Gesellschaft in der Fächerstadt, die sich mit großem Erfolg für Verständnis und Freundschaft zwischen Deutschland und Japan, sowie für die Förderung kultureller und wissenschaftlicher Beziehungen einsetzt. Seit 1994 ist die Deutsch-Japanische Gesellschaft Patin des Japangartens im Karlsruher Zoologischen Stadtgarten, dessen Geschichte auf das Jahr 1914 zurückgeht, als ein Karlsruher Arzt eine Steinleuchte und verschiedene Samen aus Japan mitgebracht hatte. Mit seiner Pagode, seinem Steinlöwen, dem Shinto-Schrein und vor allem dem im Jahr 2018 neu erbauten Teehaus verströmt der Garten das Flair des - für uns - Exotischen. Der Gang durch das rote „Torii“ führt mit einem Schritt in eine andere Welt. Gleichzeitig ist der Japanische Garten für die Karlsruherinnen und Karlsruher – fast wie selbstverständlich – ein Stück Ur-Karlsruhe. Dieser unaufgeregte Umgang mit dem Anderen, diese harmonische Integration des vermeintlich Fremden spiegeln die weltoffene Atmosphäre wider und die Neugier auf Neues, die unsere Stadt seit jeher auszeichnet.

Ich wünsche der Internationalen Medizinischen Gesellschaft Japans für die Zukunft viel Erfolg und dem 60. Internationalen Therapiekongress einen erfolgreichen Verlauf und gute Ergebnisse.

Dr. Frank Mentrup  
Oberbürgermeister

## Congratulatory Telegram

Kenro Hori MD  
President, Japan Dentist Association

Please accept our sincere congratulations on the success of the 60th International Congress on Therapy.

We truly wish further development of your Society and the health of your members.

Nobuo Yamamoto MD  
President, Japan Pharmaceutical Association

Congratulations on the 95th anniversary of the International Medical Society of Japan. Your association has contributed to the improvement of medical care in Japan and the development of international medical exchanges through the holding of lectures. I would like to express my respect. We would like to congratulate you on the success of holding today's Congress on Therapy and pray for the further development of your association.

## Introductory Message from the Chair

Georg K. Löer  
Advisory Board Member, IMSJ

The theme of the 60th International Congress on Therapy is "COVID-19 -- Responses in Japan and Germany". The crisis of COVID-19 has shaken the world, and many countries are suffering from various problems including sharp rises in infection rates, rises in mortality rates, and negative effects on health care systems, people's lives and economic implications. Germany and Japan can learn a lot from each other's experiences dealing with the crisis of COVID-19.

Regarding the Lecture I Theme "Clinical Assessment and Treatment of COVID-19 Infections", Dr. Norio Ohmagari, Director of the Disease Control and Prevention Center for the National Center for Global Health and Medicine will deliver a lecture entitled "The clinical response of COVID-19 in Japan". From Germany, the Director of the Department of Infectious Diseases at the University of Duisburg-

Essen and also Director of the West German Center for Infectiology (WZI), Dr. Oliver Witzke (Univ.-Prof. Dr. med.) will deliver a lecture entitled "Clinical Management of COVID-19 Infections in Germany".

For the Lecture II Theme, "Issues and Reflections on the Prevention of COVID-19 Infections", the Professor of the Department of Public Health's Faculty of Medicine at the International University of Health and Welfare, Dr. Koji Wada (MD MSc PhD) will deliver a lecture entitled "The response to COVID-19 in Japan -- Quarantine on the Diamond Princess and preventing clusters". From Germany, the Professor of University Hospital Frankfurt, University Hospital of Cologne, the German Center for Infection Research (DZIF), Dr. Jörg J. Vehreschild (Univ.-Prof. Dr. med.) will deliver a lecture entitled "Fostering COVID-19 Science: Insights into German and European Research Networks".

In the question and answer session, we would like to have a deep discussion with the participants.

## Lectures on Medicine

### Lecture I

#### Clinical Assessment and Treatment of Covid-19 Infections

#### Clinical responses to COVID-19 in Japan

Norio Ohmagari, M.D., M.Sc., Ph.D.  
Director

Disease Control and Prevention Center  
National Center for Global Health and Medicine

#### 1.Epidemiology of COVID-19 in Japan

As of August 2020, the number of COVID-19 cases in Japan, by age group, peaked in the 20-30 age group. On the other hand, the number of severe cases and deaths peaked in the 70-80 age range. In addition to older age, a higher fatality rate has been reported in the group of patients with underlying medical conditions such as hypertension, cardiovascular disease, diabetes mellitus, and chronic obstructive pulmonary disease.

## 2. Clinical features of COVID-19

The common cold peaks on the third to fourth day after the onset of symptoms and then gradually becomes more alert. In COVID-19, however, symptoms may not improve past 3-4 days after the onset of symptoms; in most cases, the sore throat is mildly feverish and mildly cold for about a week before gradually getting better. In some patients, however, cough and high fever begin to develop around one week after the onset of the disease, causing pneumonia. Most patients who develop pneumonia remain in good physical condition and do not need oxygen, and their symptoms are mild enough to allow them to carry on with their daily lives. However, some patients with pneumonia become very ill and require oxygen. A small percentage of these patients (about 5% of the patients with a confirmed diagnosis in China) may develop progressive respiratory failure and require ventilations or membrane lung replacement therapy.

## 3. Diagnosis of COVID-19

Tests, such as RT-PCR and LAMP, are commonly used for diagnosis. Therefore, in cases with a high probability of pre-testing, repeated testing is recommended if the PCR test gives a negative result. Saliva PCR testing was also considered as a measure to prevent infection. The results of the PCR test showed a good agreement between the nasopharyngeal swab and saliva within 9 days of the onset of symptoms. As a result, the saliva PCR test is now available in Japan for patients with symptoms within 9 days of onset. The antigen test has been reimbursed in Japan. The antigen test is rapid and results can be obtained in about 30 minutes.

## 4. Treatment of COVID-19

An international study led by the U.S. National Institutes of Health (NIA) has shown that remdesivir reduces the time required for clinical improvement compared to placebo. COVID-19 may cause dysregulation of the epidemic system and abnormal release of cytokines, resulting in the development of systemic cytotoxicity. Treatment with immunomodulators has been used to intervene in this process. A Randomised Evaluation of COVid-19 thERapY (RECOVERY) study was conducted for dexamethasone and showed a reduction in the lethality rate .

## 5. Infection prevention measures for COVID-19

According to Nishiura and colleagues, trends in the incidence of the disease in Japan revealed that 80% of infected people's medications did not transmit the disease to others, but in about 20% of cases, infected people in inadequately ventilated environments produced many secondary infections . An analysis of 3,184 cases of coronavirus disease in Japan by Furuse et al. identified 61 case clusters in medical and nursing homes, restaurants and bars, workplaces, and musical events, and showed that most of the patients were between 20 and 39 years of age and were either pre-onset or asymptomatic at the time of virus infection. A number of COVID-19 clusters were also noted to be associated with heavy breathing in close quarters environments, such as singing at karaoke parties, cheering at clubs, bar conversations, and exercise in gymnasiums.

## 6. Response in medical institutions

As a medical institution, what you can do to prevent infections is to make patients wear surgical masks when they come into contact with patients who have symptoms or findings of acute respiratory infection, such as fever, sore throat, nasal discharge, or cough, etc. In addition, those who are in charge of treatment and care should also wear surgical masks. In addition, those responsible for treatment and care should also wear a surgical mask and strive for hand hygiene. This will significantly reduce the risk of secondary infection for healthcare workers, even if the patient is a COVID-19 patient.

## Clinical Management of COVID-19 Infections in Germany

Univ.-Prof. Dr. med. Oliver Witzke  
Director of Department of Infectious Diseases  
Director of the West German Center for Infectiology (WZI)  
Essen University Hospital, University of Duisburg-Essen

The COVID-19 pandemic caused by the SARS-COV 2 virus has reached Germany in the beginning of 2020 with a first wave of infections in early spring and a larger, still ongoing wave in autumn and winter. Compared to other middle European countries, the pandemic has long taken a favorable course in Germany without serious limitations in the

health care system and a much lower percentage of fatal outcomes as compared to the neighboring countries.

The University Medicine Essen (UME) is the largest Medical Institution in the Ruhr area of Germany, the region most densely populated throughout the country. Different from other medical universities in Germany, the UME has defined COVID-19 as a central problem of university medical care. The approach of the UME was to combine medical care for a great number of patients and intense scientific work up and also to include COVID-19 management into the academic teaching activities. This has been made possible by the already previously well established structures of infectious disease medicine with a preexisting independent Department of Infectious Diseases and an Institute of Virology. Furthermore, UME has led a local COVID-19 Task Force coordinating the flow of patients in cooperation with the local city hospitals and the local public health authorities. Broken down to the city of Essen with about 650,000 inhabitants it has become clear, that the disease is following a socio-economic path with relatively higher numbers of infections in the north of the city, an area with a probably less prosperous and educated population. The limitation of elective procedures throughout the health system has enabled unrestricted and qualified hospital care of all patients with COVID-19 associated disease as well as other medical emergencies. Apart from that, oncologic treatments and transplantations activities have been performed in the full range throughout the pandemic.

As one of the largest transplant centres in Germany, we have put a strong focus on COVID-19 associated problems in patients after solid organ and stem cell transplantation. Patients after transplantation are known to have a greatly increased risk for a complicated course of COVID-19 infection. Apart from using standard therapy with the antiviral remdesivir for patients with incipient respiratory failure and giving prophylactic anticoagulation, we put great effort in using convalescent plasmas in this patient cohort with a compromised immune system. We made the clinical observation, that convalescent plasma therapy may be effective mitigating the gastrointestinal symptoms of viral

infection that is typical in patients with organ transplantation. As described by others, we found the measure effective if used early in the course of the disease and our data suggest, that convalescent plasmas may help to establish an autonomous immune reaction towards the virus in this patient cohort.

Since the beginning of 2021 batches of the mRNA based vaccines have been available that are distributed by the local health authorities according to a scheme developed by the government of the federal state of North-Rhine-Westphalia. This scheme gives a prioritisation to inhabitants with the highest risk for a fatal course: patients being older than 80 years living in nursing homes. Vaccination efforts in Germany are to date limited by the very low numbers of vaccine units. By the end of January 2021 only about 2% of the population has been vaccinated; a number that is much too low to stop the lock-down of public life activities that is in place since the beginning of December 2020. In addition, vaccination of hospital staff is also very limited and has only been performed in staff working in the central COVID-19 units. As in other hospitals, UME has experienced intense discussions about the need of continuous COVID-19 screening of all unvaccinated hospital staff. The principal UME COVID-19 steering committee that has been established in the beginning of 2020 has evaluated this issue several times and decided that screening-by-cause is used as the central strategy at our institution. Looking back, this decision has been a favorable one. This is reflected by the decision of other institutions that had used universal screening of staff and then abandoned this approach due to inefficacy and waste of resources.

We hope that intensification of vaccine efforts will lead to herd immunity in spring or summer of 2021 stopping the COVID-19 pandemic in Germany and world-wide.

## Lecture II

### Issues and Reflections on the Prevention of Covid-19 Infections

#### Respond to COVID-19 in Japan ~ quarantine for Diamond Princess and preventing cluster~

Koji Wada, MD MSc PhD  
Professor

Department of Public Health, Faculty of Medicine  
International University of Health and Welfare

The quarantine of the Diamond Princess cruise ship was the first large-scale novel coronavirus response in Japan. The quarantine had three missions: 1. Stop further spread of the virus in the ship, 2. Prevent transmission to responders and 3. Return passengers home safely within 14 days after the start of quarantine. These missions were successfully carried out for the most part. However, the biggest lesson we learned was the importance of informing the public about what was happening on the cruise ship. Information was not released strategically because some considered it unnecessary to disclose details of the quarantine, a duty of the government. PCR tests were performed for all passengers to prepare for disembarking, and the number of positive test results were announced daily. Unfortunately, this gave an impression that the infection was still spreading on the ship even after the quarantine initiated. This prompted a concerned physician to board the ship and criticize the situation on YouTube and other media, when in fact, final arrangements for disembarkation were already underway at that point. As a responder on the Diamond Princess, it is extremely disappointing that our response was reported as a failure throughout the world.

In Japan, the Cluster Response Team was set up, and COVID-19 cluster locations were analyzed. It was on March 9, 2020 that the Expert Committee first indicated that there are three conditions that were common to all settings where COVID-19 cases had been identified so far: 1. Poorly-ventilated, confined spaces 2. Crowd of people close together and 3. Close-range conversations. This speculation

arose from details about where the clusters occurred, such as on yakatabunes (Japanese houseboats), in live music venues and at social gatherings. It is said that a member of the Prime Minister's Office cleverly invented the phrase "3Cs" based on the above expert opinion.

The concept of the 3Cs was shaped from data on clusters that were painstakingly collected by the local health departments. In particular, they conducted thorough investigations on "where" the transmissions took place—which apparently isn't done in many countries. In addition, the Cluster Response Team included researchers, which enabled Ministry of Health, Labour, and Welfare to analyze data from throughout the nation and issue an early warning. Citizens and business owners also cooperated tremendously by avoiding the 3Cs.

The "3Cs" (Three Cs = closed spaces, crowded places and close-contact settings) is now known throughout the world. Recently, it has been referenced by the World Health Organization and in the United Kingdom.

It is important to add that of the 3Cs, close-contact settings where close-range conversations take place is considered especially high-risk. In particular, places where people exercise and consume alcohol (which we collectively refer to as "3Cs Plus") pose even greater risks. Interventions focusing on these settings will be effective.

Some ask if avoiding just 1C or 2Cs would be acceptable. Reducing the Cs is encouraged, but worrying excessively is counter-effective, especially as the world shifts to a new lifestyle.

So far, Japan has been able to keep COVID-19 relatively under control. However, adequate infection control is essential in the coming winter months when respiratory infections tend to strike. Not only the government and the local authorities, but communities and individual citizens must be actively involved and take leadership. I believe that the following two mitigation measures must be firmly established.

#### **1. Creating a society that can contain the spread of infection even when infected individuals are present**

People should stay home when ill and be allowed to refrain from going to work/school.

Avoiding the 3Cs as much as possible should

become the norm. Systems that enable early detection and containment of infection are needed, and communities must be trained to remain calm when responding to outbreaks. These experiences should be shared with regional cities that have not yet had large-scale outbreaks.

## **2. Continuing comprehensive infection prevention in the elderly and high-risk groups**

The elderly, high-risk groups and their families have remained extremely vigilant during the past six months, which kept COVID-19 fatalities low. Mitigation measures must continue in long-term care settings; however, restrictions that are currently placed on family visitations must be addressed.

## **Fostering COVID-19 Science: Insights into German and European Research Networks**

Univ.-Prof. Dr. med. Jörg J. Vehreschild

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University Hospital of Cologne, Dept. I for Internal Medicine, Research Group Leader

("Cohorts in Infection Research")

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Tonight's talk focuses on the German and European research networks that have come into existence when the COVID-19 crisis started. First there was regulatory divergence, so every country developed their own measures on how to deal with the situation, however, there was some convergence caused by emulation as the European crisis first started in Southern Europe and so the other countries could watch events there, see what they were doing, and what works and what not, adapting without really having a coordinated effort. Then, in Phase 2, things progressed from regulatory emulation to coordination.

There has been a unique number of funding initiatives by the European Union, putting a lot of effort into fostering science around COVID-19,

including drug and vaccine development but also other ways of collaborating and sharing data and information. Facilitated by funding, people's experience, availability of technology, necessity of staying at home, and working from the home office, Covid-19 has had a major impact on collaboration, an experience shared across many different research areas. Also, very early after the pandemic started, there were already hundreds of publications and pre-prints on COVID-19.

As one example of new ways to collaborate in a swarm, Europe and Germany saw several large hackathons with tens of thousands of people coming together online to tackle specific issues and to develop plans and ideas on how to deal with the situation. The flipside of the pandemic is that we have a so-called infodemic. As scientists and physicians, we are no longer able to read everything that is published on the subject anymore. Overwhelmed by the availability of information, this causes a growing translational gap between science and clinical practice as clinicians get too busy treating patients.

The public also does not know who to trust as everyone is talking about Covid-19. How would they know who really is an expert? There is probably even a negative correlation: the more you are in dealing with pandemic and thus the more experienced you are with Covid-19, the less time you have to talk about it, so that the best experts may have less exposure to the public. And even if people mean well and bring on all their altruism, there is also a sort of performance anxiety. As a group leader, you must always look for more research funding to you're your group going, and in a situation like this, you don't know if your research will get less funding if you don't deal with Covid-19, since resources are limited and may get relocated. So many scientists do Covid-19 now, and not every one of them should.

Our first response to bring the collective clinical experience together was the "Longitudinal European Open Study on SARS-CoV-2" (LEOSS). We started plans for the survey together with the European Society for Clinical Microbiology and Infectious Diseases, the German Society for

Infectious Diseases and the German Center for Infection research in February, when the first patients arrived in Germany. The first patient was included into this registry in March. At the time of this talk, there are 5,000 cases documented, 4,500 of them complete. More than 200 sites across several countries, mostly European and German, have registered and perform an anonymous documentation of Covid-19 cases. As we started very early, we did not have any research funding at that moment, and we knew that a lot of activities were coming up.

The "O" in LEOSS, the open part, aims to achieve something better and special, to bring people together. We have real-time publication of data with online statistics and weekly online graphics. A dashboard allows people to work with the data, use it to plan studies, play with several parameters and select specific patient groups. They see how patients progress from infection through different phases until critical phase or death or recovery. As a community project LEOSS, has an open governance structure. Everyone, everything can be voted on, everyone can be replaced, even myself as the founder of LEOSS.

As another example, we have liaison service for medical and research societies. For this, we send specific e-mails regarding sub-populations to medical and research societies who really want to be on the edge of information, e.g. in the case of solid organ transplant patients. They can have a current update on how people with solid organ transplantations are doing in LEOSS. We are still recruiting for at least another half year, and although there are larger studies in preparation in Germany and internationally, we have a very good structure to perform analyses with more than 80 different projects requesting the LEOSS dataset.

In LEOSS, people enter data in an electronic data capture (EDC) online which goes into a storage and is then processed by our team of data scientists. Scientists can then do their analysis like in any other study. This worked very well for some time. However, more and more registries and more and more cohort studies came up: local studies, regional studies, national studies, international studies. Staff

soon got very busy filling all these different case report forms, different formats and getting together all the data that is required for the science. In discussions with members of the German Medical Informatics Initiative, we came up with some ideas how to harmonize data entry.

The challenge was to prefill the electronic case report forms using the hospital information systems in order to reduce the burden for the documentation staff. LEOSS handles about 2,300 individual data items, most of them not using any international coding. Speed was of essence, and coding and looking for the correct semantics is very intense and long work. What is generally available in the data integration centers or IT systems of hospitals in Germany are the so-called paragraph 21 data reports. That is obligatory data on comorbidities and specific interventions that have been performed.

Laboratory data with the international LOINC encoding standard and, from hospital to hospital, different specialties are available. Five hospitals were asked: "Would you be able to electronically deliver this data or not?". The result was, about half of the data items were unavailable electronically, but some are available, e.g. the month of the first test and the sample location. However, in Germany clinicians often use free text like "I couldn't get a nose swab because the patient didn't cooperate, so I took a throat swab", which is difficult to tackle in a data integration process.

A typical matter of discussion when dealing with real-world data are diagnoses. All five hospitals documented comorbidities based on the ICD 10. But in practice, ICD-coded diagnoses from electronic health records may deviate substantially from the way physicians define diagnoses and key disease facts. As an example, an electronic patient record from the Frankfurt hospital information system of a patient who received an allogeneic stem cell transplantation showed five different diagnoses coded for a specific patient stay. I compared this to the doctor's letter from the same patient stay, which contains the information that he felt clinically important for his colleagues. Many diagnoses were completely missing. Others were lumped together

in catch-all ICD-codes, e.g. myelodysplastic syndrome, a spectrum of diseases varying from very harmless conditions with a life expectancy of ten years or more up to very severe cases resembling acute leukemia with a life expectancy of six months or less - all the same in ICD-10.

As a result of our research, we had to conclude that, even in 2020, in Germany less than 20% of the relevant data for a COVID-19 with sufficient quality and validity for clinical epidemiology is available in an electronic form and fully interoperable. Even if we continued to develop our interfaces and improve the semantics, it would still be around 50% of what we have in our current electronic health records. So for the next 5 to 10 years a good cohort study in Germany still requires a substantial amount of manual documentation and prospective observation. And this is where a new study may help achieve further progress.

Our National Pandemic Cohort Network (NAPKON, <https://napkon.de>) tackles the pandemic with a prospective interventional cohort, looking at different severities: asymptomatic, symptomatic, severely ill and critically ill, and different health sectors, from local health authorities up to university hospitals and tries to capture patients of all conditions or ethnicities and social groups. A population-based cohort with mostly non-severe cases, an intersectoral platform looking at patients from private practices to the ICU, and a high-resolution, deep phenotyping cohort with 800 patients who undergo examination with multiple MRIs, ECGs, EMGs, and EEGs.

NAPKON will collect a harmonized data set based on a German corona consensus (GECCO) data set, the common denominator of all larger data projects on Covid-19 in Germany, currently being discussed in the EU as one of the backbones for data sharing. Then we have extension modules for different specialties, a comprehensive harmonized blood sampling panel and specimen for virus cultivation identification that will be collected across all the cohorts. GECCO defines around 250 data items with international semantic standards; it is based on HL7 FHIR and SNOMED.

Finally, we are very happy to be part of a large European study called "Orchestra". Orchestra is

sponsored by the European Union and Horizon 2020. It will look at the European and at the global level on different populations with children, elderly, pregnant women, special high risk and high interest groups, healthcare workers, the general population and then an extra Covid cohort. While this is in part a fusion of different national and regional cohorts from Europe, India, South America and Africa, we will also have some prospective elements in Orchestra where patients are explicitly recruited for Orchestra.

The core of the Orchestra initiative is to build a central European repository where data can be ingested via several routes with non-sensitive data being directly copied into an electronic data capture system within Orchestra. The more sensitive and genomic data, and if the patient consent does not go far enough, will be kept in regional and national hubs that will provide a central analysis. The elaborated data will go into the Orchestra repository so that no identifying information is passed on but that all the relevant analysis can be performed.

The following are the key messages of the lecture:

- Digitization has changed our view on how to deal with a global crisis in the medical field with detailed real time data available but at the same having to deal with the infodemic.
- We are seeing new ways of collaboration, more efficient means of communication and have new opportunities to really work together on a global scale.
- Globally, but specifically in Europe, open standards, open governance and fast open use and access tools have become important and a priority.
- We need infrastructures and legal clearance for global interactions, especially in the field of privacy and data safety.
- We must see how we sustain the powerful structures and networks that we have now created in a post-vaccination era, where the interest of funding agencies etc. may fade.

I would be very happy to discuss this with you, to maybe look at ways of collaborating and I thank you for your attention and again for the invitation.

## Introduction of speaker of discourse

Georg K. Löer  
Advisory Board Member, IMSJ

Dr. Martin Schulz will deliver a lecture entitled "The Impact of COVID-19 Infections on the Japanese and German Economies". Dr. Schultz received a PhD in economics from the Free University of Berlin and has held various positions overseas and in Japan, including at the University of Tokyo, the Institute for Monetary and Economic Studies and the Bank of Japan, and is currently serving as the Chief Policy Economist at Fujitsu Limited.

## Discourse The Impact of Covid-19 Infections on the Japanese and German Economies

Dr. Martin SCHULZ  
Chief Policy Economist  
Fujitsu Ltd.

The economic impact of the Covid-19 pandemic has been stronger than any crisis during peacetime. So far, however, the huge disruption has been mitigated in Japan and Germany by equally huge government support packages of more than 30% GDP. Both countries could also rely on strong and accessible healthcare systems, which supported their social resilience. Japan additionally gained from high levels of public awareness of pandemic risks and disciplined responses to social distancing requirements. Germany limited risks with strong policy advisory of medical research institutions, a timely (now repeated) lockdown and the wide availability of intensive care units.

While economic losses during 2020 will still add up to around -5% of GDP in Japan and Germany, no mass unemployment or bankruptcies have occurred. They remain unlikely until a "new normal" with effective Covid-19 management, including the availability of better treatments and first vaccines, can be established.

Unfortunately, however, we still need to be prepared

for the additional and difficult longer-term consequences of the Covid-19 pandemic. Initially, a strong rebound of 3% economic growth in Japan and in Germany can be expected in 2021. The spike in export and consumer demand is unlikely to last when future growth prospects are being considered, however. By 2025, a gap of -2% GDP to earlier growth trends will likely remain in both countries. In fact, the economic costs of the pandemic will most likely never be fully recovered in low-growth Japan. Industries that have been hit the hardest, especially travel and transport, will take years to recover. Public administration and health, the biggest economic sector by size, will face some of the strongest and most conflicting challenges in the following "new normal." During the crisis, the importance of proper healthcare has been proven, and support for faster responses, more resilience and lowering social risks will likely continue. But healthcare provider are also facing huge liabilities. Cost-overhangs from delayed (or canceled) treatments during the pandemic have been built up, costs for "safer" new normal operations will increase, challenges from non-communicable diseases will continue, and depleted government finances will haunt payer relations. Even more than other sectors, healthcare will therefore depend on keeping costs as low as possible while adding value by improving operations.

The solution to many of these problems is to accelerate digitalization and to focus on agile low-cost innovation – as other industries have done before. By improving operations through better communication and leveraging treatment skills of nurses with individualized information and AI analytics, productivity could improve tremendously. By building closely integrated ecosystems of specialized technology provider and healthcare operators, innovation could accelerate. So far, however, innovation has always been moving slowly in healthcare, especially after major crises. Digital innovation requires government approval and licensing as much as any medical technology. The trial-and-error process, which is at the heart of "agile" digital innovation in other services, is hardly acceptable in medical treatments and operations. Sophisticated digital "new normal" healthcare solutions, such as Fujitsu's "Healthcare Personal

Service Platform" therefore took a long time to develop and to acquire licensing of three ministries. They currently take time to become widely adopted, although the advantages of integrating individuals' healthcare data throughout lifecycles, safely providing individual data to a wide variety of hospitals, doctors, pharmacies, and service provider have long been proven. Since risks certainly remain, and benefits of cross-industry service innovation are hard to prove before actual implementation, such comprehensive digital transformation requires a significant leap towards innovation.

So far, only "digital governments," which have acquired the necessary skills and experience by digitalizing their own operations and customers journeys, have been up to such innovation challenges. In some countries, such as Denmark, digital communication, outsourcing, healthcare as a service, national digital IDs, and centrally stored information have all been realized. Stepwise reforms and implementation took about 20 years, however. Hopefully, an unexpected consequence of the Covid-19 pandemic will be, that doctors in Japan and Germany will take the lead in a much faster implementation of now readily available digital services. Building new cross-industry eco-system for a more innovative "new normal" could improve healthcare far beyond Covid-19 requirements.

## Closing Remarks

**Dr. Martin Pohl**  
**Counsellor, Labor and Health Affairs**  
**Embassy of the Federal Republic of Germany Tokyo**

My role today in this evening is saying thank you, thank you to many people who are sitting here and who had different functions.

First of all I would like to say thank you to the 'International Medical Society of Japan' and in particular to its managing director Dr. Kenichi Ishibashi. Ken, thank you very much for trusting, also trusting me as a person so that we could do this event today in the Embassy.

Second I would like to thank the 'German Center for Research and Innovation' (DWIH) who made it possible that we have his technology, these very sophisticated things to organize the event here during Corona-times and to transmit it into the entire world by the World Wide Web.

Then I would like to thank 'NRW Trade and Invest Agency' and its representative in Japan, Mr. Georg Loeer, who strongly supported this event also as person: we had many discussions to bring it on track and part of the people who presented today came from Northrhine-Westfalia.

This was an event which had visible persons: five very distinguished speakers. Three of them are physically here and two of them are in Germany – which kind of impressive cooperation: having lecturers from 10.000 km away coming virtually together within Japan in this room, the chancellery of the German Embassy in Tokyo.

Then there are many people here who are not visible. First of all I would like to start with the interpreters. Well, we could hear them, but we could not see them. Thank you very much for their contribution. Without interpretation a communication between Germany and Japan is not possible. I really appreciate for your kind help. And we have many people here who prepared, who built up, who did action related to very

surprising technology. We never have had in this room such outstanding equipment, and I am acquainted to this Embassy since a very long time. Thank you very much for this doing that, it was and is very impressive.

So, in total we have had about 20 people behind the scene and I really appreciate to all of you.

I would like to close with some words which were already mentioned at the beginning this evening by my boss, Ambassador Lepel. She talked about what is called in German 'Steinbruecke' or in Japanese 'Ishibashi'. This event was another event for the Japanese-German academic exchange, actually, not only for the scientific exchange. Also scientists are human, and as such human cooperation depends very much on human feelings, or simply 'liking each other' - it is so simple. And in that sense it is a very nice word: 'Steinbruecke - Ishibashi'.

This is also one of the first events within the '160 years celebration of friendship between Germany and Japan'. I am happy we have this chance together here.

And last but not least I am very much looking forward to the further cooperation between the 'International Medical Society of Japan' and the 'German Embassy'. Thank you very much indeed - domo arigatou gozaimasu.

**Kenichi Ishibashi, MD, PhD**  
Chairman, Board of Directors, IMSJ

We appreciate your participating in the 60th Congress, which is the 95th anniversary of our foundation. We would like to thank Dr. Witzke and Dr. Vehreschild from Germany along with Dr. Omagari and Dr. Wada from Japan for their lectures on COVID-19 infections, and Dr. Schultz for his discourse. The theme for this Congress was decided in February when COVID-19 started to spread on the Diamond Princess. At that time, we were wondering if the epidemic would end by November, when today's Congress on Therapy is held, and we thought that the lecture would be about a past infectious disease and not a timely topic. I don't

think anyone could have predicted that it would become so wide-spread all over the world and that Japan would be in the middle of the third wave of infections. We hope that today's lectures will be useful for medical treatment and in your daily-life from tomorrow.

We are grateful for the cooperation of so many people here at this Congress. We would like to thank Mr. Mahnke, who is a cosponsor and Director of the German Center for Research and Innovation Tokyo, Mr. Georg K. L er, who is an Advisory Board Member at IMSJ and the Director of NRW.Global Business Japan and served as a Chair today, H.E. Ms. Ina Lepel, Ambassador at the Embassy of the Federal Republic of Germany in Tokyo, and Dr. Martin Pohl for providing this opportunity. We would also like to thank MIND Co. LTD for providing us with back-up support and Simulingual, Inc. for providing interpreters.

The 447th regular meeting will be held on the WEB on January 28th next year as usual. The theme is "The history and future predictions of General Medicine in Japan" There will also be a discourse on the ideas concerning "Management strategies for post COVID-19 times". Everybody who participated today will receive the information for the next meeting, and we would be happy if you can join again. Also, if you become a member, you can watch the lectures on demand, so please consider registering.

Thank you for staying with us until the end. This concludes the 60th Congress on Therapy, which is the 95th anniversary of our foundation.