## **World Hand Hygiene Day 2024**

Why is sharing knowledge about hand hygiene still so important?

A 30-year journey from 1994 to 2024

#### **Prof Didier Pittet**

Professor of Medicine (hon), Faculty of Medicine, University of Geneva Chair, Clean Hospitals – Former Adviser, Clean Care is Safer Care Former director, Infection Control Program & WHO Collaborating Centre on Patient Safety / IPC & AMR, University of Geneva Hospitals and Faculty of Medicine, Geneva, Switzerland

Hosted by Dr. Yves Longitn

www.webbertraining.com

May 3, 2024



## **World Hand Hygiene Day** (WHHD) 2024

Why is sharing knowledge about

hand hygiene still so important?



https://www.who.int/campaigns/world-hand-hygiene-day

- Why hand hygiene? What is the solution?
- Why is sharing knowledge about hand hygiene still so important?
- Facts and figures in 2024
- Why do we all need a World Hand Hygiene Day (WHHD): outline of WHHD 2024 resources and activities
- Strengthening knowledge through advocacy
- Let's pause for 1 min and choose the best method
- The Hand Hygiene Train-The-Trainers approach
- The Hand Hygiene Excellence Award (HHEA)
- 10 years of excellence: lessons from Award Winning hospitals
- Conclusions





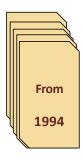
30 year-journey from 1994 to 2024

2024

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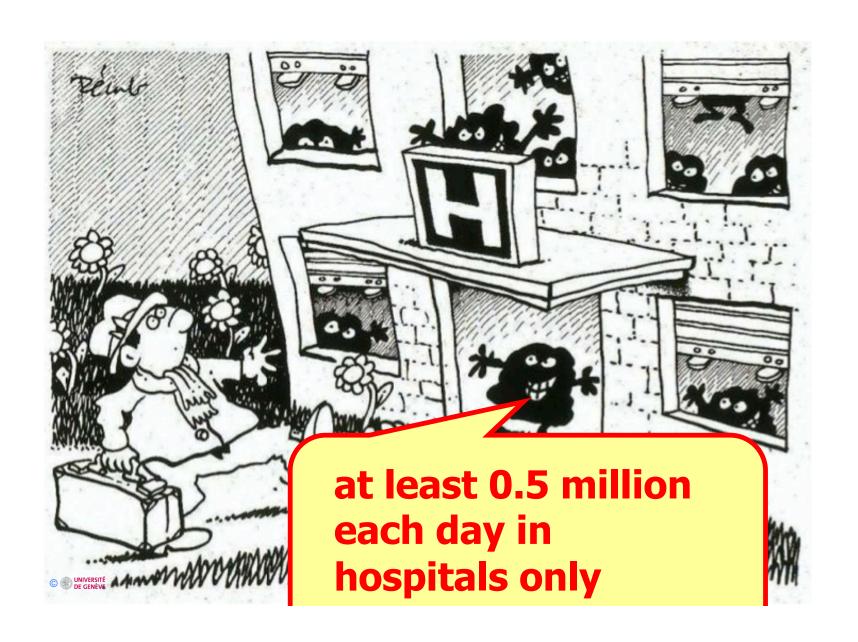




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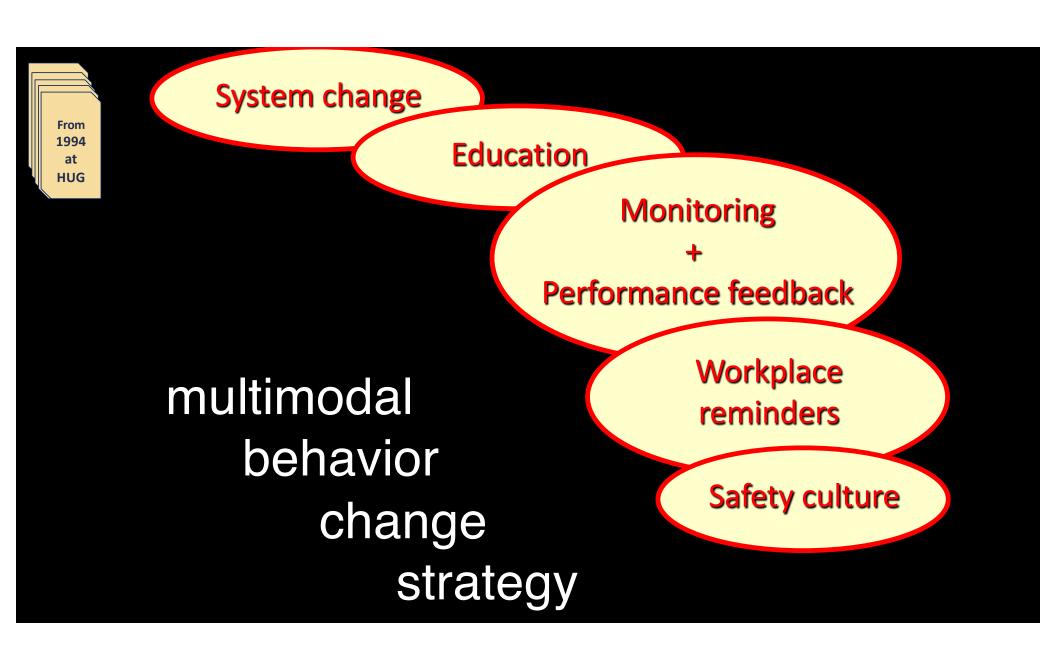




Hospital infections

500,000 patients each day

16 million deaths every year





Handwashing ... an action of the past (except when hands are visibly soiled)

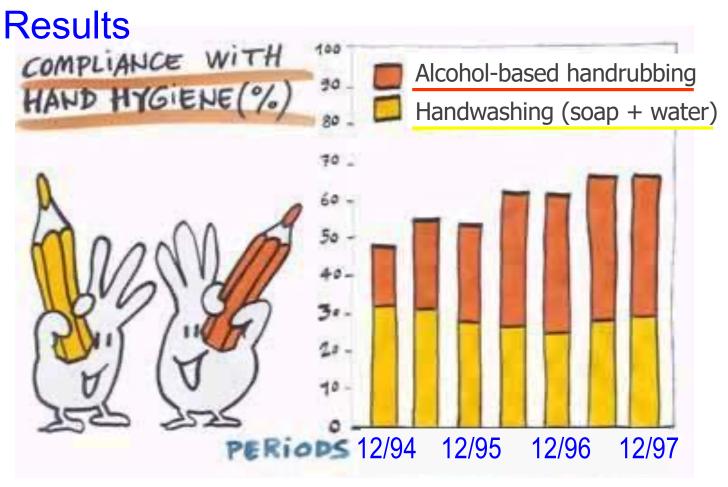


**Alcohol-based** is standard of care

20-30 sec







www.hopisafe.ch

Pittet D et al, *Lancet* 2000; 356: 1307-1312

1994 to 2001 The University of Geneva Hospitals (HUG), 8 years follow-up

For each CHF 1.00 invested,
the return was
CHF 20.00



Pittet D et al, Inf Control Hosp Epidemiol 2004; 25:264





World Health Organization (WHO), Geneva, Switzerland, 2005



The 1st Global Patient Safety Challenge aims to reduce health care-associated infections worldwide through the promotion of best practices in hand hygiene & infection control







Pittet D & Donaldson L, Lancet 2005

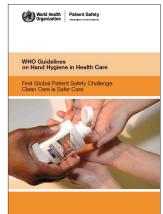


## Implementation strategy and toolkit for the WHO Guidelines on Hand Hygiene in Health Care

#### Knowledge & evidence



#### **Action**











#### What is the WHO Multimodal Hand Hygiene Improvement Strategy?

Based on the evidence and recommendations from the WHO Guidelines on Hand Hygiene in Health Care (2009), made up of 5 core components, to improve hand hygiene in healthcare settings

#### **ONE** System change

Alcohol-based handrubs at point of care and access to safe continuous water supply, soap and towels



#### **TWO Training and education**

Providing regular training to all health-care workers



#### THREE Evaluation and feedback

Monitoring hand hygiene practices, infrastructure, perceptions, & knowledge, while providing results feedback to health-care workers



#### **FOUR Reminders in the workplace**

Prompting and reminding health-care workers



#### **FIVE Institutional safety climate**

Individual active participation, institutional support, patient participation





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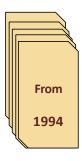
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Why is sharing knowledge about hand hygiene still so important?

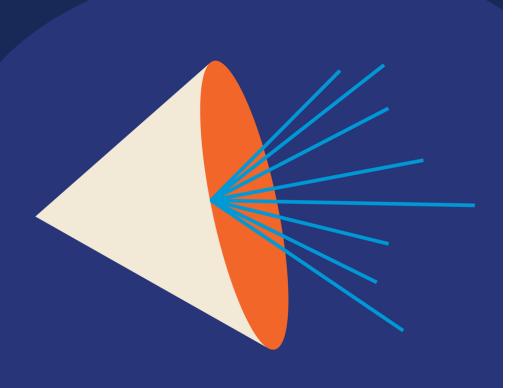
Why IPC and hand hygiene education and training should be in place for all health and care workers

Thanks to Ermira Tartari, Claire Kilpatrick, Julie Storr, Benedetta Allegranzi & team, WHO IPC-Hub, WHO HQ, Geneva



Why is sharing knowledge about hand hygiene still so important?

Because it helps stop the spread of harmful germs in healthcare.





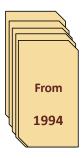
### **Objectives**

WHHD, 5 May 2024



- Strengthen learning approaches to enable implementation of innovative and effective training to empower health and care workers to improve hand hygiene and IPC at point of care with enhanced knowledge, skills and behaviours
- Promote access to innovative hand hygiene and IPC training resources for health and care workers
- Raise awareness about the importance of knowledge and learning on hand hygiene at the right times to prevent a range of infectious diseases
- Encourage measurement and evaluation mechanisms to assess the impact of training and education on IPC standards and practices including hand hygiene, including their effect on the prevention of HAI and AMR

https://www.who.int/campaigns/world-hand-hygiene-day/world-hand-hygiene-day-2024



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## HAI and AMR Burden – facts and figures WHHD, 5 May 2024



- 1 in 10 patients is affected by HAIs; higher in LMIC countries & high-risk patients
- 136 million cases of health care-associated antibiotic resistant infections occur worldwide every year
- In Europe, the burden of the six most frequent HAIs was twice the burden of 32 other infectious diseases, in terms of disability and premature mortality
- It was also estimated that 63.5% of cases of infections with antibiotic-resistant bacteria
   were associated with health care
- HAI harm patients, visitors and health workers and place a significant burden on health systems
- In Europe alone, some 9 million HAIs occur every year in acute and long-term care facilities; they lead to 25 million extra hospital days and cost 13-24 billion Euros

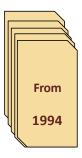
https://www.who.int/publications/i/item/9789240051164

## The role of IPC and Hand Hygiene – facts and figures WHHD, 5 May 2024



- IPC interventions reduce HAIs and AMR by 35-70% and are cost saving
- Preventing an infection and its spread reduces human suffering, loss of lives and producing economic advantages
- High quality water, sanitation and hygiene services, effective IPC programmes, based on the WHO core components, including hand hygiene action, can reduce HAIs (up to 70%)
- Hand hygiene saves millions of lives when performed at the right times in health care, while across the 34 OECD and EU/EEA countries, investing US\$ 1 in improving hand hygiene in health care settings returns about US\$ 24.6 in economic returns
- Accelerating hand hygiene action depends on water, sanitation and hygiene services. Yet globally, half of all health care facilities still lack basic hand hygiene facilities at the point of care

https://www.who.int/publications/i/item/9789240051164



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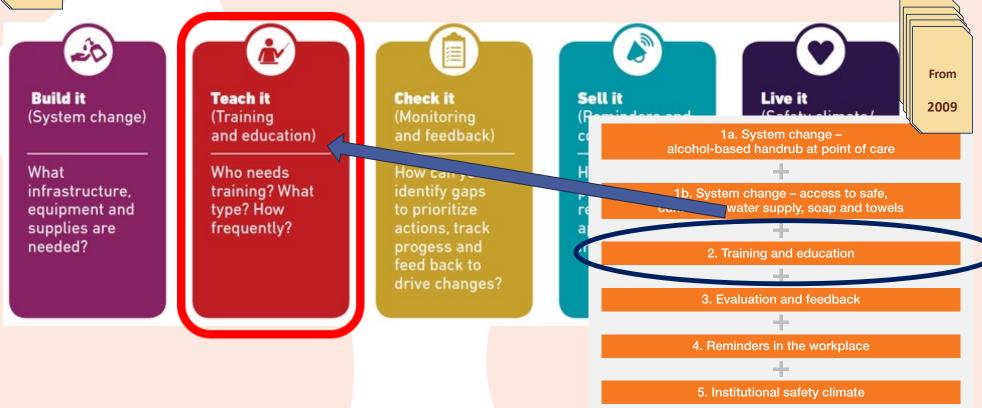


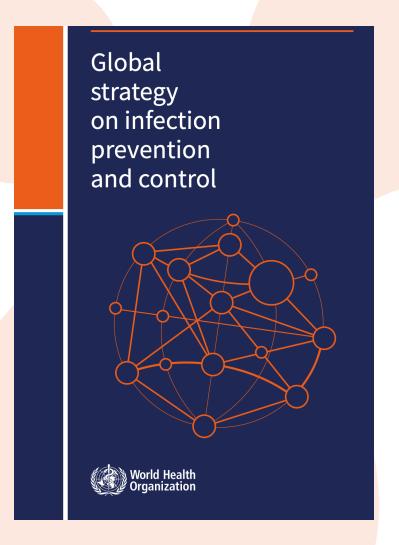


#### A reminder - training and Education:



One of five elements of the Multimodal Improvement Strategy (MMIS)







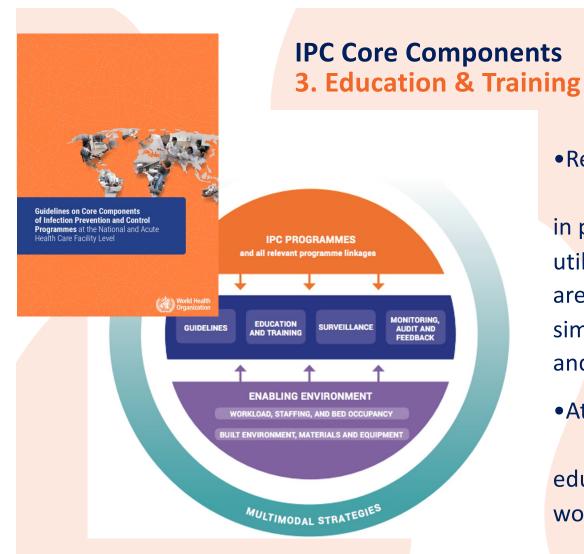
https://www.who.int/publications/m/item/global-strategy-on-infection-prevention-and-control

## IPC knowledge of health and care workers and career pathways for IPC professionals



- a. Develop IPC curricula for health & care workers and link to other associated areas (water safety and occupational health and safety in health care facilities)
- b. Provide IPC education across the entire health education system (pre and post graduate training)
- c. Ensure in-service training for all health and care workers on IPC standards and practices
- d. Ensure a recognized career pathway for IPC professionals and job opportunities empowering their role
- e. Develop approaches & resources for the education and orientation of patients and families

https://www.who.int/publications/m/item/global-strategy-on-infection-prevention-and-control





#### Recommendation:

Facility level IPC education should be in place for all healthcare workers by utilizing team and task-based strategies that are participatory and include bedside and simulation training to reduce the risk of HAI and AMR

#### • At the National level:

IPC programmes should support education and training of the health workforce as one of their core functions

https://www.who.int/publications/i/item/9789241549929; Storr J, Twyman A, Zingg W, et al. ARIC 2017;6:6.





# Achieving a MMIS – building on training approaches using WHO tools









Use the 5 Moments for hand hygiene observation & feedback forms for educational purposes.

Feedback the results to improve understanding of hand hygiene and foster capacity building

Provide collective or individual feedback to facilitate knowledge building among everyone.

Make use of a multimodal improvement strategy, when training health workers by providing performance feedback, an enabling environment, including good water, sanitation and hygiene services, reminders or a supportive culture.



### The main campaign poster

Available in two colours (orange and blue tones) in all UN languages

#### Note:

A "Question & Answer" style campaign was conceived to remind all target audiences that hand hygiene is as important as ever and to combat campaign fatigue

https://www.who.int/campaigns/
world-hand-hygiene-day/world-hand-hygiene-day-2024



### **Target audience posters**

Health and care workers, IPC professionals, policy/decision makers, the public









https://www.who.int/campaigns/world-hand-hygiene-day/world-hand-hygiene-day-2024



#### In Japanese



Thanks to SARAYA

This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the bending and authentic selfcom Poster for 5 May 2014—Health care workers.

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## Create your very own poster by yourself for WHHD, 5 May 2024

- Create your own version of the World Hand Hygiene Day campaign poster
- Print and post to highlight to colleagues why sharing knowledge about hand hygiene is still so important
- For sharing on social media, please use #handhygiene so others active in the campaign can see your posters



https://www.who.int/campaigns/world-hand-hygiene-day/world-hand-hygiene-day-2024

### Web, newsletter and email banners - available for all to use

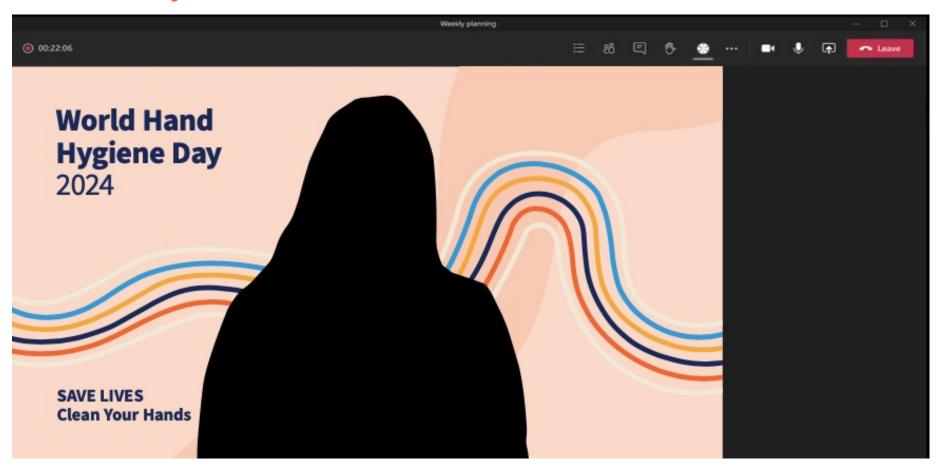
WHHD, 5 May 2024



https://www.who.int/campaigns/world-hand-hygiene-day/world-hand-hygiene-day-2024

### An online video background

WHHD, 5 May 2024



### Short, teaser video - launched January 2024

Hand hygiene is universal - a quality indicator



https://www.youtube.com/watch?v=Htd41Gj8\_zg

### Use the hand hygiene module available in 18 languages!

#### Self-paced, Certificate of completion





- Self-paced
- Languages: français Português - العربية
  Pyccкий Español 中文
   Nederlands Soomaaliga Türk සිංහල- தமிழ் Shqip македонски Tetun Казақ тілі Հայերեն ქართული ენა

https://openwho.org/courses/IPC-HH-en

### Play the game - yourself or with others!

Revolutionizing hand hygiene education





In this game, you will be transported to the International Alien Hospital in the year 2224. Your patients are friendly aliens from various planets who are highly sensitive to germs. Oh, and time is starting to unravel! Can you look after your alien patients and keep Earth safe by performing hand hygiene at the right moments?

https://5mgame.lxp.academy.who.int/

### New – use virtual badge for WHHD, 5 May 2024 Show your commitment - Be part of the community

- By using this 'new for 2024' badge you can be part of the world hand hygiene day community and always show your support
- This badge was launched in April for you to share with others and to use to highlight that we all continue to raise awareness and come together every year on 5 May
  - An overlay 'badge' a transparent background campaign PNG, with a file for people to upload their image and export the overlaid PNG to post
  - A solid 'badge' a PNG file to be uploaded as a standard profile picture or printed at home/in office and cut out to make a real badge!

Be proud to be part of WHO's World Hand Hygiene day!



### Make an impact with your voice on social media

WHHD, 5 May 2024 #handhygiene

### Social media examples

5 May 2024













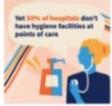
















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03

05

06

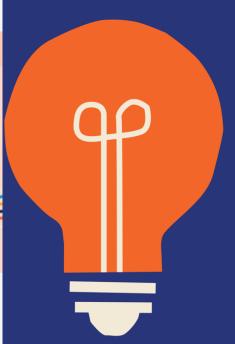
07

### Use these sample plans for on-the-job training

World Hand Hygiene Day (WHHD) 5 May 2024



Inspiration and instructions for health care facilities on undertaking short training activities during the working day, in the context of WHHD 2024



https://www.who.int/campaigns/world-hand-hygiene-day/world-hand-hygiene-day-2024



Share stories, experiences and resources





### Journal features – examples for you to share

WHHD, 5 May 2024





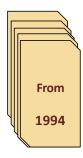
https://www.cambridge.org/core/journals/infection-control-and-hospital-epidemiology/article/world-health-organization-world-hand-hygiene-day-5-may-2024-save-lives-clean-your-hands-campaign-promoting-knowledge-and-capacity-building-on-infection-prevention-and-control-including-hand-hygiene-among-health-and-care-workers/A6DDDB46FE8EDC137CB82CC1A4FBB0B1

https://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(24)00092-2/abstract

### Check the web pages regularly!

World Hand Hygiene Day, 5 May 2024





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Maryam Abidova, Tajikistan

Voice of a midwife





### I am Maryam Abidova – a Midwife from Tajikistan



In 1988, I started working as a cleaner at the maternity department of the National Clinical Research Institute for Reproductive Health. In parallel, I studied and graduated from a medical college in Dushanbe as a midwife in 1992. I have been actively engaged in the development and implementation of the infection prevention and control programme in our clinic. Through IPC, I instruct pregnant and post-partum patients on the preparation for safe delivery and after-birth care, including promoting the WHO hand hygiene tools to others. In my teaching, I focus on the five moments of hand hygiene to prevent infections among women and their newborns. Promoting hand hygiene not only prevents infections but also decreases the need for antibiotic use. Infection control practices can save lives and it is the best way to keep us healthy.





### My name is Michael Borg. I am a clinician and director of infection prevention at Mater Dei Hospital, Malta World Health Organization

My 20-year involvement in infection prevention and control, both in my country and internationally with IFIC and ECDC, have made me realise that IPC is ultimately all about behaviour change. And, whereas education on its own offers no guarantee of behaviour change, it is the first component of every intervention. Healthcare professions need to know why, when and how to perform a procedure to do it safely. I therefore know how important it is to make hand hygiene training available for those working in my hospital, in a way that is evidence based and engaging. A good educational base is a necessity for other behaviour change interventions, such as audit and feedback and availability of alcohol hand rub, to be effective.

My team therefore places a strong emphasis on hand hygiene, not only using lectures but through informal feedback during observational visits as well as innovative tools such as interactive hand hygiene scanners. Having a deep understanding of hand hygiene and sharing that knowledge is so important for patients and health workers. It's part of my responsibilities as an effective IPC leader.



### I am Jo – an IPC practitioner that works across many countries, in different environments.



Since I started working in IPC, I have learned so much – I continue to learn every day. What I have observed about hand hygiene action has led me to recognize its utmost importance in saving lives...

I see nurses, drs, physiotherapists, pharmacists interacting with patients every day in their busy routines, and I recognize that training and coaching them to understand when action is needed within routines is a fundamental part of my role. It not only improves hand hygiene, it actually drives overall quality of care – hand hygiene is an indicator of quality of care and it is my role to ensure that staff are supported to achieve the required standards, be that resources, training or mutual support.

No matter what the environment, may that be in a resource limited situation or a gold standard of care, hand hygiene is as equally important. In my practice, I may have to advise on how to adapt the resources available or teach across a wide spectrum of staff with different languages, cultural considerations and levels of training. I use my teaching and interpersonal skills to promote, enthuse and empower people to clean their hands effectively, knowing that they are contributing towards the safety of patients, staff and visitors.

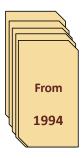


# How will you get involved, share your activities and evaluate your campaign reach?

Thank you for your support and for sharing knowledge about why hand hygiene is still so important

World Hand Hygiene Day, 5 May 2024





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# Poll question: If you could only use <u>one</u> on the job training approach for hand hygiene training, which would you choose:



- 1. An interactive game
- Classroom-based sessions
- 3. Peer-peer bedside or simulation sessions
- 4. A webinar or video show and tell session
- 5. Online learning
- 6. Quizzes and other visual resources
- 7. Other

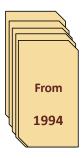


# My Own Answer (Prof D Pittet) If you could only use <u>one</u> on the job training approach for hand hygiene training, which would you choose:



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### 7. Other

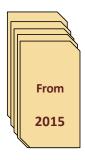


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# Hand Hygiene Train-The-Trainers





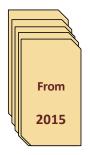




### Based on the WHO multimodal strategy:

- 1. Lectures and round tables
- 2. Hands-on-simulation training
- 3. Sharing of experiences
- 4. Evaluation of knowledge pre-post course







- Brazil
- Spain
- Mexico
- Malaysia
- South Africa
- Iran
- Thailand











### 2019:

South Africa Malaysia Vietnam Iran Turkey

Jan 2020

Japan ... Covid-19









### Rio de Janeiro, Brazil





#### Train the Trainers

Rio de Janeiro, 23-25.02.2015

Windsor Atlantica Hotel Av. Atlantica, 1020 - Copacabana

Chair: Prof. Didier Pittet, MD, MS, CBE

Collaborators/Faculties: Americo Agostinho, RN, MS Fernando Bellissimo Rodrigues, MD, PhD

### 3-day course33 IPC experts

D. Pittet, F. Bellissimo-Rodrigues, A. Agostinho

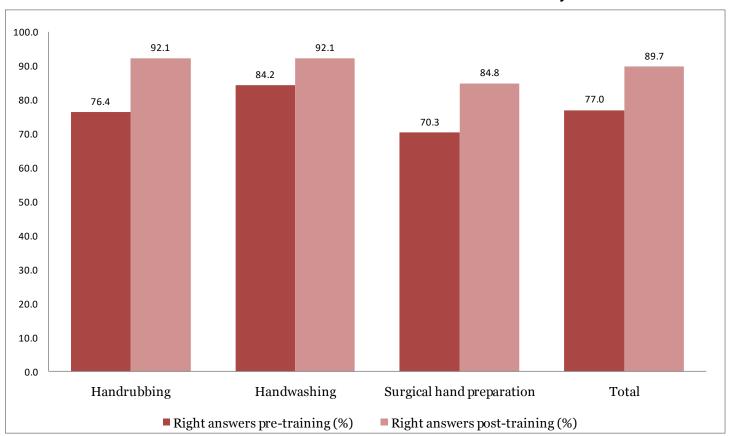






### Rio de Janeiro, Brazil





Overall, the rate of correct answers was 77.0% before and 89.7% after the course (p<0.001).









## Cape Town, South Africa







3-day course 35 IPC experts 17 countries

D. Pires, E. Tartari, C. Fankhauser, D. Pittet









# Hands-on Simulation Training Cape Town, South Africa







### Puebla, Mexico





### 3-day course22 IPC experts

Agostinho, M. Hernández, C. Frankhauser, D. Pittet





#### TRAIN THE TRAINERS: FORMACIÓN DE LÍDERES EN LA IMPLEMENTACIÓN DE LA ESTRATEGIA MULTIMODAL DE LA OMS PARA LA MEJORA EN LA HIGIENE DE LAS MANOS

La lucha contra la resistencia a los antibióticos está en tus manos.

9-12 Abril 2017 | Puebla | México Hotel Quinta Real Puebla















### Puebla, Mexico



UNIVERSITÉ DE GENÈVE













### Kuching, Malaysia







- Lead and supported by Ministry of Health
- · Great political commitment
- Participating: 14 states, 28 hospitals, 3 Ministry of Higher Education
- > 80 participants









## Adapt to Adopt

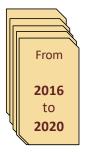


#### ...and let people be creative

- Adaptation to local needs and expectations:
- ✓ Brazil: emphasis in broader IPC subjects
- ✓ Madrid: harmonization of HH monitoring practices
- ✓ **South Africa**: launching of HH programmes in different low-resource settings
- ✓ Mexico: the first example of a domino effect
- ✓ Malaysia: creation of a regional HH program

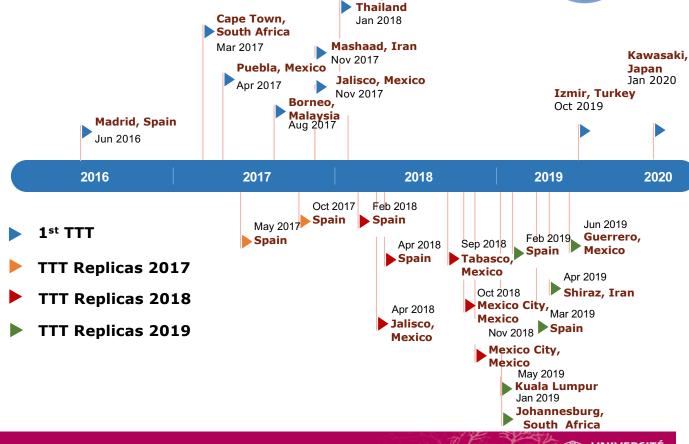






Train-the-Trainers 2016-2019: the *snow-ball* effect





Bangkok,







#### **Conclusions**



- Clean Care is Safer Care is a unique, impactful & cost-effective campaign, inviting professionals, societies, and countries to Adapt it for full success ("Adapt to Adopt")
- Train-The-Trainers (TTT) programs are very successful worldwide and promote a "domino effect"
- TTT-trained IPC experts around the world can conduct local and national TTT training once TTT-trained and certified
- TTT for Hand Hygiene developed at the University of Geneva has become a model for others TTTs worldwide in other fields of IPC





### 1st Clean Hospitals TTT Jan 2024 in Kuala Lumpur

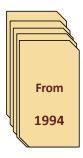




# 1<sup>st</sup> Clean Hospitals TTT







## The Menu for Today

- Why hand hygiene ? What is the solution ?
- Why is sharing knowledge about hand hygiene still so important?
- Facts and figures in 2024
- Why do we all need a World Hand Hygiene Day (WHHD): outline of WHHD 2024 resources and activities
- Strengthening knowledge through advocacy
- Let's pause for 1 min and choose the best method
- The Hand Hygiene Train-The-Trainers approach
- The Hand Hygiene Excellence Award (HHEA)
- 10 years of excellence: lessons from Award Winning hospitals
- Conclusions









## Hand Hygiene

# The journey to excellence







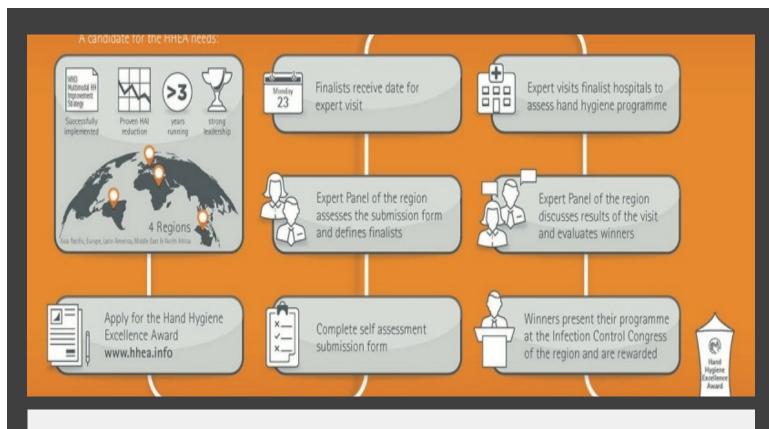
### **Hand Hygiene Excellence Award**



- Awarding active and engaged IPC professionals
- Sharing expertise
- Identifying role models & encouraging leadership
- **Be part of a global movement** to drive excellence







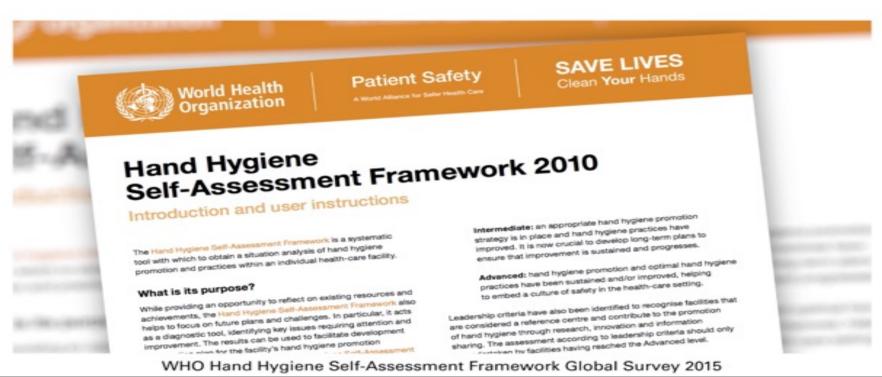
# Hand Hygiene Excellence Award

- 1. Successfully applied the WHO multimodal strategy
- 2. Show decreasing healthcare-associated infections
- 3. At least 3 years of a hand hygiene sustainability
- 4. Strong leadership





### See explanatory video at: www.tinyurl.com/HHSAFsurvey







# Hand Hygiene Self-Assessment Framework



#### 27 Indicators

- Represent the key elements for each of the 5 components
- Based on evidence & expert consensus
- Validated scoring system

http://www.who.int/gpsc/5may/hhsa\_framework/en/



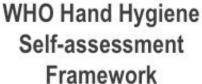




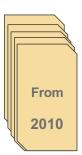




Hand Hygiene Excellence Award







#### Hand Hygiene



### Asia Pacific Hand Hygiene Excellence Award

#### Asia Pacific Hand Hygiene Innovation Award

2013

# www.hhea.info





#### **Expert Review Panel**

#### Professor Didier Pittet (Chair)

Director Infection Control Program & WHO Collaborating Centre on Patient Safety Hôpitaux Universitaires de Genève Geneva, Switzerland

#### Professor Wing-Hong Seto

Chief Infection Control Officer, Hospital Authority Senior Consultant Microbiologist & Director Quality Management, Queen Mary Hospital WHO Collaborating Centre for Infection Control Hospital Authority, Hong Kong

#### Dr Moi-Lin Ling

Director, Infection Control Department Singapore General Hospital & President, Asia Pacific Society of Infection Control

#### Professor Lindsay Grayson

Director, Infectious Diseases & Microbiology Austin Health Victoria, Australia

#### Ms Patricia Ching

Infection Control Specialist
Infection Control & Quality Improvement Department
Queen Mary Hospital, Hong Kong

#### Ms Glenys Harrington RN, RM

Infection Control Consultant Infection Control Consultancy (ICC) Melbourne, Australia









## Apply now: www.hhea.info





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#### **Hand Hygiene Excellence Award Video**



www.tinyurl.com/HHEAward



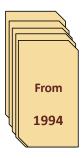


# Conclusions: the Hand Hygiene Excellence Award



- Is unique, comprehensive, and proposed worldwide
- Contributes to the harmonization of hand hygiene practices
- Provides new promotional activities for improving hand hygiene practices
- It helps building role model hospitals, in some instance at national level
- Offers great opportunities to create regional and national networks
- Is part of a global movement
- Is the best hand hygiene excellence promotion program as of today
- Results in improvement in sustainable hand hygiene promotion and reduction of healthcare-associated infections and antimicrobial resistance
- Is cost-effective and saves lives





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Hand Hygiene Excellence Award







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#### RESEARCH Open Access



Ten years of hand hygiene excellence: a summary of outcomes, and a comparison of indicators, from award-winning hospitals worldwide

Ermira Tartari<sup>1,2\*</sup>, Jacopo Garlasco<sup>3</sup>, Marcela Hernández-de Mezerville<sup>4</sup>, Moi Lin Ling<sup>5</sup>, Hilda Márquez-Villarreal<sup>6</sup>, Wing-Hong Seto<sup>7</sup>, Anne Simon<sup>8</sup>, Thomas-Jörg Hennig<sup>9</sup> and Didier Pittet<sup>10</sup>





### Objectives of the study

Ten years of hand hygiene excellence: a summary of outcomes, and a comparison of indicators, from award-winning hospitals worldwide

- To evaluate the extent of hand hygiene practices in healthcare facilities awarded the Hand Hygiene Excellence Award (HHEA), using the Hand Hygiene Self-Assessment Framework (HHSAF)
- To explore how each element of the WHO's Multimodal Improvement Strategy (MMIS) influences hand hygiene practices in these facilities
- To investigate the correlation between HHSAF scores, hand hygiene compliance rates, and alcohol-based handrub use





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Ten years of hand hygiene excellence: a summary of outcomes, and a comparison of indicators, from award-winning hospitals worldwide

- Retrospective Analysis: HHEA data 2010-2021, including hand hygiene compliance, ABHR consumption, and HHSAF scores
- Data Alignment: Adjusted for time-lag in reporting by predicting current year's hand hygiene compliance and ABHR consumption based on past trends using linear regression
- Correlation Analysis: Examined the relationship between hand hygiene compliance, ABHR consumption, and HHSAF scores using Kendall's tau and investigated potential non-linear patterns with Locally Estimated Scatterplot Smoothing (LOESS), and logistic regression models





Asia-Pacific		Eur	rope	Latin America	
Country	Number of participating hospitals	Country	Number of participating hospitals	Country	Number of participating hospitals
Thailand	5	Czech Republic	3	Brazil	24
Malaysia	3	Switzerland	3	Ecuador	18
Cambodia	2	Belgium	1	Mexico	10
China	2	Denmark	1	Colombia	5
Indonesia	2	Ireland	1	Chile	2
Turkey	2	Portugal	1	Argentina	1
Viet Nam	2	Romania	1		
Australia	1	Spain	1		
Brunei Darussalam	1				
India	1				
Japan	1				
Maldives	1				
Philippines	1				
Sri Lanka	1	]			



Ten years of hand hygiene excellence: a summary of outcomes, and a comparison of indicators, from award-winning hospitals worldwide

#### **Countries and regions** of participating healthcare facilities

97 HCFs participated from 28 countries

#### 3 Regions:

- Europe
- Asia Pacific
- Latin America

UNIVERSITÉ





worldwide

#### Ten years of hand hygiene excellence: a summary of outcomes, and a comparison of indicators, from award-winning hospitals

# General characterisation of the hospitals participating in the HHEAs

Variable	Overall (n=97)	2017-2019 (n=51)	2021-2023 (n=46)	<i>p</i> -value
Hospital type				0.047
General/University/Teaching	50/85 (58.8)	29/41 (70.7)	21/44 (47.7)	
Private	35/85 (41.2)	12/41 (29.3)	23/44 (52.3)	
Region				0.305
Asia-Pacific	23/97 (23.7)	12/51 (23.5)	11/46 (23.9)	
Europe	14/97 (14.4)	10/51 (19.6)	4/46 (8.7)	
Latin America	60/97 (61.9)	29/51 (56.9)	31/46 (67.4)	





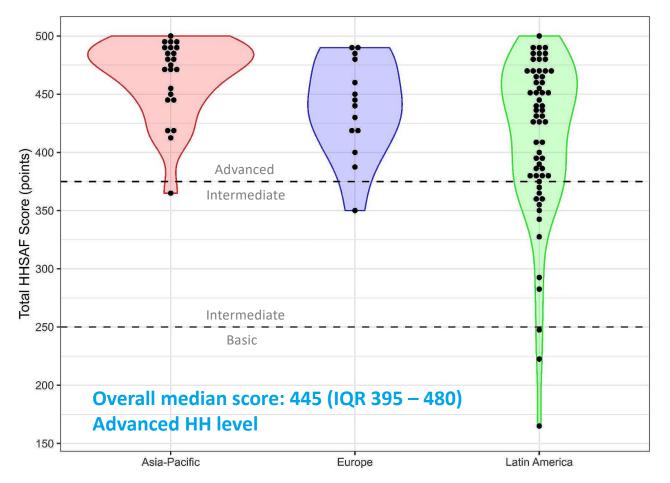


Fig. 2 Violin plots of the distribution of HHSAF total scores by region. Each dot (statistical unit) represents a HHEA winning healthcare facility. Dashed lines indicate the basic/intermediate (250 points) and intermediate/advanced (375 points) thresholds established by the HHSAF 2010

# HHSAF: scores by region

Violin plots of the distribution of HHSAF total scores by region. Each dot (statistical unit) represents a HHEA winning healthcare facility. Dashed lines indicate the Basic/Intermediate (250 points) and Intermediate/Advanced (375 points) thresholds established by the HHSAF 2010

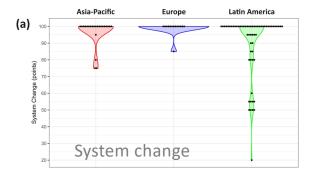
Asia-Pacific: median 475, IQR 447.5-490

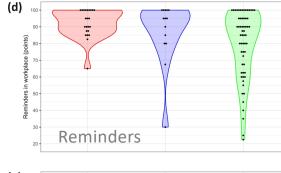
Europe: median 442.5, IQR 417.5-475

Latin America: median 432.5, IQR 380-467.5









Europe

Latin America

Asia-Pacific



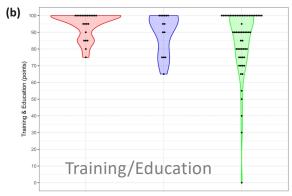
for single MMIS elements

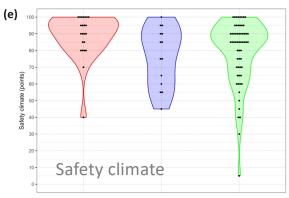
of the HHSAF by region

**DE GENÈVE** 

L'ESSENTIEL, C'EST VOUS

Ten years of hand hygiene excellence:

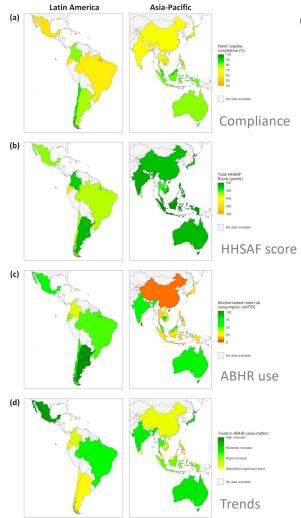




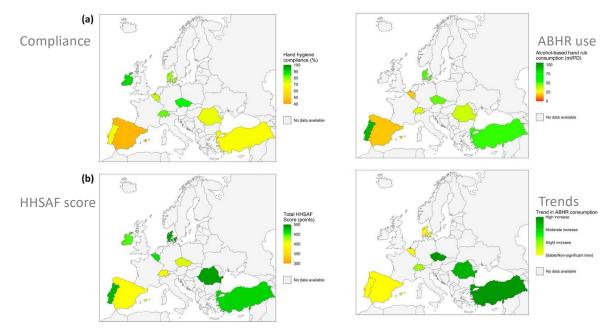
**Distribution of scores for single MMIS elements of the HHSAF by region**. The violin plots represent scores obtained for System Change (a), Training and Education (b), Evaluation and Feedback (c), Reminders in Workplace (d) and Safety Climate (e).

Each dot (statistical unit) represents a healthcare facility applying for the HHEA.





# Geographical representation of average hand hygiene performances in countries participating in HHEA



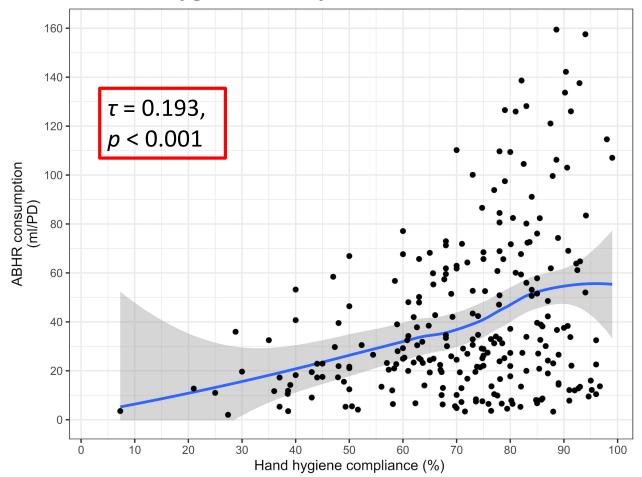
Maps of hand hygiene performance by country in Latin America, Asia-Pacific and Europe for each parameter (a: hand hygiene compliance, b: HHSAF scores, c: ABHR consumption, and d: trends) is shown.

Data show inter-regional differences in hand hygiene compliance





#### Hand hygiene compliance correlates with ABHR consumption



- ABHR use in the range between 30 and 60 ml/PD were associated with compliance rates of approximately 70-80%
- Low hand hygiene compliance rates (below 40%) were associated with ABHR consumption values lower than 30 ml/PD

Scatterplot representation of ABHR consumption in relation to hand hygiene compliance. Each dot represents a single observation (point data from one year in a single hospital). A non-linear fit of point data (blue line) is provided, along with its 95% confidence interval (shaded area), according to the LOESS regression



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Ten years of hand hygiene excellence: a summary of outcomes, and a comparison of indicators, from award-winning hospitals worldwide

Cut-offs to discriminate high- versus low-ABHR consumption groups within the central tertile of the distribution of predicted ABHR data Logistic regression models

For each cutoff i of ABHR consumption (dependent variable), hospitals were divided in 2 groups (high vs low) and the logistic regression was built. The table shows the odds ratio (OR<sub>10</sub>) of belonging to the high-consumption group for every 10-point increase in the HHSAF score (independent variable).

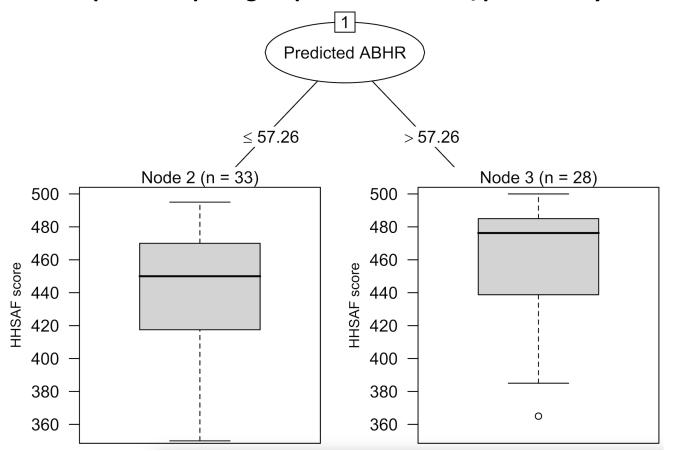
Values reported in bold indicate cut-off values for which statistical significance is approached (i = 58-59).

Cut-off (ml/PD)	OR <sub>10</sub> [CI 95%]	p-value	Cut-off (ml/PD)	OR <sub>10</sub> [CI 95%]	p-value
30	1.090 [0.956 - 1.244]	0.198	49	1.074 [0.944 - 1.222]	0.280
31	1.097 [0.963 - 1.249]	0.165	50	1.074 [0.944 - 1.222]	0.280
32	1.097 [0.963 - 1.249]	0.165	51	1.074 [0.944 - 1.222]	0.280
33	1.084 [0.953 - 1.232]	0.220	52	1.074 [0.944 - 1.222]	0.280
34	1.082 [0.952 - 1.230]	0.226	53	1.074 [0.944 - 1.222]	0.280
35	1.082 [0.952 - 1.230]	0.226	54	1.074 [0.944 - 1.222]	0.280
36	1.083 [0.953 - 1.230]	0.224	55	1.074 [0.944 - 1.222]	0.280
37	1.083 [0.953 - 1.230]	0.224	56	1.074 [0.944 - 1.222]	0.280
38	1.068 [0.940 - 1.212]	0.313	57	1.074 [0.944 - 1.222]	0.280
39	1.068 [0.940 - 1.212]	0.313	58	1.124 [0.981 - 1.288]	0.092
40	1.068 [0.940 - 1.212]	0.313	59	1.124 [0.981 - 1.288]	0.092
41	1.068 [0.940 - 1.212]	0.313	60	1.092 [0.955 - 1.249]	0.198
42	1.068 [0.940 - 1.212]	0.313	61	1.028 [0.902 - 1.172]	0.675
43	1.068 [0.940 - 1.212]	0.313	62	1.059 [0.925 - 1.213]	0.408





# Cut-off to discriminate high- versus low-ABHR consumption hospital groups: around 57 ml/patient-day



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Partitioning algorithm according to HHSAF score and ABHR consumption. To ensure the presence of an appropriate sample size, a minimum number of 20 observations was required in each group. The best partition was obtained for an ABHR consumption threshold slightly above 57 ml/PD. Computed by the R package "partykit" (version 1.2-20)





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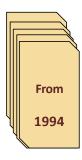
#### Conclusions

Ten years of hand hygiene excellence: a summary of outcomes, and a comparison of indicators, from award-winning hospitals worldwide

- Global impact: The Hand Hygiene Excellence Award (HHEA) has driven hand hygiene improvements globally for a decade
- **High implementation levels**: Facilities exhibited strong hand hygiene practices (median HHSAF score: 445), surpassing the WHO's advanced threshold
- COVID-19 pandemic effect: Marked increase in hand hygiene metrics and ABHR consumption during 2019-2021, reflecting pandemic response efforts
- System change scored highest among all elements of the MMIS
- Institutional safety climate scored the lowest, indicating area for improvement
- Median hand hygiene compliance was 70% with variations from hospital to hospital
- Increased ABHR consumption is associated with higher levels of hand hygiene compliance and compliance could be predicted from cut-off levels of ABHR use, at least at high use of ABHR (around 60 ml/PD). It also predicts appropriate hand hygiene implementation





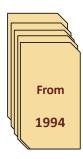


## The Menu for Today

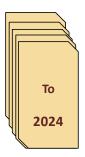
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### **Conclusions**



- Hand hygiene remains critical in IPC and the multimodal implementation strategy is key and applicable worldwide
- Sharing knowledge about hand hygiene remains important
- WHHD brings all of us together and provides resources and activities to share and facilitate improvements
- The Hand Hygiene Train-The-Trainers & Excellence Award (HHEA) approaches are successful at both local and global level
- Lessons from Award Winning hospitals around the world are many and indicate that compliance with best practices can be predicted by a validated scoring system (HHSAF) and the volume of alcohol-based handrub used per patient-day of care





### **Learning Objectives**

- 1. Review the evidence supporting successful promotion of hand hygiene best practices over the past three decades
- 2. Explain the ongoing significance of sharing knowledge about hand hygiene and comprehend the resources and activities planned for World Hand Hygiene Day 2024
- 3. Review the evidence of success behind Hand Hygiene Train-The-Trainers and Excellence Award approaches
- 4. Learn valuable, evidence-based insights from award-winning hospitals regarding their experiences and achievements in hand hygiene excellence over the past decade





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May 9, 2024	CONCERNS AND FRUSTRATIONS ABOUT THE PUBLIC REPORTING OF DEVICE- RELATED HEALTHCARE-ASSOCIATED INFECTIONS  Speaker: Prof. Sarah MacEwan, The Ohio State University College of Medicine
May 14, 2024	(European Teleclass)  DESIGNING AN OPTIMAL INFECTION PREVENTION SERVICE  Speaker: Jude Robinson, NHS England
May 21, 2024	(European Teleclass)  MATERIAL COMPATIBILITY FALLING THROUGH THE CRACKS?  Speaker: Jake Jennings, Materials Science Lead, Research and Development, GAMMA
May 23, 2024	INFECTION PREVENTION AND CONTROL CHALLENGES AND PRACTICAL SOLUTIONS IN "OTHER" CONGREGATE LIVING SETTINGS Speaker: Barbara Shea, William Osler Health System, Canada
June 10, 2024	(FREE Teleclass Broadcast live from the IPAC Canada conference) APPLYING AN EQUITY LENSE TO IPAC POLICIES AND PRACTICE

Speaker: Dr. Jeya Nadarajah, Public Health Ontario

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