WHO Global Patient Safety Network webinar on Friday 8 May 2020
Patient safety implications during the COVID-19 pandemic
Questions and Answers

Webinar speakers who answered the questions asked during the webinar:

- **Professor Jung-Hyun CHOI,** Department of Infection Control – Infectious disease specialist, Director, Center for Infection and Control, Eunpyeong St. Mary's Hospital, Republic of Korea
- **Prof Kok Hian TAN,** Group Director & Senior Associate Dean, SingHealth Duke-NUS Institute for Patient Safety & Quality, Singapore
- **Dr Shogo KUBOTA,** Medical officer, WHO office in Lao People's Democratic Republic. Lao People's Democratic Republic

Q1. If you have any reports, adverse events or other material regarding medication safety, I would be very interested.

Professor Jung-Hyun CHOI

There has been no issue related to medication safety in our hospital. No shortage of particular drug has been reported.

Prof Kok Hian TAN

https://ismp.org/covid-19-resources
https://ismp.org/acute-care/special-edition-medication-safety-alert-april-16-2020/covid-19

Some of the information materials from Singapore - National standards, guidelines, advisory and Institution medication delivery services are as follows:

• National Medication Safety Standards and Guidelines: https://www.moh.gov.sg/resources-statistics/medication-safety

• Advisory on products claiming to prevent or treat COVID19: https://www.hsa.gov.sg/consumer-safety/articles/advisory-on-products-claiming-to-prevent-or-treat-covid-19-(coronavirus-disease-2019)

• Medical Devices Standards: https://www.singaporestandardseshop.sg/Covid19/Desktop

• Free Medication Delivery Services during COVID-19 crisis:
https://www.singhealth.com.sg/patient-care/patient-visitor-info/medicine-delivery-service
e.g. https://www.sgh.com.sg/patient-care/Pages/COVID19.aspx
e.g. https://www.snec.com.sg/patient-care/e-services/home-delivery-for-medication

Q2. I am very curious to know if there is any documentation of medicine safety during this period? We still work with medication without harm, but need to relate it to the Covi-19 situation so any resources are very welcome!

Professor Jung-Hyun CHOI

I totally agree. For example, telemedicine is not legally permitted in Korea. However, with Covid-19, the need for non-face-to-face treatment emerged and governments and related agencies began to discuss the expansion of telemedicine on the premise that policies and systems should be prepared in terms of drug safety. There is no documentation available yet in Korea.

Prof Kok Hian TAN

American Diabetes Association (ADA) – Town Hall: Inpatient Care for People with Diabetes & COVID-19 (www.ismp.org/ext/434}
Wolter Kluwer – COVID-19 Resources & Tools (www.ismp.org/ext/437)
Medscape – COVID-19 Clinical Guidelines (www.ismp.org/ext/448)
American Society of Health-System Pharmacists (ASHP) – https://www.ashp.org/COVID-19

The ISMO is also collecting info on
'Has your facility experienced a medication error related to COVID-19?'
https://ismp.org/report-medication-error

Q3. How would you suggest to act if a new coming patient of a nursing care home turned to be infected with COVID-19 (the entrance tests for COVID-19 were negative)?

Professor Jung-Hyun CHOI

I think it will depend on each country's response policy to Covid-19. Our hospital closed for 17 days due to a similar situation. If confirmed positive after hospitalization, the hospital will probably be partially or totally closed for at least 14 days following current government guidelines in Korea. During the closure period, contactors of confirmed patients should be found, tested and monitored. And measures to prevent transmission in the hospital (eg, isolation of each patient and only necessary medical personnel in the hospital) should be carried out. Nursing home are vulnerable to COVID-19 infection as patients are old and have multiple chronic conditions which predisposed them to higher mortality. Nursing homes serve highly vulnerable and frail seniors, who are at higher risk of developing serious health complications if infected with COVID-19 Nursing homes need to have a strict policy for admission and for visitors & healthcare workers serving there with regards to testing, isolation, contact tracing and quarantine.

Prof Kok Hian TAN

Some of the measures instituted in Singapore included for nursing homes during COVID period:
1. All residents and employees at nursing homes and other such facilities serving the elderly will be tested for COVID-19
2. Provide alternative housing arrangements for employees who interact with elderly residents to improve safe distancing
3. Visitors were no longer allowed in nursing homes, and infection control measures were put in place.

Incoming patient of a nursing care home needs to be effectively screened with history and tests. If in doubt, there is a need for isolation. In the rare scenario that a new coming patient of a nursing care home turned to be infected with COVID-19 (the entrance tests for COVID-19 were negative), there is a need for isolation and screening of all the contacts within the nursing home.

https://www.channelnewsasia.com/news/singapore/covid-19-testing-nursing-homes-priority-accommodation-staff-12696850

Q4. All panelist's -

Do you think that COVID hospitals should be separate from the main hospitals so that they can carry on with their work?

Professor Jung-Hyun CHOI
I think it would be ideal if you could do that. However, most of the hospitals in Korea are impossible in the aspect of structure and manpower. In this regard, establishing a separate infectious disease ward is under way as a national support project and receiving applications from hospitals in Korea.

Prof Kok Hian TAN
Ideally, yes. However, when we have a pandemic that is as contagious as COVID with high case load, a National Centre of Infectious Diseases/ "COVID Hospital" might face challenges in terms of bed capacity, access and resources. Public hospitals covering each region of the country/city can help take the load of testing and admission of patients. The load can be divided among the hospitals to avoid hospitals being overwhelmed. Eacg hospitals also need to take care of essential services even as elective cases and non-urgent/chronic cases are reduced. Thus, in this scenario, public hospitals should be ready to support the "COVID Hospital" and admit active cases of COVID. In general, the private hospitals can help by taking the recovering patients or the less severe cases from COVID.

In Singapore, our public and private hospitals are working hand in hand with our National Centre of Infectious Diseases (330-bed facility) in the fight against COVID. The Public Health Preparedness Clinic (PHPC) scheme also serves the primary healthcare needs of Singaporeans in times of national need. The Clinics (more than 900) under the PHPC scheme, provide subsidised treatment, investigations and medications during public health outbreaks. For the COVID-2019 outbreak, PHPC has been activated since 18 February 2020, and subsidies will be provided for patients diagnosed with respiratory illness.

In addition, to avoid jamming up usual healthcare facilities, additional facilities can be set up e.g. medical testing posts at affected sites. Care, quarantine or recovery facilities can also be set up in large places like convention areas or halls to reduce overcrowding at health facilities e.g. with the help of public health services, NGOs, or the uniformed forces.

https://www.moh.gov.sg/news-highlights/details/comprehensive-medical-strategy-for-covid-19

Dr Shogo KUBOTA

Can be, but no need if it is well zoned. And often impossible in a country like Laos where numbers of hospitals are limited. Need to maintain essential service provision.

Q5. What do you recommend we do now to ensure ending lockdowns like in Singapore? Worth listening on a bank holiday in UK.

Prof Kok Hian TAN

To end lockdown in Singapore, the following were some principles -

1. Risk assessment should be performed - The community spread is very low. The global situation is recovering – possibility of forming travel bubbles with similarly low or zero transmission countries
2. The mechanisms of safe distancing can be effectively implemented well when lockdown lifted.
3. Capability and capacity at workplace and community must be enhanced to test and detect cases early, contact trace quickly, ringfence close contacts, and establish the original source of the infection to stop other undetected transmission chains
4. The lifting of lockdown should be gradual and in steps for the public and also for the healthcare facilities. The resumption of more healthcare services beyond the essential healthcare service, needs to be calibrated based on the prevailing community transmission risk of COVID-19. The decision to resume more healthcare services should be based on medical necessity, carefully balanced against the use of hospital bed capacity especially those requiring critical care capacities such as ICU and isolation beds, availability and stockpile of essential medical supplies including drugs and blood supplies, and manpower deployment

References:

https://www.msn.com/en-sg/news/other/singapore-outlines-criteria-for-gradual-reopening-as-cases-ease/ar-BB13z1qX

https://www.straitstimes.com/singapore/easing-measures-a-balance-between-need-and-risks

While we continue to test for cases and care for confirmed and recovering ones, it is important that we can gradually return to our activities with safe management measures in place to prevent the reoccurrence of community spread.

Therefore, it is important that workplaces implement safe management before ending any lockdowns/ circuit breaker. In this aspect, our tripartite partners – the Ministry of Manpower (MOM), the National Trades Union Congress (NTUC) and the Singapore National Employers Federation (SNEF) have issued the Safe Management Measures required of employers which will be allowed to resume their operations: https://www.mom.gov.sg/-/media/mom/documents/covid-19/annex-c-checklist-of-safe-management-measures.pdf

This includes active screening of individuals (including staff) entering the compound. Nationally, we have innovated and implemented the SafeEntry App for visitors as well as staff and the TraceTogether app for contact tracing.

Internally, in a healthcare institution in Singapore, we have also implemented the Safe Distancing Audit (SDA) to educate and remind our institutions, healthcare workers, patients, and visitors to practice safe distancing. The SDA is conducted based on a comprehensive checklist that looks at environment distancing & environment hygiene (physical location redesigned for safe distancing measures and cleanliness of the location, etc.), human factors (hand hygiene, personal hygiene, PPE donning and doffing, safe distancing, wearing of appropriate mask and keeping of mask, etc.) & safe activity distancing (e.g. staggered hours, work from home, tapping on technologies for education, meeting and services, etc.).

Safe distancing management measures implemented at the National as well as at the Institution level can work hand in hand to prevent the reoccurrence of community spread.

Q6. Question to Dr Choi, How do you ensure self-monitoring of vitals amongst patients in the community? did you have face any problems ?

Professor Jung-Hyun CHOI

We do not fully believe in the effectiveness of self-monitoring. Before visiting the hospital, inform the process to be followed if there are symptoms through social network service. A variety of systems are in operation to determine whether there are symptoms related to Covid-19 and epidemiological link at the entrance of hospital, but it is not perfect. If symptoms are notified in the clinic office or laboratory zone, we are actively responding via broadcasting system and moving the patient to triage and testing (RT-PCR, chest X-ray or others). After the patient is moved, the area is temporarily closed and cleaning is performed.

Q7. Dr Choi could you please elaborate on the structure of hospital COVID-19 management structure (command control) as it was shortly viewed in your presentation.

Professor Jung-Hyun CHOI

The Covid-19 response headquarter of our hospital was composed of personnel selected from the medical department, nursing department, planning, secretary, human resources, purchasing, medical information, PI team, etc. under the direction of the executive vice president and the medical vice president. The headquater's most important role was to establish key policies and guidelines for Covid-19 response (patient management, staff management, environmental management, visitors management etc.) and all activities for hospital operations. 1-2 meetings were held every day, and the decision was made to be shared by all staff in the hospital via various methods (in-house messenger system, poster, notice board, or directly by team manager etc). Policies and guidelines were monitored to ensure that they were properly implemented in all departments, and revisions were made to ensure continued effective operation. The headquarter was operated from late February to April 30.

Q8. How do you plan to handle the covid situation for the 2nd wave (Especially during the flu season)?

Professor Jung-Hyun CHOI

For all hospitalized patients, Covid-19 RT-PCR, chest PA, and flu test will be performed prior to admission. The triage system will be maintained for patients visiting outpatient clinic to screen. Some areas of the hospital will be devoted to installing negative pressure facilities and establishing a safe treatment area for respiratory diseases. It will continue to educate all hospital workers about the 2nd wave and how to respond to them, and maintain their preparedness.

Prof Kok Hian TAN

In Singapore, we are planning to gradually resume our daily activities on 1 June 2020. The multi-ministry taskforce has outlined a set of Safe Management Measures to prevent the reoccurrence of community cases/ 2nd wave. For healthcare workers, flu vaccinations are required and monitored under one of our key performance indicators.

We hope the stringent safe management measures will help prevent the 2nd wave. There is a need for good contact tracing information to expedite contract tracing for quick easy detection and community containment should there be a 2nd wave:

Support contact tracing requirements:
− Encourage all employees at the workplace to download and activate the TraceTogether app
− Use SafeEntry visitor management system to log the entry of all personnel (including employees and visitors) entering the workplace. For the list of workplaces where SafeEntry must be deployed, refer to https://www.safeentry.gov.sg/deployment.
− Personnel who are unwell must be refused entry to the workplace

Require personal protective equipment:
− Require all onsite personnel, including employees, visitors and vendors, to wear masks and other necessary personal protective equipment at all times, except during activities that require masks to be removed (e.g. mealtimes).
− Ensure that all employees have sufficient masks, including any need to replace masks due to workplace conditions (e.g. humidity). Where possible, employers should consider improving the working environment for employees to enable them to sustain wearing the masks

Implement health checks and protocols to manage potential case:
− Conduct regular temperature screening, check for respiratory symptoms and submit these records for all onsite employees and visitors twice daily or where relevant. Employees and visitors must declare, before being allowed to enter premises, if they have:
    a. Travelled overseas in the past 14 days;
    b. Received a quarantine or isolation order, stay-home notice, or been issued medical certificates for respiratory symptoms; or
    c. A close contact who is a confirmed case

− Require each workplace employee to visit only one clinic for check-ups. Otherwise, employees must inform the clinic of all recent doctor visits over past 14 days for any symptoms that may be related to COVID-19
https://www.mom.gov.sg/-/media/mom/documents/covid-19/annex-c-checklist-of-safe-management-measures.pdf

Q9. Hello, I would like to ask if possible for everyone. how to develop risk perception on healthcare workers? what strategies did you use?

Professor Jung-Hyun CHOI
It is recommended through the hospital broadcasting system four times a day to ensure that all employees and visitors wear masks properly and have hand hygiene. Each department measures the presence of symptoms and body temperature of employees at work every day. Major decisions are announced using the in-house messenger system. We regularly provide education on infection control and prevention guidelines and wearing personal protective equipment.

Prof Kok Hian TAN
In terms of the risk perception on healthcare workers during a pandemic, the aim is to minimize the concerns and gaps through implementing and communicating the safety measures (risk mitigating strategies) to all staff effectively. An aware staff is a safe staff.

We have implemented the COVID19 Routine Instructions that are updated and circulated daily:
− Suspect Case Definition
− Screening Measures
− Management of Suspect & Confirmed Cases
− Patient Management
− Designated Wards for COVID-19 Management
− Infection Prevention & Control Practices
− PAPR Training Materials
− N95 Mask Fitting
− Swab Collection Training Materials
− Visitor Policy
− Movement of Staff between Healthcare Institutions
− Staff Travel Advisory
− Staff who are Unwell
− Staff Surveillance (Temperature and symptoms Monitoring)
− Safe Distancing
− Staff Leave
− Staff Training
− Staff Peer Support
− Frequently Asked Questions (FAQs) have been prepared to assist public-fronting colleagues with handling queries from patients and public.

Information on number of confirmed cases in each hospital as well as confirmed healthcare worker cases are also shared timely.

On the resilience risk perception on healthcare workers, we have implemented a resilience survey where healthcare workers are encouraged to participate. The tools used focus on sleep quality, depression, burnout, and compassionate care. This survey will be carried out to better understand and monitor the resilience risk perceptions and review the effectiveness of the intervention programmes. This is a structured approach to understand resilience level, design interventions, and evaluate outcome overtime.

Dr Shogo KUBOTA
Clinical training included correct understanding of mode of transmission and protective measures. Sounds basic but effective.

Q10. There were problems (especially in the US) regarding shutting down elective surgeries to supply healthcare workforce to COVID19 care. Will that be the same for your countries?

Professor Jung-Hyun CHOI
When Covid-19 exploded in South Korea, many hospitals have limited daily care, including elective and emergent surgery. In our hospital, we gradually began daily medical care as we reopened after the closure. Currently, about 80 percent of daily care performed before Covid-19 is going well, and elective surgery is not hampered by manpower. In addition, all clinicians share the burden of care for Covid-19 (such as circular work in triage clinic) in our hospital, so we take measures to ensure that certain clinical divisions are not burdened.

Prof Kok Hian TAN
Yes, like many other countries, many of our elective procedures have been put on hold since February'20 to free up capacity for COVID 19. Community Nursing has also been put on hold. Essential care such as patients who need emergency care, surgery for cancer, psychiatric conditions and allied health services like radiology can go on as advised by the Ministry of Health. Hospitals have also offered alternative means of consultation such as teleconsultation and remote prescription as well as free medication delivery services. The Ministry of Health is currently studying the gradual resumption of services in a regulated manner.

The calibrated approach in the managing of essential and elective services gives a consistent message to our patients and public. We have not experienced any major issues from the shutting down of elective surgeries.

Q11. Dr. Tan, what do you think are the main benefits of the systems approach you use? What are some of the main challenges?

Prof Kok Hian TAN
When a complex new issue such as a pandemic occurs, it can have a tremendous impact on the functions of the whole health services and also the whole society - its people, health,

economy, education and various processes of society. A holistic structure (e.g. preparedness and response infrastructure) undergirded by the systems approach helps.

A system approach can establish a collaborative model in understanding the new complex issue looking at multiple components, diverse stakeholders, and evolving dynamics of the pandemics. It allows for designated roles with accountability and comprehensiveness in addressing the issues and facilitates collaborative engagement for co-creation/co-design and learnings within and across ministries, organizations, communities and beyond the country to the region and world.

As comprehensive as it is, the approach will see challenges in having to bring people, systems, and processes with conflicting dynamics together for a common goal. The approach require greater agility and resources for timely implementation and having experienced systems leaders from relevant domains (multi-team) to drive and sustain it.

For example, there is a need to dynamically balance the needs of saving lives vs saving livelihoods. A siloed approach basing on lockdowns from virus epidemic curve data solely will falter the economy, which is critical to be sustained to ensure the essential livelihoods of families and to prevent poverty and starvation. Prolonged lockdowns may exacerbate the burgeoning mental health issues in the country and the neglect of other chronic disease management.

Similarly, there is a challenge for the health system to work together very closely e.g. private health enterprises with public hospitals and primary care systems, health care laboratories with academic & private research laboratories. Good leadership and strong co-ordination are critical.

Amidst all the happenings and myriad activities, there may be confusion of the rapidly evolving situation and misinformation or delay in the transmission of accurate information or advisories. Thus, optimal communications within the organisation and in the country are key challenges.

Q12. From the perspective of a healthcare system in low- and middle-income countries(LMICs), what has been the role of patient safety culture in this pandemic?

Professor Jung-Hyun CHOI

In the case of infectious diseases that humans have not experienced without any available treatment medicine or vaccine, such as Covid-19, I think the nation's financial status and medical system can be directly linked to the safety of patients. To ensure the safety of patients and communities, as many patients as possible, including asymptomatic patients, should be identified and properly treated according to the disease severity, and enough medical facilities should be in place to treat severe patients. In the case of LMICs, it may be difficult to actually take these measures. It is thought that in the context of limited finances and medical supplies or medical personnel, it would be advantageous in terms of patient safety to establish policies to protect the medical staff to enable the treatment of severe patients and to treat as many mild patients as possible in isolated facilities. The impact of job loss on health will also be enormous, so life support for the people should be provided at the same time.

Prof Kok Hian TAN

A strong patient safety culture can help enhance the safety of patients, staff and the systems tackling a new epidemic. In the COVID-19 crisis, there need to be proper management of the staff, patients and visitors with new and appropriate protocols to reduce the risks of infection and to enhance patient safety. To mitigate any risks of virus transmission, there are safety protocols in place for the management of suspect or confirmed COVID-19 cases in our hospital as well as protocols for safe distancing for the patients, staff and visitors to the health facilities. A strong patient safety culture ensures adherence to protocols and allow staff and patients to be able to report gaps and deficiencies and to suggest improvement. It is important to promote and maintain a good patient safety culture through optimal communications, good leadership and promoting team work and resilience. It is critical for LMIC countries with limited resources as a strong patient safety culture can enables effective collaboration on the sharing of limited resources.

Enhancing resilience and creating joy at work is one of the key components in strengthening Patient Safety Culture. In this pandemic, the well-being of healthcare workers is ever more critical as this could be a long battle for healthcare. Collaborations with relevant departments to provide mindful self-care, peer support as well as counselling is necessary to ensure the well-being of our healthcare workers. In terms of psychological safety to speak up for patient safety and health worker safety, the message must be strengthened.

Q13. For Dr. TAN: Do you use a blood thinner for your COVID-19 positive patients preventing the Disseminated intravascular coagulation that can be observed in some patients?

Prof Kok Hian TAN

As more information become available, blood thinners are being used on COVID19 patients in critical care, and when are not assessed to have high bleeding risk. The treatments should be individualized according to the patient status and requirements.

https://onlinelibrary.wiley.com/doi/full/10.1002/ajh.25823

https://www.forbes.com/sites/lipiroy/2020/05/08/could-blood-thinners-be-the-magical-elixir-covid-19-patients-have-been-waiting-for/#230a0396553d

https://www.tnp.sg/news/singapore/blood-clot-risk-seen-covid-19-patients

https://www.ncid.sg/Health-Professionals/Diseases-and-Conditions/Documents/Treatment%20Guidelines%20for%20COVID-19%20%282%20Apr%202020%29%20-final.pdf

Q14. Dr. Kubota, you mention how the COVID-19 crisis can be an opportunity for health system strengthening. Can you give us some examples of how this is happening?

Dr Shogo KUBOTA

Unprecedented attention that health sector receives gives the sector chance to mobilize other sectors that has been very difficult in the past. For example, strengthen primary health care by engaging local authorities.

Q15. Which is the machine by which the contact of patients were identified at different areas for example wheel chair?

Dr Shogo KUBOTA

We used "Glowgerm" We can see the cream glow with UV light.

Q16. Prof. Tan's emphasis on strong joint government approach together private sector resonates. With hindsight is there any particular preparation Singapore could have done more in anticipation for potential epidemics?

Prof Kok Hian TAN

Basically, we must rethink in the systems perspective, on how we can better carry out effectively work activities without the need of a physical venue/location, wherever possible. This can cut viral transmission without impacting the economy too much. In the thick of this crisis, there is a big opportunity to bring stakeholders both private and public to come together to innovate and work out solutions. The dire need for tele-medicine, tele-education, rapid development of diagnostics, therapeutics, vaccines, public health strategies and policies innovation/optimal implementation can push the world to jointly work together to improve outcomes for everyone.

For potential/ future pandemics, we could have:

– Well integrated technological applications/ platforms to boost the contact tracing efforts. One that could not be opt out.
– Alternative work arrangements and work-related systems that could be effectively put into operations with the outbreak of a pandemic
– Agile deployment strategy (e.g. have non-essential workforce to support the front-line healthcare workers)
– Holistic management of the community groups especially the vulnerable groups – nursing homes and those where safe distancing is a challenge e.g. migrant workers dormitories with review of workplaces (including dormitories) to have physical layout feasible for safe distancing measures
– Readily available technologies for non-face-to-face meeting, education & services.

Q17. Is your respective country Covid19 response have the capacity to navigate in patient care management with systematic literature review? If yes provided by which body/institutions?

Professor Jung-Hyun CHOI

A large framework for Covid-19 patient management is provided by the Korea Centers for Disease Control and Prevention. Each medical institution is organized and operated according to the circumstances within this framework. As far as I know, there is no systematic review of patient care management.

Prof Kok Hian TAN
The Singapore Multi-ministry Task Force on COVID19 was set up to:
- direct the national whole-of-government response to COVID19;
- coordinate the community response to protect Singaporeans and stay vigilant against the spread of the disease; and
- work with the international community to respond to the outbreak.

Regular updates on the COVID-19 (Coronavirus Disease 2019) situation in Singapore, as well as other important government announcements are available for the public-

https://go.gov.sg/whatsapp
https://www.moh.gov.sg/ (MOH website)
https://go.gov.sg/covid-19 (Gov.sg website)

Similarly, for our healthcare clusters, we support the whole-of-government response to COVID19 as well as work with the international community to respond to it. Our preparedness and response system has been updated from SARs to include the measures relevant to COVID19 including references from WHO. Some of the literature as follows:

https://www.ncid.sg/Pages/default.aspx
https://www.ncid.sg/Health-Professionals/Diseases-and-Conditions/Pages/Research-Publications.aspx
https://www.ncid.sg/Health-Professionals/Diseases-and-Conditions/Pages/COVID-19.aspx
https://www.duke-nus.edu.sg/covid-19
https://sph.nus.edu.sg/covid-19/

Q18. Professor Choi, how did you use telehealth in your hospital? For what care processes? Who was involved?

Professor Jung-Hyun CHOI
Doctors in all clinical departments provide telemedicine if the patient wants. It was only for patients who had previously visited hospitals and received treatment. They listened to changes in symptoms over the phone and prescribed necessary medications. The patient received a prescription at a separate place away from the hospital's main building and received medicine from a nearby pharmacy. Patients' satisfaction with telemedicine is very high, but medical staff are not satisfied with concerns about the possibility of inappropriate diagnosis and treatment. A high level of satisfaction among patients may mean that mild, chronic diseases such as diabetes and high blood pressure are unnecessarily high in use by higher-level medical institutions such as university hospitals in Korea.

Q19. Have you identified unique adverse events occurring as a result of COVID-19?

Prof Kok Hian TAN answered this question in the webinar.

Q20. What are you learning from dealing with patient demand (especially in primary care) from those with potential serious illnesses / disease and did not present to healthcare services during the pandemic?

Dr Shogo KUBOTA answered this question in the webinar.

Additional answer from Professor Jung-Hyun CHOI

Korea is implementing a national health insurance system. Regardless of the severity of the disease, it is possible to treat at a medical institution at any time on his/her own will. In addition, if someone has symptoms such as fever, he/she can get a Covid-19 RT-PCR test free of charge at a public health center or triage clinics in university hospitals. There is no hurdle with hospital use except when the patient does not visit the hospital for fear of Covid-19 infection.