International Seminar on

Rehabilitation during COVID-19

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National Rehabilitation Center for Persons with Disabilities
Japan

WHO Collaborating Centre for Disability Prevention and Rehabilitation

Program

Time & Date 14：30～17：00 (JST), February 23, 2021
Conducted via Zoom

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Yoshiko Tobimatsu, President, National Rehabilitation Center for Persons with Disabilities, JAPAN (NRCD)

14:35～ **Keynote Lecture**
“Rehabilitation situation in the Western Pacific during COVID-19”
Peter Cowley, Coordinator, Health Policy and Service Design Division of Health Systems and Services, WHO, Regional Office for the Western Pacific
Cheryl Ann Xavier, Consultant, WHO, Regional Office for the Western Pacific

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“WHO's support regarding rehabilitation and COVID-19”
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Opening Address

Yoshiko Tobimatsu, President,
National Rehabilitation Center for Persons with Disabilities, JAPAN (NRCD)

On behalf of National Rehabilitation Center in Japan, I'd like to express my heartfelt welcome to all of you. Our center, NRCD, is one of the WHO collaborating centre for disability prevention and rehabilitation. As a collaborating centre, we hold international seminar every year. Unfortunately, we had to cancel the seminar last year because of the COVID-19 epidemic. This year, the world is still state of COVID-19 pandemic, but we should be pleased to hold this web seminar.

We hope we can share the experience of the rehabilitation under COVID-19 pandemic and discuss how to manage rehabilitation under COVID-19 pandemic. I hope the seminar will be fruitful for everyone. Thank you.

“Rehabilitation situation in the Western Pacific during COVID-19”

Peter Cowley, Coordinator, Health Policy and Service Design Division of Health Systems and Services, WHO, Regional Office for the Western Pacific

Cheryl Ann Xavier, Consultant, WHO, Regional Office for the Western Pacific

Thank you and good afternoon once again to everyone. Thank you for this opportunity to share with regards to rehabilitation situation in the Western Pacific Region during the COVID-19 pandemic.

Today's presentation is focused on the results of the WHO pulse survey on the continuity of essential health services during the COVID-19 pandemic, which was an interim report that was published in August 2020. The aim of the report was to gain an initial insight from country key informants into the impact of the COVID-19 pandemic, on the essential health services across the life course. There was a survey of up to 25 essential health services conducted between May to June, 2020. There were 105 countries who responded, from the five WHO regions. The results are going to be shared here today. Of the 105 countries who responded, 80% of the countries had identified an essential health service package prior to the outbreak. And 66% of all countries had identified a core set of services to be maintained during the COVID-19 pandemic. More than half of the countries implemented government policies to scale back service provision intentionally at some point during the reported period.

The most common suspension affected as you can see on the slide, is mobile clinics, where 21% of the country's reported complete suspension of mobile services. Full suspension of outpatient services and community-based care was reported in 8% of countries. Limiting access to selected services or in selected areas of the country was more common than full suspension of services. 61% of the countries had policies that partially or fully affected outpatient services, community-based care in 54% of the countries, inpatient services, 53% and mobile clinics, 47%. Pre-hospital emergency care services and emergency unit services were affected in a minority of countries. The next question was looking at maintenance of essential health services. Questions were asked about the disruption of up to 25 essential health services using a three point ordinal scale; no, partial or severe - complete disruption. The partial disruption was defined as a decline in service use by five to 50% of patients or clients. While any decline above 50% was to be considered a severe - complete disruption. Among the 105 countries, 28 reported disruptions in 75 to 100% of their services. 27 countries reported 50 to 74% disruption in services. 20 countries reported 25 to 49% of services and 19 countries less than 25% of services. Only 11 countries reported no service disruptions.

When looking at the distribution of these service disruptions in the WHO sub regions, or by country income groups, it was shown to be uneven. Disruptions were much more frequently reported by low income countries. The higher the income group, the lower the median proportion of disrupted services. When we look at the disruption across service areas, 48% of the countries reported at least partial disruptions in all NCD services, compared to the other service groups. So you can see here that the NCD services was the most disrupted. On the other side of the spectrum, more countries reported that there was no service disruptions in any of the emergency and critical services compared to the other service groups.

Looking at the data for the region where 14 countries participated, you can see in this slide that 88% of the countries reported the disruption in their rehabilitation services. And with 25% reported complete disruption of rehab services and 63% reporting partial disruption of rehab services.

Similar to the global result, in the region, the most common suspension due to government policies affected mobile clinics. 36% of countries reported complete suspension of mobile services. Full suspension of community-based care, was reported in 29% of countries. For outpatient services, 21% of countries reported full suspension.

When we look at the causes of disruption of essential health services in the Western Pacific Region, the top three causes of disruption in 67% of countries was due to the cancellation of inpatient elective care. 56% of countries reported closure of population level screening, while 50% of the countries reported changes in treatment policies for care, patients not presenting and closure of outpatient services. The other items in the slide show the other reasons for disruption in essential health services with the least cause being hospital beds not available.

To complement the pulse survey, the WHO NCD department, NCD stands for non-communicable diseases department conducted a rapid assessment of the service delivery for NCD diseases during COVID-19 pandemic. There were 163 countries who responded to the survey. In the region, 23 countries responded to the survey. Five were from high income countries, six were from low or middle income countries and 12 countries were from the Pacific Island countries. The link to the report is also provided here.

The results show that of the 163 countries who responded to the survey, 122 countries reported that NCD services were disrupted. You can see in the slide that globally, rehabilitation services were the most impacted services. 50% of the countries reported partial disruption and an additional 12% reported complete disruption of their rehabilitation services. Looking at the regional data, countries were asked whether the continuity of the NCD related services was included in the list of essential health services in their national COVID-19 response plan. 65% of the countries responded that it is included in their COVID-19 response plan.

However, only 47% of the countries reported including rehabilitation services as part of the NCD essential services in their COVID-19 plan. In contrast, the three NCD essential services most commonly included in the COVID-19 response plans of the countries were cardiovascular disease services, diabetes services, and the chronic respiratory disease services.

Hypertension management services was reported as the most common NCD services partially disrupted during the pandemic. Next to this was rehabilitation with 44% of the countries reporting partial disruption during the pandemic.

In the region, the five most commonly reported main causes of NCD related services disruptions were: the closure of the OPD or outpatient disease specific consultation clinic; closure of population level screening programs; the decrease in outpatient volume due to patients not presenting; the decrease in inpatient volume due to constellation of elective care and NCD

related clinical staff were deployed to provide and to address the COVID-19 response of the country. Having identified the most common causes of disruptions, we now look at the common mitigation strategies that were employed by countries.

So to overcome these disruptions, 100% of the high income countries use telemedicine to replace the in-person consults, novel supply chain or dispensing approaches for NCD medicines, and triaging to identify priorities. In low and middle income countries, only 33% reported using telemedicine and novel supply chain approaches for NCD medicines. While in the Pacific, the redirection of patients with NCDs to alternative healthcare facilities was the common mitigation strategy.

The findings of both surveys show that rehabilitation is among the most commonly disrupted services during the pandemic and we need to understand better why this is the case. Last month, we convened our WHO collaborating centers and rehabilitation in the region. This was an opportunity to share their experiences during the pandemic, and it was encouraging to hear their role in providing direct services to patients with COVID-19 technical advice, to governments, COVID-19 planning and response, supporting services to the vulnerable population, the knowledge sharing in the regional and global platforms and how they have used innovation in service delivery through the use of tele-rehabilitation.

In summary, we will continue in the regional office to seek, to understand the reasons behind this disruption and explore alternative strategies. As the level of rehabilitation demand is expected to increase substantially due to COVID-19. We will continue to support Member States in the region to build back better and strengthen their health systems, better deliver rehabilitation with the following initiatives. One, with regards to financing, we are looking at determining rehabilitation health financing baseline through the health system strengthening accelerator project with the USAID. In terms of governance, we will be supporting Member States in understanding the rehabilitation situation in the country through a systemic assessment of rehabilitation situation, and helping them to develop their national rehabilitation strategic plan.

With regards to rehabilitation service, we are piloting initiatives on making rehabilitation service available at primary health care level through integrating rehabilitation interventions and assistive technology in the management of NCD, in particular stroke and diabetes, and exploring the role of tele-rehabilitation as a strategy. When looking at the workforce, we are also piloting the rehabilitation competency framework. In assistive technology, countries in the region are conducting a rapid assessment of their assistive technology on the population need for assistive technology and the assessment of their national capacity provide assistive technology. In terms of information, we seek to gather data on core regional rehabilitation indicators.

Thank you. That is the end of the presentation.

“WHO's support regarding rehabilitation and COVID-19”

De Groote Wouter, Rehabilitation Programme, Non-communicable Disease Department, WHO

Thank you. And good day, everybody. I will start sharing my screen. I'm very honored to be part of this seminar. So my name is Wouter De Groote as I was introduced. I work for the Rehabilitation Programme at WHO HQ, and I’m responsible for the coordination of COVID-19-related activities. So today, I was asked to talk about the support WHO is providing regarding rehabilitation and COVID-19. I will start with an overview of different resources that have been developed by WHO in collaboration with internal and external stakeholders, in order to support the rehabilitation community.

Early in the pandemic, we developed a resource called the ‘rehabilitation considerations, during the COVID-19 outbreak’, which is a guidance—and provides guidance and actions for governments and health services on rehabilitation, in the context of COVID-19. This is a document that was published at the WHO regional office in the Americas and the Western Pacific. Second, we were able to integrate rehabilitation in the operational guidance of what is called the severe acute respiratory infection centers and stepdown facilities. And this was a publication that was done with the WHO Emergency Medical Team initiative. We also developed what we call a patient leaflet, which is a document that is used for patients recovering from COVID-19 illness to support their self-management of persistent symptoms. And this was published in the regional offices of WHO of Europe and Africa.

We also published a document on digital health, facilitating daily rehabilitation, again in the WHO regional office of the Americas. And then we developed what is called a post-COVID-19 case report form, which is used for the data collection and monitoring of mid- and long-term consequences of COVID-19, on a platform of the WHO website, which is called the WHO Global Clinical Data Platform. And then, finally, our team was able to integrate rehabilitation in the clinical management of COVID-19. And this was done via two resources. First, we developed an online training course on the rehabilitation in COVID-19, and second, we have been including rehabilitation in the latest update of the WHO clinical management guidelines of COVID-19. So, what I have provided you now is an overview—update—of what has been developed by WHO for the rehabilitation of COVID-19, and these are all different resources. So, unfortunately, with the time that I have, which is twenty minutes talking to you, I'm not able to address or go into the details of all products, but I will try to highlight, or at least share some highlights of the different resources, so that you might be inspired to go and check the web pages that are presented. And I'm very happy to share my slides with the organization, so that you are able to visit the different web pages.

The first document that I mentioned is called the rehabilitation considerations during the COVID-19 outbreak. So this was a document that was published early in the pandemic, for governments and health service providers, talking about two subjects: how to ensure rehabilitation is used to optimize outcomes for COVID-19 patients, and how to best support the continuity of rehabilitation in the face of disrupted health services, and that is for non-COVID-19 patients.

Regarding optimizing health outcomes of COVID-19 patients, the document mentions that rehabilitation should be included along the continuum of care. And in the acute phase, in the respiratory failure stage, rehabilitation has its objectives, such as optimizing oxygenation, managing secretions, and preventing complications. In the subacute phase, where there still is respiratory failure, but complications might happen, the rehabilitation professionals will identify and manage impairments for affected clinical domains. They will prevent complications, and facilitate a safe discharge and referral. And in the chronic phase, rehabilitation is still crucial to optimize functioning, and to minimize the impact of the impairments on the quality of life.

Regarding the support and the continuity of services, the same document is explaining how the lack of access to rehabilitation can compromise health outcomes, extend inpatient stays, and result in preventable hospital admissions. So for every country to decide upon service continuity, there's different factors driving that decision-making. And of course there's a risk of infection for both staffs and patients. There's the risks that are associated with the reduction of services for patient groups. There's, of course, the feasibility of alternative models of service delivery, such as daily rehabilitation, access to PPE (or personal protective equipment) is crucial, and then of course, the capacity of your workforce to be able to redistribute. And as you can see in the figure below, at the left, when continuing with business as usual, the risk of infection to staff and patients is high, but ending all services, at the other end of the figure, has a higher risk for patients that are not accessing services anymore. So, in most countries there will be a mix or a combination of daily rehabilitation, and adapted essential services with personal protective equipment.

The next resource that I have mentioned earlier is the operational guidance for the severe acute respiratory infection centers. And maybe this is less useful for clinicians attending the webinar, but from our perspective at WHO, this has been an important step. The Emergency Medical Team at WHO has been including rehabilitation professions for the management of severe and critical patients. And then, we have provided a ratio of the number of staff per number of beds.

And the same has been done for stepdown facilities. So, for patients that have been ventilated in these centers that are pop-up centers for severe and acute respiratory infection. For every 20 beds, we are recommending a number of physiotherapists, occupational therapists, speech and language therapists, and psychologists, and each with their own competency, as you can see. From the rehabilitation perspective, this is important, that there's guidance from WHO including rehabilitation in the acute phase of care.

The next resource that we have developed is what we call the patient leaflet. And that is to support the rehabilitation self-management for people that are at home, discharged from the hospital. So this is like a booklet that is providing basic exercises and advice for adults on how to manage their own symptoms at home, such as breathlessness, exercising, managing your voice, or whenever you have problems with eating and drinking and swallowing, cognitive issues, managing your activities of daily living, and psychological issues. And of course, there's some guidance on when to contact a healthcare professional.

So, these are a few figures that are in this patient leaflet, demonstrating positioning techniques to use and to reduce your breathlessness, and to the right, you can see a picture that is showing

some breathing techniques. So, these are techniques that are provided in the patient leaflets for the self-management of symptoms that persist.

Another resource that have been developed at WHO headquarters is what we call the post-COVID-19 case report form. Now, WHO has launched a platform which is called the COVID-19 clinical data platform, inviting member states of WHO and health facilities around the world to submit data that are anonymized, standardized, and patient-level. And these are data that are used to inform clinical interventions, public health response, and the generation of evidence-based guidelines on the clinical management of COVID-19.

So up till now, on this platform, we had three case report forms. All three are for hospitalized patients, including pregnant women and children with MIS-C. Now, to the right you can see a next case report form that has been developed by the Rehabilitation Program, in collaboration with internal and external partners. And that is the post-COVID-19 CRF. And this is a CRF that includes patients that have been hospitalized, but also patients that have been managed at home. And this is a data collection type for mid- and long-term consequences in COVID-19 in the follow-up of these patients.

So, module one of this case record form includes background information such as demographics, and the clinical information of the acute phase of illness. In module two, there's questions about persistent symptoms and there's a functioning measure, which helps to identify patients that require further clinical evaluation. And then, in module three, there's the opportunity to report on whatever diagnostics or tests or scales that have been used, and whenever there has been a new diagnosis during follow-up visits. So, based on the results, of course, patients can be referred for clinical care or rehabilitation, per national protocols.

Same document is providing guidance in terms of time points of administration. So, as you can see, this case report form for the mid- and long-term consequences of COVID-19 applies for hospitalized patients after discharge, and for people that have been managed at home. And then it will depend upon whether there's persistent symptoms or not. For somebody who has persistent symptoms, we are recommending to do a follow up and to report every three months, as long as needed. And whenever somebody is free of symptoms and no signs persist, we are recommending to repeat the completion of the CRF every six months, if possible.

So another resource that has been developed at WHO headquarters is an online training course, which has been published on openWHO.org. And this is the sixth course of a series of courses on the clinical management of patients with COVID-19, and this is completely devoted to rehabilitation. So this course number six has seven modules, and it is addressing the different impairments that are experienced by people recovering from COVID-19. And, I think I still have time? Maybe I can share with you a video that is announcing this resource.

The first module is providing an overview of rehabilitation pathways and the clinical management cycle of rehabilitation. And then we have six modules that address different impairment types in COVID-19 patients recovering from that illness. The first one is on cognition. This is a module that is providing rehabilitation techniques for memory and attention issues, and problems with problem-solving. We have a module on the physical deconditioning

for any patient that is still experiencing muscle weakness and reduced exercise capacity. Then, we have a module on long impairments for the management of breathlessness and fatigue. We have a module on swallowing issues that might result from intubation or neurological complications in COVID-19. And then, we have a module on the rehabilitation of communication issues, and the last one is on activities of daily living. This online training course was launched about one month ago, the last time I checked we already had over 8,000 people enrolled in the course. Participants will receive a certificate for attendance and high achievement.

The learning objectives of this training course: at the end, participants will be able to understand the role of rehabilitation, and the management of impairments resulting from COVID-19. Participants will be able to describe the etiology of rehabilitation-related impairments in COVID-19. They will also know who and when to assess for rehabilitation needs. They will know how to provide education and advice to patients and their families, and then to advise strategies to help patients and their families manage their impairments. So this is a course that will take about three hours to complete.

And then, lastly, let me mention an important resource, again, developed at HQ, which is the COVID-19 clinical management living guidance. This has been last updated on the 25th of January, 2021. So this is a living document that is updated every four to five months. And the latest version has rehabilitation extensively addressed across chapters in the document. Chapter number 12 has rehabilitation and respiratory techniques included in the management of critical COVID-19. Chapter 19 is exclusively addressing rehabilitation, and chapter 24 is a new chapter on the care of after COVID-19 illness, in the post-COVID-19 condition and again, rehabilitation is included.

So, regarding this chapter that is completely devoted to rehabilitation, chapter 19, it has an introduction that is describing the rehabilitation needs in COVID-19. And then, there's five recommendations that are done. And for every recommendation, for anybody who is able to go and check the documents, every recommendation has a few remarks that explain in detail, and more in practice, what is meant with the different recommendations. So the first recommendation is that, in hospitalized patients, during the acute phase of illness, rehabilitation professionals may provide interventions that relieve respiratory distress, prevent complications, and support communication. So this is a recommendation about respiratory rehabilitation early in the acute phase. It is about early mobilization. It is about speech and language therapists for dysphagia, and so on. The next recommendation says that, prior to hospital discharge, COVID-19 patients should be screened for rehabilitation needs, in order to facilitate onward referral. And the document explains how this screening can be done, and how onward referral can best be organized. The third recommendation is for COVID-19 patients: whenever they are in a hospitalized setting or in an outpatient setting, they should always be provided with education and support for the self-management of breathlessness, and resumption of their activities. So, the document explains how to provide guidance for the resumption of activities and how to manage breathlessness.

And then, in conclusion, there's two more recommendations. The fourth is for patients who have been discharged from the hospital, or patients that have been managed at home, and still experience symptoms or limitations in functioning: they should be screened for physical, cognitive, and mental impairments, and then managed accordingly. And the clinical management guideline provides directives on how to do so. And then, whatever rehabilitation

needs are identified, provide individualized rehabilitation programs, from the subacute to the long-term, according to the patient needs. And the prescription of rehabilitation programs should be based—and guided—by persistent symptoms and functional limitation.

So, this is what I wanted to tell you today. I thank you very much, and I hope it has been clear. So, for anybody who is willing to visit our resources, please, go and check the websites. I'm very happy to provide any feedback and questions. Thank you.

“Rehabilitation and Management of China Rehabilitation Research Center during Epidemic of COVID-19”

XU QING, Chief of General Surgery, China Rehabilitation Research Center

Thank you. Hello, dear delegates, distinguished Dr. Tobimatsu, Happy Spring Festival. It is my pleasure to attend this seminar. Mr. Wu Shicai, the director of China Rehabilitation Research Center, extends his congratulations on the successful opening of this seminar, and wishes our experts good health. Today, my presentation is Rehabilitation and Management of China Rehabilitation Research Center during COVID-19.

And first, let me introduce myself. My name is Xu Qing, from China Rehabilitation Research Center, and I'm the Deputy Head of Epidemic and Prevention and Control Leading Group of CRRC. Here is some basic information of our center and hospital. China Rehabilitation Research Center was founded in October 1988, mainly undertaking multi-field rehabilitation work for persons with disabilities, involving rehabilitation, medical care, medical research, personnel training, community-based rehabilitation instruction, etc. Over 32 years of development and exploration, CRRC has now become a modern center of rehabilitation in China with more than 1,700 staff. Beijing Boai Hospital is a part of CRRC, and has 1,100 hospital beds. So there are outpatient clinic department and emergency department, as well as more than 52 departments in the hospital. So we can carry out clinical rehabilitation, clinical service, rehabilitation therapy, medical technology practice. So, it is special that it's necessary not only to provide service for rehabilitation patients, but also to meet the needs of emergency and community epidemic provision and medical service.

At present, people in many countries and regions in the world are fighting against COVID-19. Coronavirus pneumonia is the common enemy of mankind. Therefore, during this special period, it is of great significance for experts and scholars from Japan, Korea, China, as well as WHO and other countries and regions to jointly discuss strategy for rehabilitation, treatment, and management under the epidemic, and learn from each other.

Today, I would like to share the practice and effect of our COVID-19 epidemic prevention and control, and work resumption from the following seven aspects. At first, let’s review some details about COVID-19 prevention control in Beijing Boai Hospital, CRRC. Professional viral clinic department plays a very important role in the screening of new COVID cases, which can effectively avoid the nosocomial infection between suspected patients and normal population. Our hospital found confirmed case of COVID at two crucial time points. One case was in January and the other was in June. These two cases were timely transferred to designated hospital for further treatment. So, fortunately, no nosocomial infection occurred due to the well-placed prevention and control, just like other centers and hospitals in China. In a following-up work, we established the Fangcang* PCR laboratory and the CT Scan Room just for fever patients in the shortest time. All those works have laid a good foundation for apprehensive prevention and control the COVID during the epidemic period. Up to now, furthermore, 605 medical staffs were sent to sample 70,320 people in the community for nuclear acid testing.

Next, I would like to introduce our epidemic prevention and control emergency and support system in China and in our center and hospital. Our center works under the guidance from two channels, one is from the Health Commission Channel. This is from National Health Commission to Beijing Health Commission and then to District Health Commission. Another channel is from Minister of Civil Affairs of China, then to China Disabled Persons' Federation. Under the leadership from the two channels, our center and hospital set up COVID-19 epidemic prevention control leading group, making overall plans and coordination in epidemic prevention and control. The group have several specialized teams responsible for integration, coordination, expert supervision, pre-checking, screening, medical care management, epidemic prevention and control, logistic support, and so on. The work of epidemic prevention was carried out effectively, with close collaboration. In addition, our center is also responsible for providing guidance of epidemic prevention to all provincial medical rehabilitation center, and task against epidemic in Beijing and our district, that is, Fengtai District, including nucleic acid testing and vaccination. So when new COVID cases were discovered in one hospital or region, other hospitals and government organizations will immediately respond and support. And the transfer of patients is very smooth.

Nevertheless, COVID-19 epidemics have brought a negative impact on our center's rehabilitating practice. Our center has made a full set of management systems and procedures composed of dozens of correlative files. For example, working scheme, working procedure, personal training program, rehabilitation professional management scheme, ward area management scheme, outpatient procedure, emergency scheme, admission and discharge management procedure, which have been updated in accordance with national requirements, dynamically.

As you can see from this slide, due to the new cases identified in our center, there are significant drops in rehabilitation practice in February and July, but it quickly recovered. During the last year, our center have three PT departments, all departments' workload are dropped, from 4% to 40%. Next, the workload of OT department also dropped about 39%. And the ST department dropped about 46%. But, in the fourth quarter, all workload increased significantly to that in the same period in 2019.

How to scientifically and effectively carry out epidemic prevention and control, while promoting simultaneously work resumption, is very important. First of all, promote the prevention and management of rehabilitating professionals under the epidemic. The training of rehabilitation professionals should not only meet their own prevention needs and that in a process of rehabilitation treatment, but also the requirements of social support for prevention. So, we changed the traditional rehabilitation treatment procedure, and actively promoted ward rehabilitation and individualized one-to-one rehabilitation service.

How to manage inpatients and their caregivers during the epidemic period, culturally, is a challenging problem. We carry out one plus three admission examinations, include blood routine and nucleic acid, antibody, and lung CT scan. And which is taken regularly and irregularly as monitoring, for all hospitalized patients and their caregivers during the epidemic period. Under the premise of humanistic care, the ward area practice was in closed-loop management, to ensure the safety of inpatients and the environment safety, and to meet patients' rehabilitation demands, and the quality of their life.

Smartphone data management has been adopted for persons entering and leaving CRRC and the hospital. Following national requirements, personnel management and epidemiological prevention and control are carried out by means of route track code, visitor registration, epidemiological history screen form, and health quick response code (HQRC).

Transition management in the long-term control during the epidemic period has been worked well. According to the working plan of our hospital, we set up a hospital level transition ward to first stage of transition for hospitalized patients, and transition wards were set up in each department to a second stage of transition, especially during the severe epidemic period. This approach can effectively ensure the safety of hospitalized patients during the epidemic, and the need for rehabilitation and control of COVID. From March 2 to August, 687 cases entered the hospital level transition ward, received rehabilitation treatment, and lifesaving service during the transition period, through MDT cooperation, among which 640 cases were safely admitted to the hospital for rehabilitation treatment. 41 cases underwent rehabilitation and emergency treatment, or surgery, in the hospital level transition ward. 6 cases discharged. Unfortunately, 2 cases died due to other disease. The two-stage transition system of ward has been worked well since August 2020. We believe that this transition system could effectively prevent and control nosocomial infection, and is of great importance of rehabilitation treatment safety.

Online video rehabilitation guidance and family rehabilitation have gained widely used. With the advent of 5G era, the network video guidance and family rehabilitation guidance developed rapidly, through multiple channels, just like video ward rounds, video rehabilitation education, video rehabilitation guidance, and the remote consultation. Patients has access to reliable and high-quality rehabilitation treatment service, and evaluation methods. On this basis, our rehabilitation works went on effectively without any interruption during the epidemic period. Making full use of this platform, many video conference and online education programs between CRRC and Japan, the students' education program, have also been implemented, as well as nationwide rehabilitation meetings and nursing training.

Finally, the epidemic of COVID-19 didn't stop the progress of our national rehabilitation poverty alleviation plan. Our doctors and nurses and therapists, went to Inner Mongolia region, Hubei Province, and other regions to support with rehabilitation in point-to-point or fixed-point way, to support their work. Poverty alleviation by means of rehabilitation makes persons with disabilities stand up for independence and self-care. We have started orderly vaccination work with mature Chinese experience in scientific prevention and control. Despite sporadic cases and cases from local gathering in some parts of China, the epidemic has been controlled effectively by effective and timely comprehensive intervention.

Thank you, dear delegates, distinguished President Tobimatsu. In the face of COVID-19, let's strengthen cooperation, creating a community of shared future of mankind, to go through difficulties together. I think the Tokyo Olympic Games will be held successfully. Thank you. Okay. That's all.

* "Fangcang" means "Makeshift" or "Temporary".

“Rehabilitation Responses in KNRC during COVID-19 Pandemic”

UNJOO KIM, Director, Department of Community Reintegration Service, National Rehabilitation Center, Korea

Good afternoon, everybody. I’m Dr. Unjoo Kim, from Korean National Rehabilitation Center. Thank you for having me in this international seminar. My talk is about rehabilitation response in KNRC during COVID-19 pandemic. My presentation will be divided into the following three areas in COVID-19 response: national response, NRC response, and rehabilitation post-COVID-19. I mainly introduce the COVID-19 response to medical rehab in my hospital.

Let's start with the characteristics of Korea’s COVID-19 response at the national level. Infectious disease prevention and control is a concept that goes beyond simply stopping a virus from spreading. It must also sustain social and economic activities, and allow citizens to carry out their daily routines, while protecting their health at the same time. Korea has a principle in the midst of this crisis: openness, transparency, creative, innovative. The government provided the public with information on outbreak and government response in a timely and transparent manner, so we need trust from the public.

In response to this new virus, we had to forge a new strategy. The health authorities needed to take a more proactive approach than ever. The proactive governance committee supported the health authorities’ COVID-19 response. This allowed many creative strategies to be put into action in a timely manner, such as drive-through and walk-through screening centers, residential treatment centers, and no face-to-face medical care. The public voluntary participation in the government-led social distancing campaigns also played a key role in the COVID-19 response, especially in the early stages. Public hospitals, as well as military hospitals, were the first in the line to embrace patients confirmed with COVID-19 during the early stages of COVID-19 outbreak, allowing more time for other medical institutions to make preparations.

Of course, the private sector, including healthcare professionals and hospital beds, has been doing their part of the public healthcare system. Of course, the scope of public healthcare is no longer defined by who owns the hospital, but the service they provide. With the COVID-19 pandemic, we are seeing a shift toward a two-way process, where the hospitals suggest the part they can take in the response with the government provide assist in their efforts. With a national health insurance scheme covering all citizens and foreign residents, the public health care system plays a role in the pandemic response.

I'd like to say about three Ts: namely, fast testing, meticulous tracing, and appropriate treatment. The government granted emergency use authorization for testing kits, and promised a certain amount of purchase to secure the minimum necessary level of return for the company during the production review stage. This helped to build a foundation. As you all know, the introduction of drive-through and walk-through screening stations for sample collection, coupled with the fast, aggressive test, allowed early detection of confirmed cases in community. The time needed for epidemiological investigation was also significantly reduced, thanks to the utilization of ICT. The International Travel Information System, ITS, and Drug Utilization Review

system, DUR were used to inform healthcare providers if a patient had recently visited a country or a region in the early stages. Based on a democratic-built legal framework, epidemic intelligence officers were able to request mobile phone data and credit cards, as well as the CCTV footage, of course based on patient consent, in addition to traditional patient interviews, to trace contact as early as possible.

At the peak of the outbreak, Korea avoided a collapse of healthcare delivery system by reforming the system to ensure the medical resources are allocated efficiently. Confirmed cases are first categorized by severity. Mild cases are treated at residential treatment centers with minimum necessary medical resources, so that more resources can be focused on treating. The government-designated isolation hospitals and infectious disease hospitals to ensure adequate hospital beds. And the pool of medical personnel was expanded by deploying public health doctors and volunteers.

In a world with COVID-19, I think there is the tension of balancing appropriated COVID-19 rehabilitation alongside rehabilitation for other medical condition. This slide provides a timeline of key milestones in the manifestation of COVID-19 status in Korea, and our response over time. The first case in Korea was confirmed in January 2020. The infection prevention and control team in NRC decided immediately to restrict visitors, control entrance, and do daily report related to COVID-19, to protect the safety of patients and our staffs. Just one year ago, outpatient rehabilitation services had been suspended according to the upgrade of crisis warning. Now, we are facing the third crisis. It's a COVID peak situation. Preemptive COVID-19 test has been conducted for all steps, every two to four weeks, due to COVID’s third peak. And we decided to include the COVID-19 patients last December in NRC. As of this month, 87,000 cumulative confirmed cases occurred. 78,000 cumulative quarantine release, 8,000 under treatment, including isolation, and 1,550 died of COVID-19.

Our initial response to the pandemic was maintaining inpatient rehab services for non-COVID patients as before, so-called COVID-free rehabilitation. General hygiene rules and quarantine was well followed, with all visitors to hospital with checking body temperature or meeting activities with the media such as Zoom, we have set up a transitory ward with temporary and very strict isolation and stiff PPE protection rules before a new patient is admitted, or inpatient has a fever or suspicious symptoms of COVID. After the COVID-free condition, or is clearly identified, the patient was assigned to a general ward. This transitory ward for new patient was operated only in the early stages, because all newly hospitalized patient these days mostly receive negative result of COVID. Restriction imposed to prevent infectious spread created difficulties in delivering rehabilitation in outpatients. Unfortunately, outpatient rehabilitation services has not yet begun, and we have continued to provide long-term personnel support to quarantine facilities for national hospitals. Until now, 130 medical and administrative personnel has applied.

With the continuation of COVID-19, we found increasing number of COVID-19 patients with disabilities, and they had difficulties in finding appropriate hospital along with research of COVID-19 last December in Korea. Based on this, we had changes in our policy and practice to include COVID-19 patients in our hospital, with appropriate infection control. NRC provides free temporary housing to staff who request it for any reason, most commonly to reduce contact of their members with their own vulnerable family members.

There has been many lessons learned through our experience so far, and more that we will undoubtedly follow as we move into the future. From a rehabilitation perspective, the issue that has made physicians, therapists, and nurses reluctant to spend time treating patients, and fear when they do so. While optimal PPE would not eliminate these concerns, it would provide the staff with reassurance that every possible precaution is in place to protect their health. On a positive note, the availability of mental health services, along with housing and other support, has helped the clinical team members manage their stress better. These are important lessons that pertain to any future pandemic or other emergency situation. A novel disease results in novel rehabilitation needs, and the need to adapt to provide this care in real-time.

In our case, our initial plan to maintain our rehabilitation hospital, as a COVID-free one, was found to be change. The need to build rehabilitation program for outpatient, along with maintaining social distancing, has called for change in patient time and patient flow in our hospital. Rehabilitation units are often there to meet, current rather than future needs. The risk of a future pandemic with patients requiring intensive rehabilitation facilities should be constructed in ways that allow appropriate infection control, while permitting active rehabilitation. Single room with negative pressure ventilation, avoiding large open gyms for therapy, in favor of multiple smaller therapy treatment spaces, and other strategies to facilitate patient isolation should be considered when planning or renovating these facilities.

Technology has played a key role in society, broadly, in adapting to this pandemic. Video conferencing has become the norm in the workplace. In Korea, the use of a video visit for KMR physicians, as well as for PT/OT visits, has not yet established, but this technology will remain an important tool for the foreseeable future, even once the pandemic is completely resolved.

What could rehabilitation post COVID-19 look like? COVID-19 pandemic provides an opportunity for health and social care services to transform how they deliver rehabilitation. I think there is opportunity to put services in primary care and community stages, and to engineer better collaboration outside healthcare. This integrated system of rehabilitation are more likely to prove resilient to future pandemic. It's likely that care will need to be delivered close to home, and to be effective, team must work across organizational boundary. A more diverse rehabilitation workforce will be required, to meet the scale of this challenge. For stratifying rehabilitation need and matching approaches to the right profession, professional leadership is needed to drive clinical expertise and system improvement across multiple pathways. It does not mean that where rehabilitation is provided is likely to change. There is less emphasis on hospital-based services, and more emphasis in services delivered in or near patients' own home. This means a change in the way rehabilitation is delivered. It is important to provide rehabilitation services tailored to the patient's condition, and approaches that involve group work are particularly likely to be vulnerable to future pandemics or imposition of mobility restrictions.

Rehabilitation is a critical aspect of our healthcare system, but it's particularly vulnerable during a pandemic response, where the focus of the healthcare system shifted to acute management in search of acute patient. The challenges of adjusting the role of rehabilitation providers and systems during the rapid progression of the COVID-19 pandemic provide insight that may help system manage their response. Preparation for future pandemic is an essential long-term response, to maintain our ability to respond to future challenges, to provision of rehabilitation systems in our healthcare system. This transformation of rehabilitation must deliver a need-based, individualized approach, close to home, to enable people to live well for longer in spite of COVID-19. Thank you for your attention.

“Rehabilitation during COVID-19 Crisis at NRCD”

Reiko Fukatsu, Director, College, NRCD

Hello, ladies and gentlemen, I am Reiko Fukatsu, Director of National Rehabilitation Center for Persons with Disabilities NRCD College, Japan. A medical doctor specialized in neurology and at the NRCD hospital, I am also engaged in outpatient treatment in the rehabilitation department. It is a great honor for me to be here, to introduce our efforts in the current COVID-19 crisis in our organization. And I'd like to take this opportunity to thank all of you.

The shown is the daily number of detected PCR positive cases since the beginning of the COVID-19 pandemic in Japan. The first state of emergency, which lasted almost seven weeks, were applied to several major prefectures, including Tokyo, Saitama, Chiba, Kanagawa, Osaka, Hyogo, and Fukuoka. The second state of emergency, which is scheduled to last more than eight weeks, apply to the seven prefectures, plus five other prefectures.

The flowchart represents how a typical rehabilitation proceeds for persons with disabilities in Japan. When a person sustains an injury or develops an illness, acute treatment and rehabilitation starts at an acute phase hospital, involving medical doctors, nurses, and therapists to provide physical function maintenance, recovery, and disuse syndrome prevention. Then, at a rehabilitation hospital, such as one in our institution, medical rehabilitation in the chronic state is initiated involving medical doctors, nurses, PTs, OTs, STs, MSWs, and POs to provide functioning recovery, physical function maintenance, and physical strength improvement. Following the medical rehabilitation, social rehabilitation is initiated at a support center for persons with disabilities, such as our rehabilitation service bureau, involving vocational guidance counselors, PTs, OTs, nurses, and healthcare assistants, to provide vocational and daily living skill trainings, and driving rehabilitation, parasports, and healthcare as needed. The goal is independence and social integration of persons with disabilities achieving employment, school attendance, living at home.

Coronavirus response at NRCD. We have implemented general infection prevention measures, informed the staff of government response policy, and have them comply with infection control protocols, and minimized the risk that virus would be brought in by outsiders. Workplace infection risks. To avoid the three Cs: crowded places, close-contact settings, and enclosed spaces. In order to avoid the three Cs, we did these things. Infection risk from outsiders, requested thorough infection prevention measures to visitors such as follows.

Rehabilitation Service Bureau. It provides social rehabilitation through welfare service to persons with disabilities. There are two groups for the daytime trainees: boarding trainees and commuting trainees, and different measures are applied to them. Before the declaration of the first state of emergency, the trainings for both groups were basically business as usual, except for some trainings. During the first state of emergency period, while the training for the commuting trainees was canceled, that for the boarding trainees was provided as usual, with the maximum infection prevention measures. After the state of first emergency period, the training for the commuting trainees was resumed with daily-life-infection-risk-minimizing

measures. Measures against infection risks at training. The details are as indicated below. Body temperature measurement, avoid the three Cs, online training, etc.

Measures against daily life infection risks: hand-washing, limiting visitors to family member only, assigning an individual dormitory room for each, social distancing in cafeteria lines and at the table, and no seat facing other seat, installation of plastic seats at the cafeteria counter, consideration for persons with cognitive disorders at the cafeteria.

Hospital. It provides medical rehabilitation to persons with disabilities. The ground floor of our hospital is for outpatients. The second floor is for rehabilitation, and the third and fourth floors are inpatient wards. We have arranged the patient floors in the hospital so that outpatients and inpatients never encounter each other. The rehabilitation for outpatients was limited during the first state of emergency period. As for the inpatients, individual rooms were assigned to them for the two weeks from the admission, and the rehabilitation were provided in their rooms. In the ward, quarantine simulation has been conducted, in case of a COVID-19 case detection. Fortunately, no positive test case was found in the hospital as of today. For the outpatients' floor, body temperature and health condition checks for visitors, adequate distance between chairs in the waiting room, and plastic shields at the reception.

For the rehabilitation floor, we have introduced arranging patient floors, and rehabilitation schedules for outpatients and inpatients, so that they never encounter each other. Infection prevention training for the staff. For the inpatient floor, we have introduced temporarily canceling all visits, including that of family members. Temporary restricting inpatients from going and staying out. Two-week quarantine in a single patient room, for new and returning patients, during which his or her health conditions are monitored. Activities are restricted, and rehabilitation are provided in the private room. Mandatory use of PPE, adequate for infection risks in one's duties.

Research institute. It conducts research projects contributing for the independence of, and measures for, persons with disabilities. In our research Institute, a decision to conduct a particular research project has been made, weighing its necessity and safety. The progress of some research projects involving human subjects have been delayed due to partial cancellation and/or restriction of the studies. However, the research projects have been continued, devising alternate methods

College. In our college, we train rehabilitation professionals. In the training department, a school to train rehabilitation specialists with 114 students, we have established a remote lecture system during the first state of emergency period, and now, face-to-face lectures, as well as online lectures, are provided. As of today, no COVID-19-positive is detected among our students. In our seminar department, all the seminars scheduled until August last year were cancelled, and during the closed period, we have established an online seminar system, and resumed our seminars online since September. The details are as indicated below.

Information and support center for persons with higher brain dysfunctions (HBDs). It provides medical, healthcare, welfare, and labor information for persons with neurocognitive disorders

due to strokes or traumatic brain injury, and establishes a support system for them, cooperating with local governments. The reports from 47 prefectures show some major effects on COVID-19 spreads on the prefectural projects. They include that on the delivery of variety of rehabilitation services, way to conduct seminars, and cooperation among relevant organizations. Their measures include changes of the time and duration; venue and attendee size; and use of web, telephone calls, and documents in writing, instead of face to face communications. Effect on prefecture sponsored seminars. While 24% continued face-to-face-style seminars, 70% adopted web-style ones, and 6% canceled their seminars altogether. Effects on persons with HBDs, and measures taken. Became mentally unstable. Alcoholism became apparent in some cases. Consultation for daily lives and employment increased. Stopped using adult daycare service. Workload decreased at some support centers.

Information and support center for persons with developmental disorders. It provides reliable information on developmental disorders and indirect support in various forms for people with this disorder. It has conducted an online questionnaire survey, comprised of ten questions on changes and problems caused by adapting a so-called new lifestyle, and on one's life from now on, between July 2nd and August 17th, 2020. Among 852 replies obtained, 352 were from persons with developmental disorders, and 500 were from a family member. There were two types of questions: multiple-choice questions, and text open-ended questions. And for the latter conducted, text-mining analysis was conducted. As shown in example, analysis of questions on wearing a mask. According to the analysis, 44% feel comfortable wearing a mask, 50% bearable, and 6% unbearable. In the text-mining analysis, categories of breathing difficulty, hypersensitivities, pain-ears, and others were extracted. For more details, please access the shown URL but, sorry, only in Japanese.

Summary. Our rehabilitation departments where social rehabilitation and medical rehabilitation are provided, college where rehabilitation professionals are trained, and research institute have been continuing their projects, devising alternate methods in this current COVID-19 crisis. Fortunately, no PCR-positive person has been detected among our trainees, patients, nor students as of today. The national survey researches conducted regarding neurocognitive disorders and developmental disorders have indicated that there have been significant effects of COVID-19 on people with these disorders, and those who support these people. We will continue our rehabilitation projects in the future, to respond to the impacts and challenges that people with disabilities face. Thank you for your kind attention.

Discussion among presenters, Q&A

Facilitator: Toru Ogata, Associate Professor, Department of Rehabilitation Medicine, The University of Tokyo Hospital

Ogata: Okay. I'd like to say thank you for all five speakers from different countries to join today's seminar, to share the information and knowledge about COVID-19. So today, we have 25 minutes to go, and I want to use this time for discussing about issues in today's topics, and also taking some questions from the audience. And before getting the question from the audience, I want to make some questions to each speaker. Today's we have three talks from the rehabilitation center from Korea, China, and Japan, and two talks from WHO, and we heard many efforts to handle the COVID-19 infection, as well as how to keep the function of the hospital during the pandemic. So my first question is for the speakers from three medical institute from each three countries, because these institutes are much specified hospital where more patients who had the background of the disabilities compared to the general hospitals. And my question is, is there any specific consideration or difficulty in your institute because you have more number of the people with disability in your institute? Could I ask Dr. Fukatsu to begin with this question?

Fukatsu: Yes, okay. I'm thinking about the question, so please give me a moment.

Ogata: Okay. Okay. So Dr. Kim, could you give me some idea? Maybe your microphone is off.

Kim: Sorry about. It's very difficult one to manage the patients and their caregivers together with the COVID these days and patients and caregiver cannot leave the hospital at all for the mission period. It's very long time. And so but we should keep the infection control, basic infection control guidelines and we should keep the preventions for infection during the therapy. So interval between the therapy, we should clean their beds, the treatment beds with sanitary materials. So it's not very difficult, it's not very different information control comparative with other medicine, are the same method, but more people to manage. So it's very … That's the different one.

Ogata: Okay. Unfortunately, do we have the connection to China? No, not yet? No, no. Okay, unfortunately … Okay, so Dr. Fukatsu please.

Fukatsu: Okay. I say that fortunately in NRCD, no PCR positive person has been detected among our trainees, inpatients nor students. So we made efforts to avoid COVID-19 virus from by outsiders including outpatients. But I think from now on, we have to think about the rehabilitation service for the patients after COVID-19. We haven't initiated that service, but I think it will be necessary.

Ogata: Okay. Also I want to ask to the officers in WHO, if there is any possible guideline for the hospital or institute where there's more people with disability exists. Is there any specific guidelines or advice to those institutes, maybe Dr. Wouter may go on?

Wouter: So if I understand your question correctly, you're asking about guidelines for hospitals in terms of the clinical management and rehabilitation?

Ogata: Especially for the person with disabilities, where wheelchair users or visual disorders. These patients seem to be very vulnerable to the diseases and having difficulty to understand, or the protection would be different from the general population. So, in that sense, any specific items.

Wouter: Yes, and maybe this is a resource that has been developed by colleagues of mine. So I'm not aware of the details, but there has been a document developed addressing inclusiveness for people with disability in terms of accessing healthcare during the pandemic. So but I will need to refer and maybe Cheryl is aware of the document better than I am.

Ogata: Okay. There any … Please go on.

Cheryl: Yes. Thanks Wouter. It's a high-level document that addresses, gives advice to Member States where it talks about disability considerations in the response of the government to COVID-19. So we do have a document that says disability considerations for the COVID response. And this is more of a high level document compared to what you're asking for in terms of institutional level guidelines. We will take note of this particular concern over.

Ogata: Thank you. Do we still lost contact with Chinese Rehabilitation Center? No. Okay. So also my second question is about the telemedicine. Some of the slides talk about telemedicine and the importance of the new types of, new style of the medicine and rehabilitation. And I wonder how far it is available in each countries in terms of telemedicine or tele-rehabilitation or video clinic and so on. And again can I ask Dr. Kim first in Korean situation?

Kim: As I mentioned before, in Korea the user video visit or telephone visit, not contact visit for physicians as well as for therapist has not yet permitted by law, but during the pandemic, I think the government wants to seek other access to disabilities or some problems with mobility need to visit clinics. I think there's own process about the not telemedicine. I think that's about tele-rehabilitation. It's a little different things. It's a very conflict thing, so in Korea we are not permitted yet.

Ogata: Okay. Thank you. So how about in Japan?

Fukatsu: Yeah, okay NRCD, I'm sorry, only telephone call is available for repeat patient. How about your hospital, Tokyo University hospital?

Ogata: Well, I think the Japanese law changed for the COVID-19 strategy, and they basically allowed the re-visit patients only, not for the first visit patients, because we need to establish the communication with patients and doctor infirmatively. So can I ask Ms. Cheryl, you mentioned that the many countries applying telemedicine in during the pandemic and what kind of telemedicine does it mean?

Cheryl: If I may just respond in terms the telemedicine, as a survey it did not go into the details of what kind of telemedicine it was. Most of the high income countries in the region had that as a strategy of providing telemedicine. We have colleagues in the region who are also looking at this specifically as to what level of telemedicine is being implemented in the countries. And I hope that we can be able to share that the result of their studies towards the end of the year. Over.

Ogata: Thank you. Dr. Wouter, do you have any idea about the instruction or guideline for telemedicine or tele-rehabilitation from the point of WHO?

Wouter: Well, the thing is that it is early in terms of being able to assess the value of tele-rehabilitation in COVID-19, we know from a subjective point of view, as a mitigation strategy and how patient satisfaction is high. But still there's many issues to discover and learn from. I believe that digital rehabilitation up till now has not been investigated enough to be added in a service delivery platform. But this is what the pandemic is demonstrating. And hopefully this is a good spin of the pandemic that people will include tele-rehabilitation into service delivery platforms and implementation research. Regarding the pandemic, we have learned that some specific population groups, such as younger people and with less motor impairment are the ones that are possibly best targeted with digital rehabilitation. But as you know, there's many issues in users acceptance and technology, especially for people with mental impairments.

So there's still a lot to learn in the use of tele-rehabilitation and especially add some international standards to it which is even not the case yet for other conditions. We do have some good evidence, but still the evidence-base is challenging for other health conditions as well. Over.

Ogata: Thank you very much. I also think that this is a, some kind of good chance to develop the telemedicine not only for the COVID-19, but also from the view point of the community-based rehabilitation. So do we have any other question tonight? Okay. So still we have some more time. So if any speaker have some question to other speakers it's also appreciated. Do you have any question, each other or any question?

Wouter: If I may, and this is very-

Ogata: Okay. Okay, sir.

Wouter: Yeah, this is very an open question because I believe that we, from WHO , we are working hard to support the rehabilitation community in terms of COVID-19, whether it is in training resources of guidance and clinical management, or actions and recommendations for governments. But still, I believe this webinar could be an opportunity for participants or panelists to share their experience, how useful our support has been. As the clinical management, we have been providing, being of any use in daily practice in your region.

Ogata: So your question is the usefulness of the materials from WHO in our, in each countries and clinic, each countries and...

Wouter: Yes, exactly. Sorry. Exactly, just trying to measure how it has been captured and picked up and how we can improve from WHO perspective our services to the rehabilitation community.

Ogata: Okay. So Dr. Fukatsu could you comment?

Fukatsu: Okay. I talked about the persons with developmental disorders, some of them with supersensitivity don't like to put a mask. So that problems, characteristics of disability is very important, I think. So for example, today I came here by train for one hour ride, and at the same time, I am instructed to stay home as possible. So this is a very difficult decision-making, especially for persons with cognitive disorders. So they're easily mentally disabled and have a big, strong anxiety and become easily depressed. That is one of the big problem in during COVID-19 crisis I think.

Ogata: Okay. Thank you. So, Dr. Kim, give some comment.

Kim: Yeah, I agree to Dr. Wouter's conclusion especially about the prior to discharge COVID-19 patients should be screened for rehab needs. It's been about a month, in NRC, just it's been a month since infectious world has been operated. So much experiences are still lacking, but I think as you mentioned, the screening for COVID-19 prior to discharge need to be according to their needs, according to their priority or needs, that will help. So if I have, and I say have any opinions about that and during operation the infectious world, I want to share our experiences or opinion with you. Thank you.

Ogata: Okay. So we're now having the China Rehabilitation Center back. Thank you. Dr. Qing, I'm glad to have a contact with you again. Is that okay? You can hear me?

Xu: Okay.

Ogata: Okay. Thank you very much. So we now, we have some comments from Dr. Wouter about the WHO provided, many useful information about COVID-19. And he asked us that how far we utilize those information and that's the question, right, Dr. Wouter. Okay, so maybe these three countries are not English speaking country. For the general population, the WHO, the information is slightly difficult to understand but the government policies generally based on the WHO policy making. So that's how we refer to the government policy, which also refer to the WHO policy. So I want to ask Dr. Qing, how did you utilize that WHO information so far?

Xu: Thank you. I think that WHO's information is important for the COVID patients, especially for the acute and subacute COVID patient's rehabilitation.

Ogata: Thank you.

Xu: But yeah, it's very important. We can use many methods from the WHO's information to help the patients. But in our center, the COVID patient's treatment is in the designated hospital, in order to control the COVID-19. Thank you.

Ogata: Okay. Thank you very much. So, Dr. Wouter, do you have any comments?

Wouter: First of all, thank you all for your feedback. It has been very useful, and I hear you about disability inclusion. Unfortunately, we do know that people with disability have three times higher chances to die from COVID-19. So that is when they are contracted with the infection. And we need to make sure that people with disability are protected and have access to information. So that is that I hear you, and thank you for that feedback. And in terms of guidance to Dr. Kim and Dr. Qing, thank you. I value your feedback and we will take it into consideration. Thank you.

Ogata: Okay, thank you very much. I also have one more question to Dr. Wouter. You mentioned about the series of information and guidelines to treat the severe Coronavirus infection, pneumonia but I guess there's so many patients who have mild or moderate or almost no symptomatic patients in the world. Do you have any specific rehabilitation protocol for those patients, or just generalized included in that protocol you mentioned.

Wouter: Yes. Thank you for that question. And that's a really good question. It is true that early in the pandemic, rehabilitation needs were anticipated based upon the critical care population. But that was early in the pandemic. And then later many publications came out reporting on persistent symptoms and impairment types in all hospitalized patients and people who have been managed at home in the community. And we even see that most post COVID-19 conditions seems to be more prevalent in mild cases. So we do have people with persistent fatigue, breathlessness, and what we call the brain fog with cognitive issues. So we do need guidance in terms of the clinical rehabilitation management for these people who have persistent symptoms and who have been treated in an outpatient setting or community setting.

So this being said, unfortunately, the evidence is very low at this point, and we can build upon available recommendations in terms of how to treat fatigue and breathlessness from other health conditions. But these recommendations at this point are not specific enough to the COVID-19 condition as the evidence and clinical trials are still going on. So we will shortly be developing what we call a post COVID-19 core outcome sets for clinical trials. So for researchers around the globe, hopefully to use the same outcome set and to be able to compare clinical trials that are done around the world. So we are aware of that question and we do need guidance as soon as possible. But at this point in time, evidence is low and we are waiting for more evidence to be published. Over.

Ogata: Thank you very much. As you mentioned that we need the long-term follow-up of the COVID-19 patients both severe and also the mild or moderate patients, I think. So in that case that the clinical form you showed today is very useful to generalize that information, I guess. So we're coming close to the end of the discussion time. So I'd like to take one last comment from each speakers. If you joined the seminar today, and if you have any comments for those topics or your perspectives of the COVID-19 world or any other free comments, please starting from Dr. Fukatsu. Okay.

Fukatsu: Okay. Thank you for the good opportunity for me to present here and report our effort in NRCD. It's a very good experience for me. Thank you.

Ogata: Okay. Dr. Kim please.

Kim: I'm at my home because of my personal matter related to COVID-19. Don't worry about, I'm not COVID-19. So it's a very meaningful time to learn about COVID response in other countries and above all, I am grateful I can safely attend this international seminar in a new environment called Zoom. And I also thank Japan NRCD for successful hosting. Thank you.

Ogata: Okay. So, Dr. Qing from China, please. Your microphone is off now.

Xu: Okay. Thank you. I think this meeting is very important during this period. And in China, we have done a lot of work about the control of COVID-19, with lots of experience. Today, I learned a lot from experts of WHO, Korea and Japan. In the future work, I think the COVID-19 will be overcome by mankind all over the world. Thank you.

Ogata: Thank you. Ms. Cheryl, please make some comment.

Cheryl: Thank you. First of all, for this opportunity to convene and share experiences, which is really the key thing, where each and every one of us has a role to play in addressing and responding to our global pandemic and the experiences that everyone has shared highlights the need for us to collaborate and continuously share learnings from each other. So we take note of the need to, the needs for our vulnerable population and the more detailed guidelines, we've taken note of how best we can also collaborate across the different stakeholders. So thank you for this opportunity.

Ogata: Thank you. Dr. Wouter please.

Wouter: Yes, and on my turn, I want to thank the organizers, NRCD for having us. It has been a pleasure exchanging knowledge and a learn from experience. I believe that the rehabilitation community needs to continue strengthening their role and the COVID-19 pandemic is demonstrating how important it is to include rehab into the healthcare system as an essential service, especially as we learn from the pandemic, that there is no cure to the disease. And many people are dependent on our service delivery, has a rehabilitation community. So hopefully we can start looking at learning from it and developing innovative service delivery platforms and slowly by slowly looking beyond the pandemic. Thank you.

Ogata: Okay. Thank you very much. I'd like to say thank you again for all speakers and it's my privilege to discuss with you all. So I take the talk back to the coordinator. Thank you.

Closing Address

Koichi Mori, Director, Rehabilitation Services Bureau, NRCD

Hi. This is Koichi Mori speaking. Ms. Xavier, Dr. Wouter, Dr. Xu, Dr. Kim, Dr. Fukatsu, Dr. Ogata and all the delegates, as we mark the end of the "International Seminar on the Rehabilitation during COVID-19," I wish to thank all of you for having time in this busy and difficult situation to attend this virtual international meeting. We apologize for the connection problem and change of the presentation order, and also for the rectangles displayed around our faces. This is because of the too intelligent camera we have.

We have learned that WHO has provided worldwide the guidelines for rehabilitating the COVID-19 ailment, as well as non-communicative diseases during this pandemic. WHO also provides online training courses for rehabilitation in seven areas, which are handy and concise especially when physical gathering is difficult. Dr. Xu also presented on tele-rehabilitation and tele-application in China using the cutting edge 5G technology. However, we have also learned that our government policies in many countries, including Japan, still restrict tele-rehabilitation.

We are informed that significant proportions of rehabilitation services for non-communicative diseases have been disrupted or reduced in many countries. The impact of the pandemic is much larger in the lower income countries, where rehabilitation services had been insufficient even before the pandemic. The pandemic has imposed too much strain on the medical resources for most of the countries to sustain rehabilitation services as before.

The take home message of today's seminar is that the rehabilitation services are feasible and gradually becoming available, even in the pandemic but only with appropriate resource allocation and careful preventive measures. This is a good sign in this bleak pandemic and hopefully we could extend what we have learned today in all the countries in the Western Pacific Region, as well as in the world.

The organize body of this seminar, the National Rehabilitation Center for persons with Disabilities in Japan would like to sincerely thank all the presenters, who have shared respectively important information and made the seminar very timely and useful. We are also very grateful to all the participants for taking time to attend the seminar in this difficulty. And thank you again for participation. Everyone, it is an honor for me to declare that our "International Seminar on the Rehabilitation during COVID-19" is now officially closed. Thank you and good day.