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Information Magazines for Healthcare Workers

# HosCom International

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**World Information**

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**Introduction**

Hand hygiene is widely regarded as a fundamental aspect of clinical practice, serving as an indispensable measure for the prevention of healthcare-associated infections (HAIs) and the spread of antimicrobial resistance (AMR). In 2009, the World Health Organization (WHO) issued guidelines on hand hygiene, emphasizing the need for a comprehensive approach to instituting behavioral change in this area. (1) The WHO Multimodal Hand Hygiene Improvement Strategy (MMIS) is an evidence-based approach designed to promote a hand hygiene behavioral change among healthcare workers. The MMIS comprises five key elements: system change, education and training, monitoring and feedback reminders in the workplace, and institutional climate change.

It is important to note that individual interventions, such as the installation of alcohol-based hand rub (ABHR) dispensers in wards or monitoring hand hygiene compliance among healthcare workers, are insufficient to promote hand hygiene effectively at the facility level. Thus, a more systematic approach is required to implement proper hand hygiene practices using the MMIS strategy, essential to which are education and training. As stipulated by the WHO guidelines, all healthcare workers require comprehensive education and training on hand hygiene. As such, by employing a user-centered, standardized approach to disseminate clear messages, such training and education can foster behavioral and cultural changes, ensuring that hand hygiene competency is deeply ingrained and maintained among all healthcare workers. Furthermore, WHO published a research agenda concerning hand hygiene in healthcare in 2023, which included 21 high-priority research statements following extensive expert consultations and consensus agreement processes. (2) One of these statements aimed "to evaluate the impact of different hand hygiene training and educational strategies on the knowledge and skills of health and care workers across all levels of the healthcare system." Therefore, the pursuit of an effective training approach remains a key focus within the "education and training" domain.

**What is the TTT in hand hygiene?  
Course structure and strategy**

The Train-the-Trainers (TTT) course is a standardized approach to hand hygiene training for infection prevention and control (IPC) professionals, (3) originally launched by the University Hospitals of Geneva (HUG) as a WHO Collaborating Centre (WCC). This three-day practical training program is based on the WHO MMIS (Figure 1).

The course consists of didactic lectures, hands-on sessions with video reviews of clinical scenarios, role-playing of clinical scenarios, and the mutual exchange of successful experiences and challenges faced by the participants in their clinical settings, with the aim of enhancing interactions and discussions between participants and lecturers. The materials developed for the course include videos and case scenarios for role-playing, and the original course is facilitated by IPC practitioners trained and validated in hand hygiene by IPC/WCC faculty members and local



**Figure 1.**  
The course flyer of  
Train-the-Trainers  
in Hand Hygiene  
(Uganda)

IPC focal points in their respective countries. Simulation-based sessions focus on the direct observation of hand hygiene compliance monitoring according to the WHO's "My 5 Moments," using video reviews of clinical scenarios and role-playing.

The key aspects of the course include the impact and burden of HAI and AMR; the advantages and disadvantages of direct observation, automated electronic monitoring, or a combination of both; feedback from the course participants on the direct observation of the WHO's "My 5 Moments"; barriers to hand hygiene practices, such as gloves, nails, jewelry, and skin problems; and an education and validation plan for hand hygiene observers, with inter- and intra-rater reliability testing (optional). In addition, improvements in participants' knowledge of hand hygiene throughout the course were assessed using a pre- and post- course evaluation.

The course is designed to enhance participant's knowledge, to share experiences, and to expand networks, and IPC professionals who have participated in the course can use this reference training method to disseminate knowledge further to other healthcare workers (that is, the concept of "trainees becoming trainers"). All course materials are made available for modification and adaptation by course participants to encourage the organization of subsequent TTT courses, and they are currently available in English and Spanish. In addition, the course content is translated into local languages, and simultaneous interpretation is provided for non-native English- or Spanish-speaking countries, where necessary, as the TTT course, first launched in 2016, has been conducted across four continents (Figure 2). Course lecturers and local organizers are present at all times throughout the course to answer any questions related to the interpretation of information.

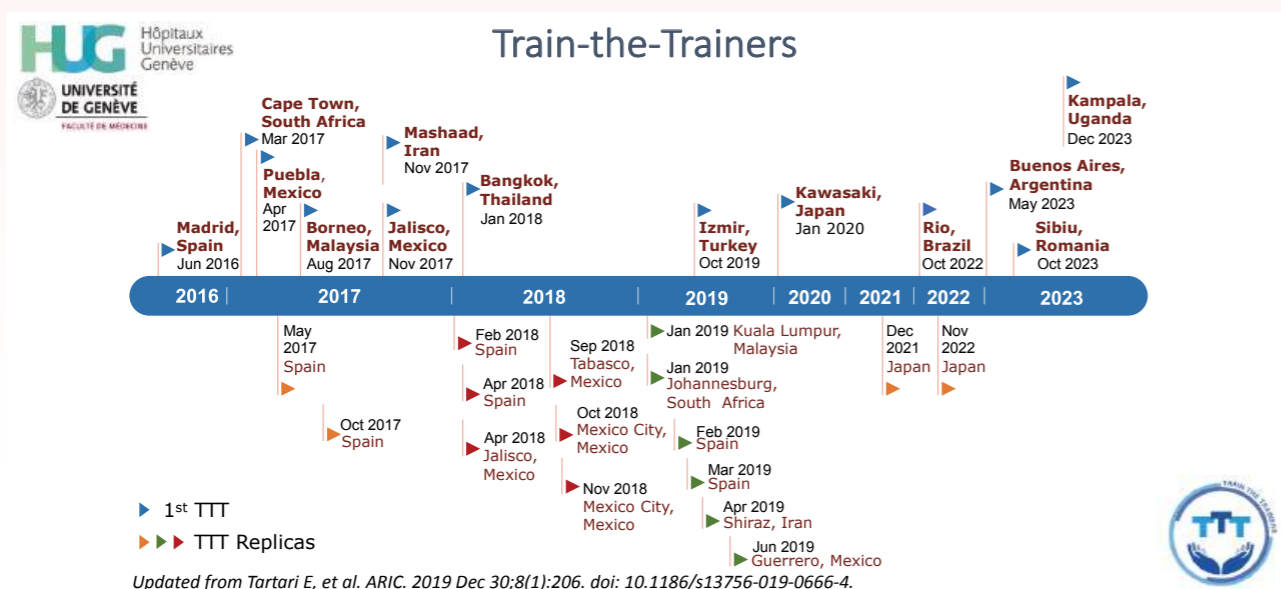


Figure 2. TTT and TTT replicas in hand hygiene, June 2016–December 2023.

Timeline chart showing the evolution of the TTT course between June 2016 and December 2023. \*Replicas are organized by former TTT program participants and local IPC organizers. Note: The term TTT program depicts the overall process, including the original first courses and replicas.

### General findings at the global level

Tartari et al. conducted a study examining the effects of the TTT course on hand hygiene knowledge in six countries: Iran, Malaysia, Mexico, South Africa, Spain, and Thailand.(3) The target audience was professionals involved in IPC at healthcare facilities, and the evaluation utilized a pre- and post-training questionnaire to assess knowledge related to microbial transmission, hand hygiene principles, and the WHO methodology for hand hygiene monitoring. The study found that 305 IPC professionals completed the TTT course across over 20 countries, as well as observed a significant improvement in hand hygiene knowledge following TTT course completion in all participating countries. The positive aspects of training include a unique learning environment, experience sharing, hands- on practice, and networking among IPC professionals. The study revealed further that the knowledge improvements were sustained in follow-up evaluations conducted five months to two years after the initial course. As such, this study's global impact is considerable, demonstrating the effectiveness of the TTT model in significantly improving hand hygiene knowledge among healthcare professionals, which is crucial for driving progress in IPC. Further, the success of the TTT model in diverse countries indicates its adaptability and relevance across different healthcare systems and cultural contexts.

The TTT model, which equips individuals to instruct others, has evidenced considerable improvements in hand hygiene compliance and comprehension across diverse healthcare settings, and the approach is particularly beneficial in resource-constrained environments, providing a cost-effective and scalable solution to bolster infection control practices. This study accentuates the crucial function of standardized, all-

encompassing training in cultivating a culture of safety and cleanliness in healthcare settings on a global scale.

### Local adaptation, adoption, and cascading effect: Mexico

The hand hygiene TTT training approach was first offered in Mexico by the HUG team on two occasions, in April and November 2017, training 84 healthcare professionals as hand hygiene leaders in Mexico. The course was delivered mostly in Spanish by Spanish-speaking lecturers from the HUG team using translated materials. The commitment established by the leaders who received training implied the responsibility of continually promoting the training and adapting it to the different contexts and needs in other regions and institutions of the Mexican health system. Thus, a cascading effect was evidenced: in total, 278 health professionals were trained over five training workshops conducted in the states of Jalisco, Tabasco, Mexico City, and Guerrero between 2018 and 2019.(3)

The training of health professionals in hand hygiene is critical for the consolidation of IPC teams in health facilities, involving the 8 basic components of IPC, which are taken as starting points. In the case of Mexico, 15 IPC initiatives were identified, including the necessity for regulatory frameworks or manuals and guidelines that encourage training in different aspects, including hand hygiene.(4) Bedside implementation, however, needs a continuation of the training cascade. Next steps should include a consistent and standardized competency validation process for hand hygiene trainers and observers to ensure the correct application of the MMIS.

### Local adaptation, adoption, and scaling up: Japan

The TTT course was first conducted in Japan by the HUG team in January 2020, for which the original TTT materials were translated into Japanese where appropriate, and several

Japanese physicians helped the HUG lecturers deliver the course as interpreters. Satisfaction among about 80 participants was overall high, but a few challenges were identified based on a course satisfaction survey. The first was related to the language barrier: despite the translated materials and live translation, most Japanese participants spent much energy interpreting comments by lecturers word for word. In addition, each lecture took longer because of multiple interruptions in the live translation, and time management in the course delivery was difficult. The second challenge was related to the different contexts of healthcare across countries. For example, some simulation videos were created in the Swiss healthcare setting, causing some participants difficulty in applying the videos to their own healthcare contexts.

Therefore, modifications were made in 2021 and 2022, where participants who wanted to become "trainers" were recruited from among the first TTT participants ("trainees") to formulate a team: "TTT-Japan." Regular meetings were held monthly, and the team created an agenda to improve the TTTs and update their progress. They modified the TTT program slightly in consultation with the HUG team so the content would be of even greater interest to Japanese participants while maintaining the original teaching points intended to be delivered. Other activities included the standardization of Japanese terms to be used for the WHO MMIS and the creation of simulation videos elaborated in a Japanese healthcare setting. Due to the COVID-19 pandemic, the team transitioned its course delivery to hybrid (on-site and online) in 2021 and 2022, respectively, leading not only to consistent knowledge improvements between the pre- and the post-course period among TTT participants, but also to trainers' further contributions to institutional climate change in their own facilities. (5) TTT-Japan provided a space in which trainers could work on hand hygiene promotion as a team and learn from each other; as a result, they gained more confidence in hand hygiene promotion activities at their own facilities, including leadership engagement.

### Local alcohol-based hand production, adaptation, and adoption: Uganda

Most recently, in December 2023, the TTT course was conducted in Uganda, offered for the first time in a low-economic African country, as historically, the Japanese International Cooperation Agency (JICA) contributed to patient safety in Uganda. Hand hygiene promotion was selected as the first Global Patient Safety Challenge by the WHO in 2005, and it was highlighted as an important patient safety agenda in Uganda. The TTT was officially organized by the Ministry of Health (MOH) in Uganda in December 2023 with the support of the JICA, in which more than 40 IPC focal points or IPC professionals participated across 18 regional referral hospitals, as did major stakeholders, including several collaborators from the MOH, such as high-level colleagues. The demand for IPC training and education was excessive, and participants and lecturers exchanged approaches to improve hand hygiene in resource-constrained settings. Many participants also worked on quality improvements and patient safety at their facilities, suggesting that the TTT course's impact would be reinforced by the close linkage with other key horizontal activities, such as patient safety.

Importantly, the MMIS cannot be implemented without a pre-requisite system change, i.e., the universal availability of the ABHR solution at the point of care, facilitated in Uganda by the long-term planned local production of ABHR from sugar cane byproducts in Jinja, in the middle of the country. The successful partnership between the Kakira sugar factory and Saraya Manufacturing (U) Ltd., for more than 10 years has made it possible for the MMIS to be implemented in several hospitals in Uganda and, in particular (but not only) in hospitals involved in the MIKONO study in four locations of the East part of Uganda: Kumi, Mbale, Tororo, and Busia.

### Conclusion and Perspectives

Hand hygiene promotion is a never-ending process, and as such, the TTT will continue to be delivered by the HUG team, as well as by TTT-trained local teams across the globe, creating a cascading, or even snowballing effect. "Adapt to adopt" is key to this success, so the TTT course content and its mode of delivery will continue to be adapted, maintaining the standard concept of the WHO MMIS, built upon the multimodal strategy developed at HUG in the 1990s. In addition, the TTT format can be utilized in other IPC areas, such as environmental cleaning. Now that the TTT network has been expanding globally, its potential to impact IPC in healthcare is significant. Thus, we hope more and more IPC professionals and frontline healthcare workers will join, adapt, deliver, and spread TTT knowledge, thus contributing to patient safety altogether as a global team effort.

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### 和訳要約

#### 世界に広がる手指衛生：影響をもたらすTTT(手指衛生指導者育成プログラム)の足跡

2009年、世界保健機関(WHO)は手指衛生についてのガイドラインを発表し、この分野における行動変容を確立するための包括的アプローチ、WHO手指衛生多角的戦略(MMIS)を推奨している。MMISの1つである「研修及び教育」を実践するため、医療施設のIPC専門家を集めて研修を行い、参加した専門家がそこで得た知識を自施設に広めるTrain the Trainers(TTT)コースを2016年に開始した。研修修了者を次の講師に育てるTTTは、その後の追跡評価においても各医療施設で手指衛生遵守率、知識の向上が見られたなど有効性が確認されている。日本初のTTTは2020年1月にジュネーブ大学病院のチーム等によって実施された。研修参加者の満足度は高かったが、シミュレーションビデオの舞台となったスイスの医療現場が日本と異なったため、自施設での導入を困難に感じている参加者がいるなど課題もあった。そこで、このTTT参加者が講師を務めた2021年、2022年のTTTでは、シミュレーションビデオを日本の医療現場で製作するなど、参加者の理解をより深められるよう改善された。最近では2023年12月にアフリカの低経済国であるウガンダで初となるTTTを実施。参加者と講師陣で、資源に限りある環境で手指衛生遵守率を改善するためのアプローチについて活発な議論が行われた。またMMIS実践のためには揮発性アルコール消毒剤への容易なアクセスが必須であるが、ウガンダ中部ではサウキビの副産物からアルコール消毒剤の現地製造が行われ、病院で使用されている。これはウガンダのカキラ製糖工場とサラヤウガンダの10年以上の取り組みから実現に至った。TTTは今や研修を受けた世界各地のチームによって、MMISの基本理念を維持しつつ各地で受け入れられやすいように工夫をこらしながら、継続的に実施されている。TTTの形式は手指衛生だけでなく環境衛生など他のIPC分野でも応用が可能である。これからの世界的な拡大を続け、患者安全への貢献に期待したい。

In the first volume of HosCom 2023<sup>1</sup>, we discussed the return to normal life in European countries that had opened, whether rapidly or gradually, after the prolonged period of lockdown (closed for social and business activities). In discussing the present topic on long COVID-19, it is worth taking a quick panoramic look at the situation of COVID-19 infection and control across healthcare settings in Europe.

Life across Europe and, indeed, around the globe has moved from the pandemic period to almost the pre-pandemic normalcy. Travels, shopping, hospitality, leisure, entertainment, sporting events, and even the healthcare sector are back to life without pandemic infection controls and precautions.

Caution and scientifically reasoned continuation of infection control measures such as washing and cleaning hands, application of alcohol hand rubs, and surface disinfections as part of an ongoing multi-model control measure were then proposed on the basis of the prevailing data showing that the causative virus of COVID-19, SARS-CoV-2, and its new mutants were still present in populations though spreading in fewer countries with less severe health impacts on the population<sup>2</sup>. The preventive measures have since almost disappeared across Europe, including in key public places, airports, train stations, and even in healthcare institutions. Where they remained, they are largely non-functional and in certain cases no longer attended to. All the local laws enacted to enforce the measures have also been legally dismantled.

Has the COVID-19 virus and its health effects disappeared, or are people simply co-habiting with the virus and its mutants? The latter seems to be the case, as evidence suggests that humans are now co-habiting with the SARS-CoV-2 variants, the agents of COVID-19<sup>3,4</sup>.

A new sub-variant of the Omicron virus variant has been spreading in parts of Europe. Earlier in the last winter season, more than 800,000 patients had been recorded as infected by the Eris virus in the United Kingdom.

#### What is the current situation of COVID-19 across Europe?

The 2023/2024 seasonal winter infection was described as severe because of what some have referred to as a triple whammy, referencing the combined effect of the COVID-19 virus, the usual seasonal flu, and respiratory syncytial virus (RSV), also known as human RSV and orthopneumovirus. RSV is a contagious virus that causes respiratory tract infections with mild-to-severe cold-like symptoms depending on the patient's pre-existing medical conditions and age<sup>5</sup>.

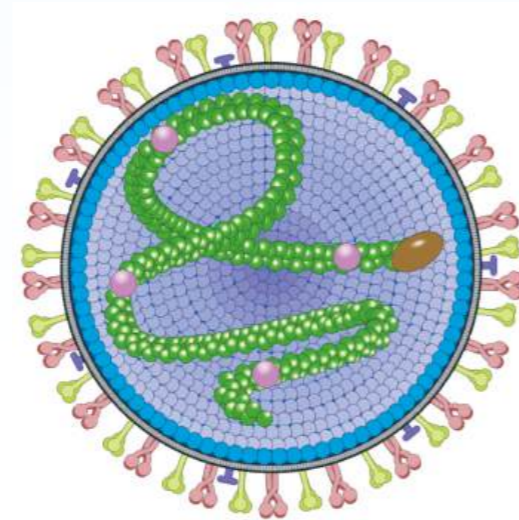


Figure 1. Respiratory syncytial virus (RSV)<sup>6</sup>

The effect of the disease differ between age groups. The most common symptoms, which may be confounded by the symptoms of COVID-19 infection, include cough, fever, headache, fatigue, sore throat, congestion, sneezing, runny nose, and wheezing, and data show that one in 20 elderly adults contract RSV infection every year in Europe, which may result in severe illness and death<sup>5,6</sup>.

The combination of COVID-19, flu virus, and RSV infections created a challenging confounding condition that manifests similar symptoms in cases of COVID-19 in the United Kingdom and other parts of Europe. Some countries have reported increases in the incidence rates of COVID-19 without a corresponding increase in hospitalisation.

Incubation of the Omicron virus in a cell tissue culture in the laboratory. The virus is incubated to allow it to multiply, which on average take 3 to 4 days with a maximum of 8 days<sup>7</sup>.

Although all infection prevention and control (IPC) measures, including legal powers that enable and enhance implementation, have been lifted and the pandemic, or 'global health emergency'<sup>3,4,8</sup>, are officially declared over by the World Health Organization (WHO), variants of the COVID-19 virus and the disease remain.

Above all, health impacts remain in a relatively small number of patients. One such health fallout of concern from COVID-19 has been recognised as Long COVID-19<sup>9,10</sup>. The decision to declare the end of the pandemic was reached after data analysis revealed a decreasing trend in COVID-19 deaths, a decline in related hospital and intensive care admissions, and a high level of population immunity to SARS-CoV-2.

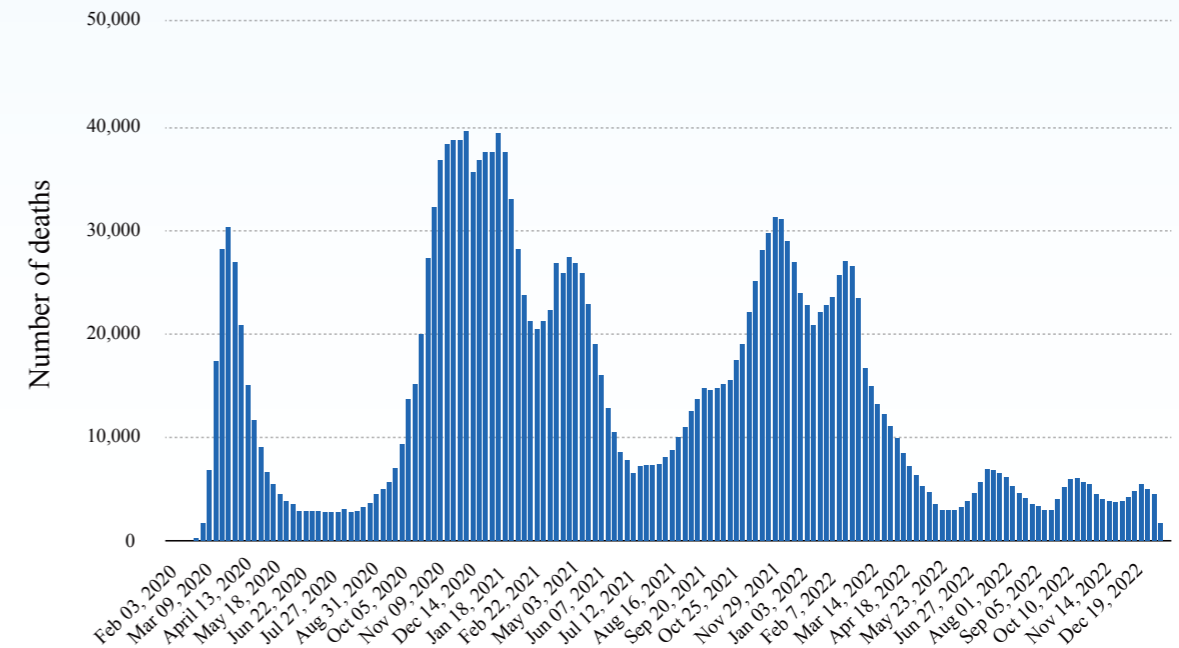


Figure 2. Number of new COVID-19 deaths in Europe, February 2020–December 2022<sup>10</sup>

As COVID-19 persisted and the number of patients increased, patterns of recovery and survival rates varied significantly between patients. Currently, although the control of the pandemic has been declared a global success, some patients are still experiencing the various impacts of the disease long after that declaration<sup>10</sup>.

In a fast-shifting global geopolitical and economic landscape, these patients were beginning to feel like falling through the cracks of healthcare systems or carrying on while suffering in silence, with the global return to normal activities, overshadowing the lingering impact of COVID-19 in this minority group, hence the name long COVID-19.

What is this disease, Long COVID-19, and who is susceptible? Does it have a cure, or is it preventable? All these pertinent questions of concern and more, continued to be asked.

#### What is long COVID-19?

Long COVID-19 descriptions are based largely on the clinical expressions and knowledge surrounding COVID-19. It started out as an initially unexplained or undiagnosed condition that developed in a proportion of COVID-19 patients. The condition has been referred to by different names, including long COVID-19, long-haul COVID-19, post-COVID-19 syndrome, post-acute COVID-19, long-term effects of COVID-19, and chronic COVID-19. The WHO recommended post-COVID-19 condition<sup>9</sup>.

In a coordinated programme involving COVID-19 patients and experts, the WHO provided an evolving definition of long COVID-19 as follows<sup>11</sup>:

*“Post-COVID-19 condition (PCC) occurs in individuals with a history of probable or confirmed SARS CoV-2 infection, usually 3 months from the onset of COVID-19, with symptoms that last for at least 2 months and cannot be explained by an alternative diagnosis.*

*Common symptoms include fatigue, shortness of breath, cognitive dysfunction, and others and generally have an impact on everyday functioning. Symptoms may be a new onset following initial recovery from an acute COVID-19 episode or persist from the initial illness. Symptoms may also fluctuate or relapse over time.”*

Among other criteria, the WHO established a symptom duration of at least 3 months to qualify it as a long COVID-19 condition<sup>7,8,9</sup>.

According to the US Centers for Disease Control and Prevention (CDC), Long COVID is the occurrence of new, returning, or ongoing health problems 4 or more weeks after an initial infection with SARS-CoV-2, the virus that causes COVID-19<sup>12</sup>. Just like the symptoms, there are various definitions, one common feature being a relatively long duration of the disease in the affected patients.

#### What are the symptoms of the Long COVID-19 Condition?

Although the disease expression and duration in individuals may clinically vary widely, Ann Li, the Chair of Long COVID Europe, provided a graphically vivid description of the symptoms of the disease in WHO News of September 2022<sup>13</sup>:

*“My husband and I got COVID-19 in the first Belgian wave of the virus in March 2020, ..... I don't have clear memories from that time, which the doctors think was probably caused by lack of oxygen, but all I remember is the pain, not being able to breathe, being very tired and wanting to sleep all the time,”*

*“The worst thing for me has been the ongoing brain fog, because I normally work in a very cognitive setting where I'm having to use my brain a lot. Yet, for a while, I couldn't even talk properly. I could only talk very slowly as it was so difficult to form sentences in my head. I just couldn't concentrate or multitask anymore. Reading became impossible. It was just horrible.”*

Another widely reported case was the passing of the prominent UK personality Derek Draper at the age of 56, after years of Long COVID-19 infection. The wife, Kate Garraway, herself also a well-known TV personality, announced his death on 5 January 2024<sup>14</sup>.

*“As some of you may know he has been critically ill following a cardiac arrest in early December which, because of the damage inflicted by Covid in March 2020, led to further complications....”*

In the worst-case scenario, death from long COVID-19 has been reported<sup>14</sup>. It is important to note that the disease expression and duration in individuals may vary widely<sup>15</sup>.

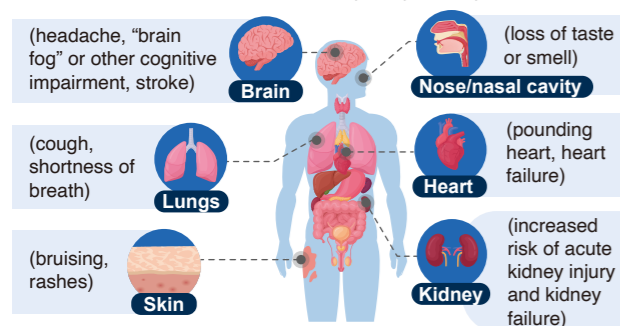


Figure 3. Symptoms of long COVID<sup>16</sup>

Dr Hans Henri P. Kluge, WHO Regional Director for Europe, pointed out that many people in the region may be saddled with debilitating symptoms many months after their initial COVID-19 infection<sup>17</sup>.

### Who can develop long COVID?

In general, most people recover from COVID-19 within weeks of the infection. However, symptoms may persist for much longer in a minority of the population. This may last for months or years and may cause other disabilities or, unfortunately, death<sup>18</sup>.

Research findings have shown that between 1 month and 1 year after having COVID-19, 1 in 5 people aged 18 to 64 years develop at least one medical condition that might be due to COVID-19. Among people aged 65 years and older, this number increases to 1 in 4, with at least one medical condition potentially linked to COVID-19.

### How many people have contracted long COVID-19?

It is unclear how many people have been affected by long CoVID-19. Studies have shown that 10% to 50% of all COVID-19 patients also have the extended disease<sup>2,4,9,17,18</sup>. If accurate, this is a staggering number that appears to be supported by a recent global estimate published in December 2023 by the Global Center for Health Security, which suggests that more than 65 million people, including children and adults, have long COVID-19<sup>18</sup>.

A WHO modelling showed that approximately 17 million patients living in the 53 member states of the WHO European Region might have experienced the post-COVID-19 condition or syndrome, also known as long COVID-19, during the first 2 years of the pandemic, from 2020 to 2021. A WHO report recognised that several millions of people may have to live with long COVID-19 for years to come<sup>9</sup>.

According to March 2022 data from the United States, long COVID-19 was estimated to have impacted 7.7 to 23 million people, of whom an estimated 1 million have been put out of work<sup>7</sup>. Hence, long COVID-19 is a significant and growing global problem.

### How are the healthcare needs of this relatively new group of patients met?

Apart from the usual health provisions in the different healthcare settings across Europe, including hospitalisation and hospital visits, extensive and resource-intensive ‘care at home’ by the patients' close relatives constitutes an unofficial healthcare segment<sup>19,20</sup>.

To respond to the health needs of this group, an international network organisation, Long-COVID Europe, was created as a non-profit health support organisation. This is composed of 19 patient associations based in the European Union member states. The WHO has announced a partnership with Long-COVID Europe to help address knowledge gaps and support patient advocacy.

### What is the potential long-term impact of the post-COVID-19 condition?

A wide range of complex post-infection conditions, which vary widely between individuals, may develop in some patients after repeated infection or long CoVID-19. People who have had severe COVID-19 might experience organ damage, including the heart, kidneys, skin, and brain<sup>9</sup>.

Inflammation and perturbation of the immune system may also occur. As noted earlier, the symptom durations are uncertain and may end with a fatality. Each effect has been suggested to be a potential precursor of other new conditions such as diabetes, heart, nervous system problems or mental health breakdown<sup>10,12,13,14,15</sup>.

### What should I do if I think I am experiencing symptoms of long COVID-19?

Global healthcare authorities have advised consulting your local healthcare provider if the COVID-19 symptoms have become prolonged. For proper analysis and assessment, some preparatory steps may have to be taken before the appointment, such as writing down answers to the following questions<sup>20</sup>:

- Describe the symptoms you are experiencing (may differ between individuals).
- When did you first experience the symptoms (how long ago)?
- Do the symptoms worsen under certain conditions or activities?
- What is the frequency of the symptoms you are experiencing?
- How do the symptoms affect your daily activities?
- What other conditions are you experiencing?

### How can I avoid contracting long COVID-19?

The long COVID-19 condition, or syndrome is a known consequence or follow-on of COVID-19 in some patients. Thus, the first principle of any preventive measure is to consider the basics in the prevention of contamination or infection by the SARS-CoV-2 virus and any of its newer variants. Therefore, it is critical that all IPC measures for COVID-19 are put in place.

The control and preventative measures cited in numerous publications, including the HosCom in March 2023<sup>1</sup>, include proper hand washing with soap and water, application of a broad-spectrum alcohol hand rub such as any of Saraya's Alsoft VB Hand Disinfectant range, appropriate use of personal protective equipment such as masks and gloves, and social distancing, particularly when confined in poorly ventilated rooms with potential virus carriers (e.g. persons experiencing any COVID-19 symptoms). It is good practice for individuals who test positive for the COVID-19 virus to voluntarily take the necessary measures, including isolation, where possible.

Other IPC measures in a multimodal approach should include proper surface cleaning and disinfection with the right product. Ultraviolet C devices are also known to be effective against the coronavirus and its variants and sub-variants such as Omicron and Eris.

### Going forward: Future recommendations for the management and prevention of long COVID-19

First and foremost, the usual IPC measures for COVID-19 must be practiced along with strengthening of immunity. Prevention should always take precedence whenever possible. Moreover, hand and environmental hygiene should be maintained using appropriate chemicals, including Saraya's Alsoft VB Hand Disinfectant for broad-spectrum antiviral activities and the Alpet D2 surface disinfectant.

### Policy positions and measures to support COVID-19 IPC

More national and international research efforts are needed to understand the diagnosis, development, treatment, monitoring, and management of long COVID in individuals in society<sup>21</sup>. The benefits of decades of experience in dealing with influenza should stand in good stead for new healthcare policies in this area. These efforts will be important as new variants of the causative virus of COVID-19 continue to emerge, confounding its epidemiology with those of the common flu virus and other seasonal infections in the anticipatory healthcare events calendar.

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# SARAYA Activity Report 1

## Participating in the 1st Healthcare Environmental Hygiene Train-the-Trainers (HEHTTT) at the National Institute of Health Selangor, Malaysia (NIH)

### About the Event

The inaugural Healthcare Environmental Hygiene Train-the-Trainers (HEHTTT), led by Professor Didier Pittet and his team of experts, took place in Malaysia from January 23rd to 24th, 2024. Saraya Co., Ltd. and Saraya Goodmaid Sdn. Bhd. supported this event. It served as a two-day platform, attracting 160 participants comprising health experts, hospital administrators, engineers, and infection prevention and control personnel from across Malaysia, all attending to receive training as future trainers.

Throughout the program, discussions centered on proper hospital cleaning and maintenance of its surroundings, with a focus on commonly overlooked areas. The sessions also introduced best cleaning techniques and recommended tools. Additionally, topics included air change rates and strategies for maintaining optimal ventilation in patient areas. An integral part of the HEHTTT was the introduction of the Healthcare Environment Hygiene Self-Assessment Framework (HEHSAF) tool. Developed and internationally validated, HEHSAF aids healthcare facilities in identifying areas for improvement within their environmental hygiene programs. Overall, the HEHTTT aimed to raise awareness, foster discussions on best practices, and explore the latest scientific research regarding the impact of proper environmental conditions on infection prevention and control in hospitals.



The speaker team comprises Dr. Andreea Capilna, Ms. Martina Mocenic, Professor Didier Pittet, Dr. Pamela Lee Yew Fong, and Professor Sasheela Ponnampalavanar, as depicted from left to right. These experts were present to engage with participants, sharing insights from their current practices and suggesting evidence-based improvements for implementation in their facilities.

### Day 1 (Theory and Discussion)

As early as 8:00 am, 160 participants from across Malaysia arrived at NIH to register and take their seats, eagerly anticipating the start of the session.

Professor Didier Pittet commenced the program with his first session titled "From Clean Hands to Clean Hospitals." During this session, he elaborated on the Clean Hands program and its success in improving hand hygiene rates among healthcare workers, consequently reducing treatment costs significantly by minimizing healthcare-associated infection (HAI) rates and duration of hospital stay. The concept of Clean Hospitals represents the evolution of Clean Hands, shifting the focus from hands alone to encompassing the entire healthcare facility environment. By broadening the scope to include hospital surroundings, Clean Hospitals has the potential to further reduce HAI, recognizing that disease contamination is not limited solely to hands but extends to the hospital environment as well.

Following the opening session, participants were tasked with completing the Clean Hospitals HEHSAF to assess their baseline knowledge prior to the HEHTTT. At the conclusion of the 2-day program, participants were asked to revisit the HEHSAF to reassess the knowledge they had acquired.



Additionally, digital copies of Clean Hospitals marketing materials, such as banners and posters, were distributed during

the HEHTTT. These materials were intended for participants to take home and reproduce in their facilities, thereby promoting the Clean Hospitals initiative within their respective healthcare environments.

### Day 2 (Practical Session and Discussion)

The second day commenced with a continuation of the discussions from the first day, providing participants with a cohesive learning experience before they proceeded to the practical sessions.

All 160 participants were divided into 8 groups, each consisting of 20 members, to initiate the practical sessions. Subsequently, the 8 groups were further divided into 4 pairs, with 2 groups in each pair, before rotating within the practical session. There were 4 areas of focus during this HEHTTT, namely:

**Bathroom Station** – During this activity, trainers shared the best cleaning techniques for thorough cleaning, while also highlighting commonly missed areas during routine cleaning with group participants. Trainers stained areas with UV gel before participants proceeded with cleaning. Following the cleaning, trainers utilized UV black light to reveal commonly missed areas. In addition to identifying missed areas, participants compared wiping techniques to determine the most effective method for leaving little to no residue.



**Floor Station** – Trainers introduced the benefits of flat mops compared to conventional mops. Additionally, they demonstrated the correct technique for using a flat mop and allowed participants to experience first-hand how flat mops outperformed conventional mops.



**Bed & Surface Station** – Trainers began by staining the area with UV gel before participants entered the designated areas. Participants were then tasked with cleaning these areas, with trainers using UV black light to identify commonly missed spots after the cleaning process. Throughout this session, the concept of "clean to dirty" was emphasized, meaning that surfaces should be cleaned in sequence from clean to dirty to prevent cross-contamination.

**Contamination Station** – In this particular station, trainers applied UV gel to stain the whiteboard before instructing participants to clean it using a cloth. Trainers then used UV black light to demonstrate how the conventional circular motion wiping technique left behind residue, prompting a discussion on the most effective wiping techniques.



### Conclusion

After two full days of HEHTTT, supported by the Malaysia Ministry of Health, Professor Didier Pittet and his team, along with Saraya Co., Ltd. and Saraya Goodmaid Sdn. Bhd., have successfully equipped the 160 healthcare participants from across Malaysia with enhanced knowledge and ideas for improving hospital environmental hygiene. They have gained a deeper understanding of the importance of this aspect and are better equipped to implement effective strategies in their respective healthcare facilities.

# SARAYA Activity Report 2

24年世界手卫生日 Supporting the World Hand Hygiene Day 2024, 5th May in China

HosCom Int'l  
2024 vol.2

**SARAYA**

**Alsoft**

Always soft. Always gentle.  
Always close to give a hand.



To celebrate the World Hand Hygiene Day in 2024, 5th May, SARAYA (Shanghai) Biotech Co., Ltd. in China supported the organization of related events in healthcare facilities for disseminating hand hygiene knowledge, as well as technical information on how to use hand hygiene products. This report aims to introduce some of the activities that SARAYA supported in China.

## A University Hospital in Henan



The theme of the event in this hospital was a practical skills competition. Healthcare workers washed their hands with SARAYA moisturizing foaming hand wash dispensed by a hand hygiene dispenser, UD-1600 from SARAYA, to compete with each other.

## A University Hospital in Jiangsu

The hospital conducted an educational session on hand hygiene for patients, their attendants and cleaning staffs. Through learning, they reaffirmed the importance of hand hygiene. The hospital hopes that they will continue good hand hygiene practice.

## A Hospital in Sichuan



A hospital in Sichuan organized an event with the theme of "Together We Act, Hand Hygiene Promotes Health" to celebrate the World Hand Hygiene Day 2024. The event targeted various people; the hospital staff including nurses and cleaners, patients, their families, community members and elderly care personnel. The hospital provided education for them while demonstrating proper hand hygiene practices.



## THE COMPLETE SOLUTION TO INFECTION PREVENTION

Alsoft provides you all the tools you will need to improve infection prevention compliance in your facilities, reducing the number of infectious disease in the world.

With a desire to contribute to hygiene, environment and health in the world, SARAYA introduced alcohol disinfectants, named Alsoft, in the 1990s outside of Japan. Alsoft, which refers to "always soft and gentle to people", means to always be close and give a desired support to "people who need infection prevention" such as healthcare workers who work on the front lines.

Based on this spirit, Alsoft became a brand that includes not only alcohol disinfectant but also hand washing, hand protection, and environment cleaning and disinfection, all vital for infection prevention. We hope Alsoft can contribute to improve infection prevention implementation compliance and reduce the number of infections diseases in the world.

Skin Wash



Environmental  
Cleaning & Disinfection



Hand Disinfection



Hand Care



UD-1600 (automatic  
dispenser for hand hygiene  
agents)

SARAYA  
moisturizing foaming  
hand wash





### Cho Ray Hospital

**Address** : 201B Đ. Chí Thanh, Phường 12, Quận 5, Thành phố Hồ Chí Minh, Vietnam  
**Number of beds** : 3,200 (As of July, 2024)  
**Total number of staff** : 4,500 (As of July, 2024)  
**Website** : www.choray.vn

Cho Ray Hospital is one of the largest hospitals in Vietnam and is located in the southern part of the country. The hospital is under the Ministry of Health and provides special and high-level care for patients while functioning as a training and practical facility for medical students. In addition, the hospital plays a wide range of roles, including providing health checkups for local residents and foreigners and conducting research on the prevention of infectious diseases. As Cho Ray Hospital is one of the largest healthcare facilities in the country, many patients seek care from this hospital every year.

**Interviewee** Ms. Nguyen Thi Ngoc Yen,  
 Head nurse of ICU-C  
 Work Experience: For 24 years at ICU-C

**Product in Use** SARAYA OraCare  
 Oral Care Sponge  
 Brush



### Steps taken to introduce the SARAYA OraCare Oral Care Sponge Brush

#### How were implementing oral care prior to the introduction of the sponge brush?

Before the sponge brush was introduced, we used normal cottons to implement oral care. We changed the method and began to use a normal toothbrush with toothpaste. In 2018, when a hospital-wide ventilator-associated pneumonia (VAP) prevention program was introduced, we started using the OraCare Oral Care Sponge Brush (Saraya's sponge brush).

#### What was the deciding factor in choosing SARAYA OraCare Oral Care Sponge Brush? Were there any challenges you faced before this item was introduced in the hospital?

One of the two deciding factors was the implementation of a hospital-wide VAP prevention program. As per the program's manual, it was necessary for us to use the sponge brush while implementing oral care to patients. Second, to keep pace with the evolution of technology in the country and around the world, we needed to incorporate new technology into our hospital. When the VAP prevention program was introduced, a Japanese infection prevention and control expert dispatched from the Japan International Cooperation Agency (JICA) provided us with guidance on how to use sponge brushes and perform oral care for patients. After going through the steps the expert detailed, Saraya's sponge brushes are now used alongside a 0.12% chlorhexidine gluconate solution. As a result, the percentage of VAP infection has reduced from 28.4% to 11.7% since 2017 to 2024.

Prior to the introduction of Saraya's sponge brush, it was difficult to adjust the amount of water for oral care—it was either too little or too much. One of the good points of Saraya's sponge brushes is that they make it possible to control the amount of water impregnated into the sponge.

### After the introduction of the SARAYA's sponge brush

#### What are your favorite points about Saraya's sponge brush?

We heard that Saraya's sponge brushes are easy to use and that the company pays particular attention to the shape of the shaft and the color of the sponge. I like that it is easy and convenient to use and that it fits very well in the patient's mouth. Normally, many tubes are inserted into ventilated patients; thus, they don't have enough space in the mouth. This sponge brush can reach even small spaces, making it possible to thoroughly clean the mouth. It is also very soft and flexible enough to be used in the mouth because it doesn't irritate the gums.

#### Which staff members use this item? When do they use it?

Nurses in the ward use it to implement oral care to patients twice a day, at around 7 a.m. and at 9 p.m.

#### What kind of patient is Saraya's sponge brush used on?

The sponge brush is used for the oral care of critically ill patients who are unconscious. First, the inside of the patient's mouth is moisturized with Saraya's sponge brush. Then, we clean the inside of the patient's mouth until all the dirt is removed.



#### Are all staff members able to use it properly?

Yes, all of this hospital's nurses can use this product properly because all staff received training in its use. A Japanese expert who had been dispatched to our hospital as part of the JICA project gave us a lecture about oral care using a sponge brush. The staff came to the ICU-C and attended the lecture as part of their on-the-job training. The expert also gave us a manual from the National Center for Global Health and Medicine in Japan (NCGM) that included video clips, which we used to practice. I am also currently training ward staff.

#### How has your work changed after introducing this item?

The work efficiency of our nurses has improved. Most importantly, the number of VAP cases has decreased since this product was introduced at the hospital.

### Next Step

#### Do you expect to face new challenges in oral care in the future?

To improve patient care, we must always consider incorporating new technologies, such as a brush that can be connected to the suction tube.

Interview date: March 20, 2024

## For oral care in healthcare settings Oral Care Sponge Brush

Hygienic Individual Package

50 pieces individually wrapped



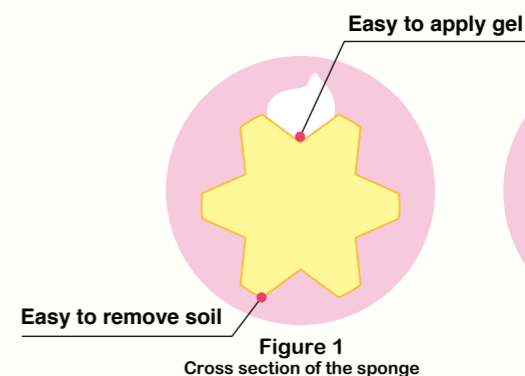
Easy to remove dirt  
 Star shape sponge



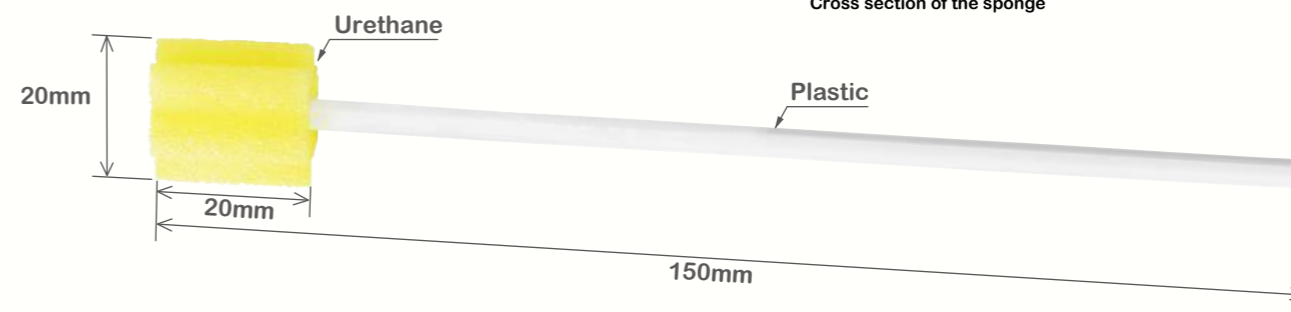
● Easy to remove dirt and apply moistening gel\*Fig.1

● Soft fine sponge

● Heptagonal plastic handle which is easy to hold\*Fig.2



### Oral Care Sponge Brush



Recommended for those who...

- Cannot gargle or rinse their mouth
- Has a risk of aspiration
- Are using moisturizer
- Have difficulty opening their mouth

### How to use the sponge brush

**1** Moisten a sponge brush with water.

**2** Wring out the sponge brush and drain the water.

**3** Rotate the sponge brush and clean the inside of the mouth while winding up dirt.

**4** Repeat wiping in the order of 1, 2, 3, while using a different cup to wash off the dirt that has been rolled up.

**5** After cleaning, apply moisturizer with a sponge brush and apply it to the oral mucosa.

Use a toothbrush or interdental brush to clean between the teeth.

\*Do not use the brush repeatedly once it has been used.