

Händehygiene - TTT - Train the Trainer Program

*13. Symposium zum internationalen
Tag der Händehygiene
Wien, 05.05.2026*

PD DR Markus Hell



PARACELSUS
MEDIZINISCHE
UNIVERSITÄT

Agenda

Händehygiene –TTT- WHO –first time in Austria!!!

- Part I :
 - Background: The WHO multimodal strategy
 - The 10-year success story
 - Examples by country
 - The evidence and efficacy
 - Courtesy Prof. Didier Pittet
- Part II:
 - TTT in Austria
 - 3 Days program in Zell am See
 - Relevance for Austria-Summary



TRAIN THE
TRAINERS

Hand Hygiene

Train-The-Trainers

under the auspices of ÖGHMP + ÖGKH

MRSA Infektions-reduktion durch HH - promotionsprogramm

Effectiveness of a hospital-wide programme to improve compliance with hand hygiene

Didier Pittet, Stéphane Hugonnet, Stephan Harbarth, Philippe Mourouga, Valérie Sauvan, Sylvie Touveneau, Thomas V Perneger, and members of the Infection Control Programme

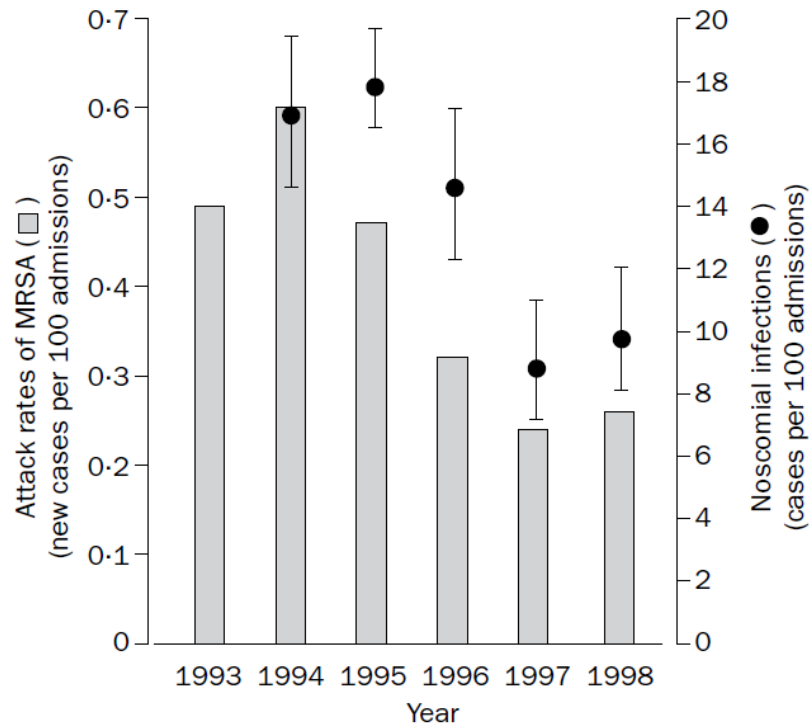


Figure 3: Trends in prevalence of nosocomial infections and annual attack rate of MRSA, 1993-98, University of Geneva Hospitals

The decrease in nosocomial infections and MRSA transmission rates strengthens the case that our intervention was beneficial to patients. Seven quasi-experimental studies

Nachweis für die systematische und anhaltende Reduktion von einem Problemkeim und Spitalsinfektionen !!!



TRAIN THE
TRAINERS

in hand hygiene – Part I:

Based on the WHO multimodal strategy:

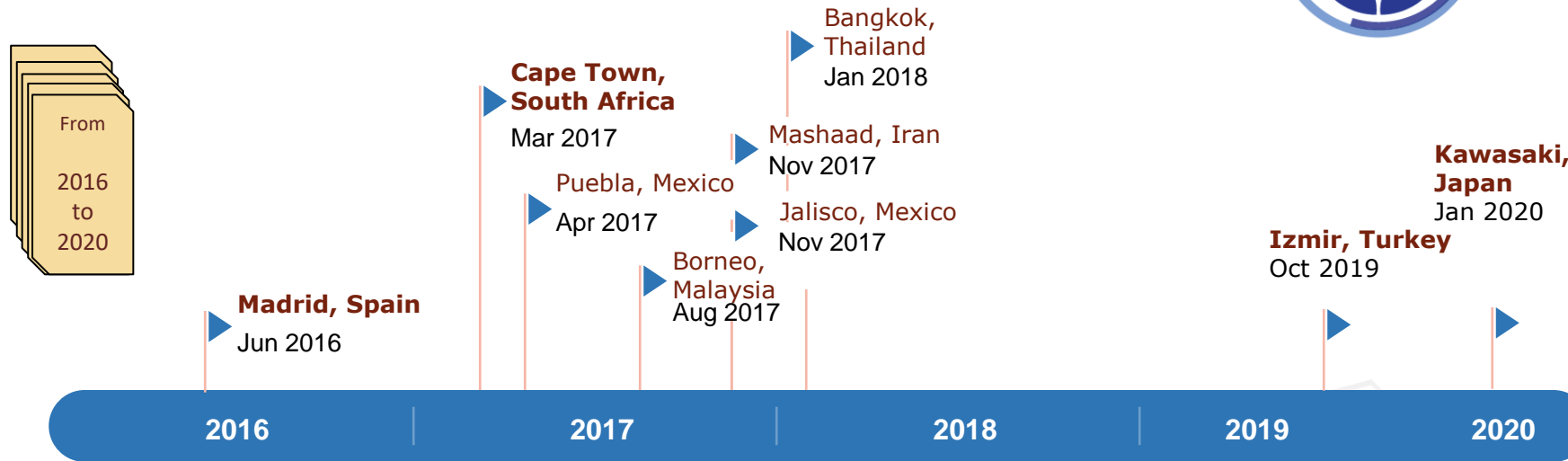
1. Lectures and round tables
2. Hands-on-simulation training
3. Sharing of experiences
4. Evaluation of knowledge pre-post course



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



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TRAINERS



- ▶ 1st TTT
- ▶ TTT Replicas 2017
- ▶ TTT Replicas 2018
- ▶ TTT Replicas 2019

Tartari E, Fankhauser C et al.
Antimicrob Resist Infect Control. 2019 Dec 30;8(1):206





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in hand hygiene:

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



2019:

South Africa

Malaysia

+

Vietnam

Iran

Turkey

Jan 2020

Japan ... Covid-19



TRAIN THE
TRAINERS

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

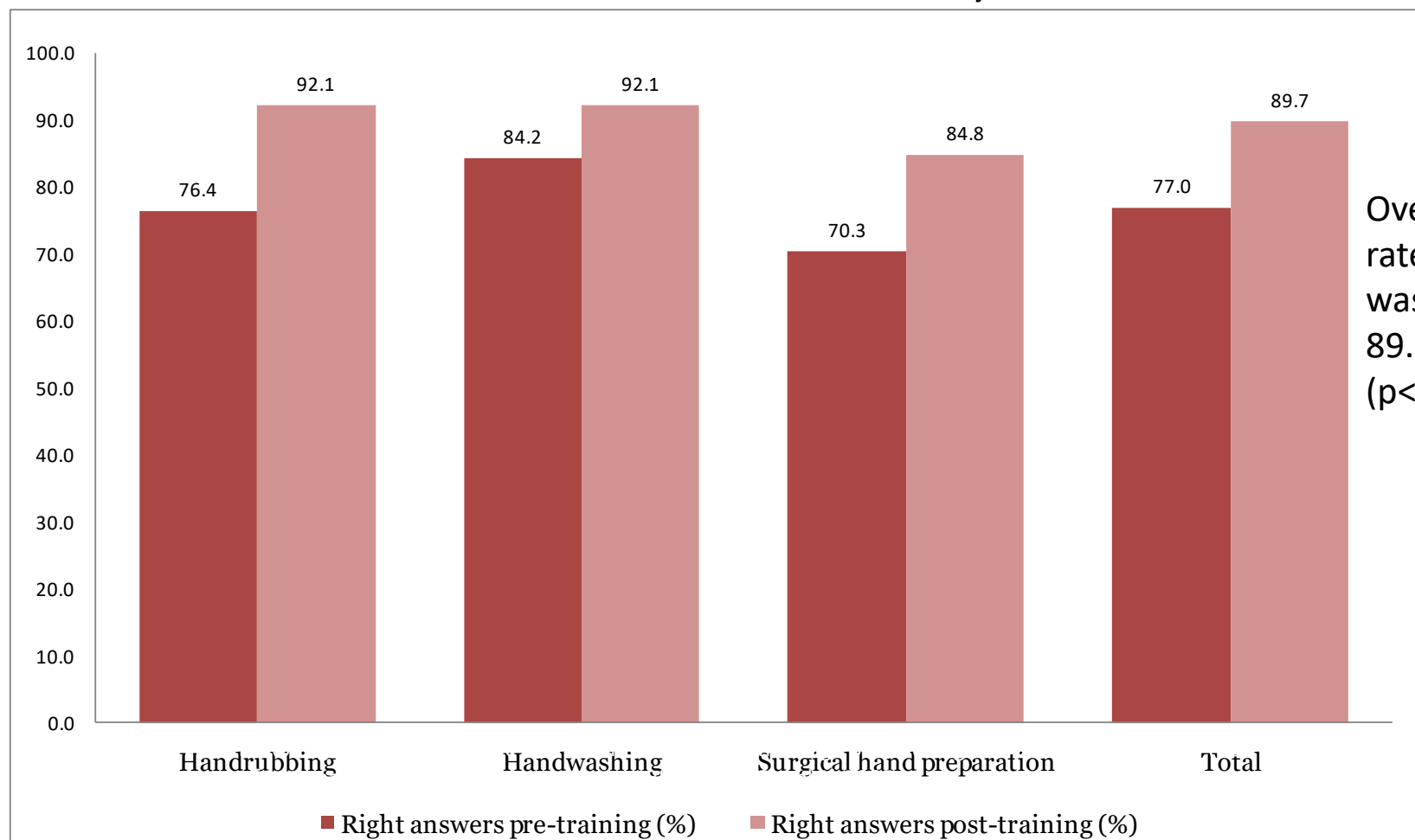
3-day course

33 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



**Infection Control
Africa Network**



Hands-on Simulation Training Cape Town, South Africa





Puebla, Mexico



3-day course
22 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**

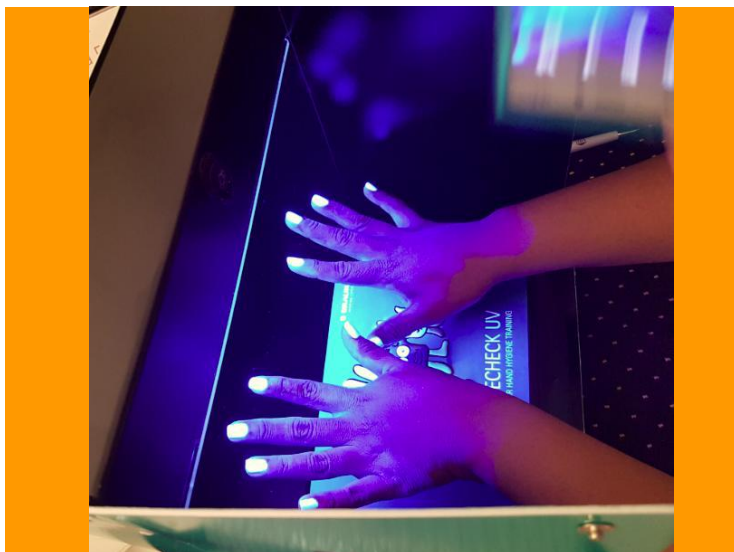
La lucha contra la resistencia a los
antibióticos está en tus manos.

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



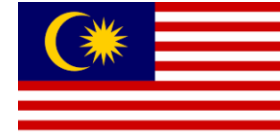


Puebla, Mexico





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



TRAIN THE
TRAINERS

- 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 in hand hygiene facilitate the implementation of the WHO hand hygiene multimodal improvement strategy in Japan: evidence for the role of local trainers, adaptation, and sustainability



- 3 TTT courses conducted annually from 2020 to 2022 in Japan
- Team “TTT-Japan” >20 IPC practitioners who completed their first TTT
- “TTT-Japan” adapted to reflect the local healthcare context in Japan, and subsequently
- “TTT-Japan” launched the 2nd and 3rd TTTs
- Pre- and post-course evaluations to assess improvement in knowledge/perceptions on hand hygiene
- HHSAF used at TTT-Japan trainers’ facilities to compare results before and after trainers’ engagement.

Saito et al, 2023 ARIC





TTT in Japan 2020



From TTT trainees
To TTT trainers



“TTT – Japan”
= a local team for TTT



2020 TTT trainees (participants)



2021 TTT trainers recruited from the 2020 TTT trainees: a team “TTT-Japan”



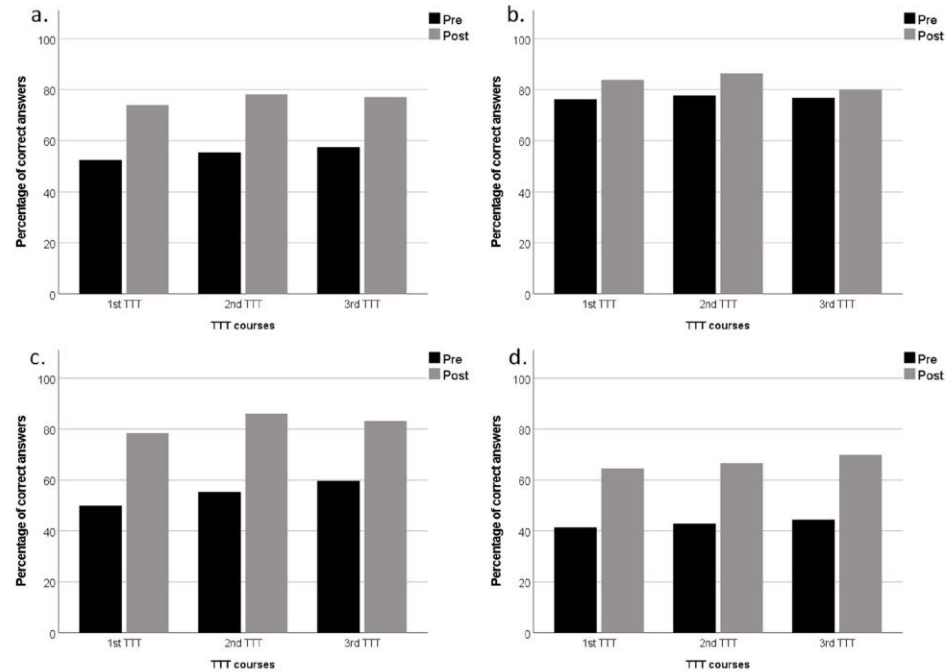
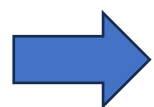


Fig. 1 Results of pre- and post-course evaluations of Train-the-Trainers in hand hygiene. **a** Total scores. **b** Scores on Knowledge domain. **c** Scores on WHO Methodology domain. **d** Scores on Clinical Scenario domain. TTT: Train-the-Trainers in hand hygiene

- 158 Japanese healthcare workers participated in 3 TTT courses
- The scores of pre- and post-course evaluations significantly improved after the course ($P < 0.001$)
- The improvement was consistent across all three TTTs
- Their experience as a trainer had a positive impact on practice

Saito et al. 2023 ARIC. Dec;12(1):1-0.



Experience as a trainer

Improved Institutional Climate Change

Table 5 The scores of hand hygiene self-assessment framework at trainers' own facilities completed before their participation in Train-the-Trainers in hand hygiene as a trainee and after their involvement in the Train-the-Trainers Japan team as a trainer (N = 13)

	Pre median (interquartile ranges)	Post median (interquartile ranges)	P values
Total	305.0 (217.5–355.0)	345.0 (270.0–372.5)	0.249
<i>Elements</i>			
System change	90.0 (65.0–92.5)	85.0 (65.0–92.5)	0.461
Training and education	60.0 (32.5–70.0)	75.0 (45.0–90.0)	0.181
Evaluation and feedback	65.0 (40.0–73.8)	65.0 (50.0–75.0)	0.366
Reminders in the workplace	65.0 (42.5–80.0)	60.0 (47.5–85.0)	0.504
Institutional safety climate	40.0 (30.0–55.0)	60.0 (37.5–80.0)	0.012

*Wilcoxon sign rank test

Two themes emerged:

1. learning as a trainer
2. working on hand hygiene promotion together as a team

Saito et al. 2023 ARIC. Dec;12(1):1-0.

"[Involvement in the TTT-Japan team] led me to better understand how to train hand hygiene and the WHO multimodal improvement strategy. (...) In addition, getting to know teammates across the country who work on hand hygiene promotion through TTT activities was a big plus for me."



Conclusions –Part I



- 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

Part II -
TTT in Austria –
20.-22.10.26
in Zell am See



Train-the-Trainers Programm zur Handhygiene

Ein standardisierter Ansatz für Schulungen zur
Infektionsprävention und -kontrolle

LEARNING OBJECTIVES

- Build national IPC leadership capacity
- Enable implementation of WHO multimodal strategy
- Train participants to become trainers (“cascade effect”)
- Strengthen hand hygiene promotion at system level
- The Trainers:
 - Emira Tartari, Caroline Frankenhauser, Andreas Widmer, Didier Pittet



Carolina Fankhauser-Rodriguez
Mikrobiologin – Genf, Schweiz

Carolina Fankhauser-Rodriguez ist Mikrobiologin mit besonderem Interesse an multiresistenten Erregern (MDRO). Sie arbeitete im Infektionskontrollprogramm und am WHO-Kollaborationszentrum für Patientensicherheit an den Universitätsspitalern und der Medizinischen Fakultät in Genf, Schweiz.

Dr. Ermira Tartari
University of Malta, Malta

Dr. Ermira Tartari ist Senior Lecturer und Forscherin für Infektionsprävention und -kontrolle (IPC) an der Fakultät für Gesundheitswissenschaften der Universität Malta in Malta. Sie hat einen PhD in Global Health von der Universität Genf. Sie ist außerdem Beraterin für Infektionsprävention und -kontrolle bei der Weltgesundheitsorganisation (WHO)

Prof. Andreas Widmer
Nationales Zentrum für Infektionsprävention, Schweiz

Prof. Andreas F. Widmer, MD, MS, FIDSA, FSHEA, ist Gründer und Präsident des Swiss National Center for Infection Prevention. Er ist verantwortlich für die Überwachung von nosokomialen (im Gesundheitswesen erworbenen) Infektionen in der Schweiz und Kernmitglied im Bereich Patientensicherheit bei der Weltgesundheitsorganisation (WHO).

METHODS

- Standardized **3-day course**
- **Simulation-based and interactive training**
- Combination of lectures, workshops, role-play
- Focus on “**My 5 Moments**” and **observation methods**
- Implementation planning and real-life scenarios

Hygienische Händedesinfektion

Standard-Einreibemethode für die hygienische Händedesinfektion gem. EN 1500

Schritt 1

Handfläche auf Handfläche, zusätzlich gegebenenfalls die Handgelenke



ca. 5 Sekunden

Schritt 4

Aussenseite der verschrankten Finger auf gegenüberliegende Handflächen



ca. 5 Sekunden

Schritt 2

Rechte Handfläche über linkem Handrücken – und umgekehrt



ca. 5 Sekunden

Schritt 5

Kreisendes Reiben des rechten Daumens in der geschlossenen linken Handfläche – und umgekehrt



ca. 5 Sekunden

Schritt 3

Handfläche auf Handfläche mit verschrankten, gespreizten Fingern



ca. 5 Sekunden

Schritt 6

Kreisendes Reiben mit geschlossenen Fingerkuppen der rechten Hand in der linken Handfläche – und umgekehrt



ca. 5 Sekunden

Bei der hygienischen Händedesinfektion das Händedesinfektionsmittel in die hohlen, trockenen Hände geben und über 30 Sekunden nach den aufgeführten Schritten bis zu den Handgelenken einreiben. Die Bewegungen jedes Schrittes fünfmal durchführen. Nach Beendigung des 6. Schrittes werden einzelne Schritte bis zur angegebenen Einreibedauer wiederholt.

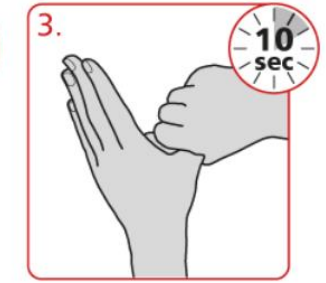
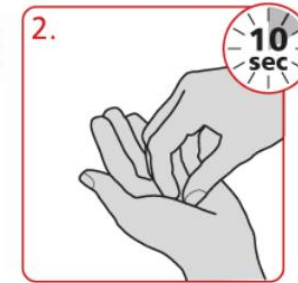
■ Darauf achten, dass die Hände die gesamte Einreibedauer feucht bleiben. Im Bedarfsfall erneut Händedesinfektionsmittel entnehmen.

D | 11.21 | CH | artemedia

6 Steps or... 3? Still a matter of debate..



Hygienische Händedesinfektion mit vereinfachter Methode



Händehygiene mit vereinfachter Methode.

Einreibezeit und Entnahmemenge des Desinfektionsmittels bleiben unverändert:

30 Sekunden mit 3 ml Händedesinfektionsmittel.

Tschudin-Sutter, Sarah, et al. "Simplifying the World Health Organization protocol: 3 steps versus 6 steps for performance of hand hygiene in a cluster-randomized trial."

Clinical Infectious Diseases 69.4 (2019): 614-620.

The TTT is a standardized, 3-day, simulation-based course grounded in the WHO Multimodal Hand Hygiene Improvement Strategy

:

Day 1 – Foundations and strategy

- Why hand hygiene matters: HAI burden, transmission dynamics, evidence base
- WHO Multimodal Strategy: system change, education, evaluation/feedback, reminders, safety climate
- Core principles of best practice hand hygiene and behavioural drivers

Day 2 – Measurement and skills building

- WHO “My 5 Moments for Hand Hygiene” as the reference framework
- Standardized direct observation methodology, data capture, and feedback principles
- Practical exercises and ateliers: observation training, calibration, typical pitfalls and inter-observer variability

Day 3 – Implementation, leadership, sustainability

- Implementation planning, adaptation to local context, and change management
- Training design: how to train others (the “TTT” cascade) and build national/regional capacity
- Practical simulation sessions, role-plays, case scenarios, and action planning for post-course rollout

Tag 1

Datum	Start	Ende	Dauer	Agenda	Speaker/Moderator
Dienstag 20. Oktober 2026	08:00	08:30	00:30	Registrierung	
	08:30	08:45	00:15	Begrüßungsansprache	Prof. Didier Pittet
	08:45	09:00	00:15	Begrüßung und kurze Einführung	Prof. Didier Pittet & Co.
	09:00	09:45	00:45	Fragebogen zur Kursevaluation vor Beginn	TTT IPC-Team
	09:45	10:00	00:15	Kaffeepause	
	10:00	10:45	00:45	Globale Belastung durch gesundheitssystem-assoziierte Infektionen	Prof. Andreas Widmer
	10:45	11:45	01:00	Die Anfänge der Förderung der Händehygiene in Genf und ihr weltweiter Erfolg – die Geschichte hinter der Initiative	Carolina Fankhauser MSc
	11:45	13:00	01:15	Die Anfänge der Förderung der Händehygiene in Genf und ihr weltweiter Erfolg – die Geschichte hinter der Initiative	Prof. Didier Pittet
	13:00	14:00	01:00	Mittagspause	
	14:00	14:30	00:30	Besondere Aspekte der Händehygiene: Hautpflege und Barrieren für eine gute Praxis	Ermira Tartari PhD
	14:30	15:00	00:30	Das Konzept „My 5 Moments for Hand Hygiene“ in der Praxis Fragen und Antworten – Videodiskussion (30 Minuten)	C. Fankhauser; E. Tartari
	15:00	15:30	00:30	Das Konzept „My 5 Moments for Hand Hygiene“ in der Praxis Videodiskussion – gemeinsame Besprechung im Plenum	C. Fankhauser; E. Tartari
	15:30	16:45	01:15	Das Konzept „My 5 Moments for Hand Hygiene“ in der Praxis Gruppenarbeit	C. Fankhauser; E. Tartari
	16:45	17:00	00:15	Kaffeepause	
17:00	18:00	01:00	Film: Clean Hands	TTT IPC-Team	
18:00	18:30	00:30	Zusammenfassung und Abschluss des Tages	Prof. Didier Pittet & Co.	

Tag 2

Mittwoch 21. Oktober 2026	08:30	09:00	00:30	Antibiotic Stewardship in Österreich: Herausforderungen und Lösungsansätze	
	09:00	09:15	00:15	Initiativen zur Händehygiene in Österreich	
	09:15	10:00	00:45	Von „Clean Care is Safer Care“ zu „Clean Hands Save Lives“	Prof. Didier Pittet
	10:00	10:15	00:15	Kaffeepause	
	10:15	11:15	01:00	WHO-Selbstevaluationsinstrument zur Händehygiene (HHSAF = Hand Hygiene Self-Assessment Framework)	Carolina Fankhauser MSc
	11:15	12:15	01:00	WHO-HHSAF – praktische Übung zum HHSAF	
	12:15	13:00	00:45	WHO-Umfrage zur Infektionsprävention und -kontrolle (IPC) 2019	C. Fankhauser and E. Tartari
	13:00	14:00	01:00	Mittagspause	
	14:00	14:25	00:25	Rollenspiel – Vorbereitung in Gruppen	
	14:25	14:50	00:25	Feinabstimmung der Gruppenpräsentationen	
	14:50	16:30	01:40	Rollenspiel: Präsentation und Diskussion der Gruppen 1–3	
	16:30	16:45	00:15	Kaffeepause	
	16:45	18:25	01:40	Rollenspiel: Präsentation und Diskussion der Gruppen 4–6	
	18:25	19:00	00:35	Zusammenfassung und Abschluss des Tages	Prof. Didier Pittet & Co

Tag 3

Donnerstag 22. Oktober 2026	08:30	09:15	00:45	Was gibt es Neues in der Händehygiene	Ermira Tartari PhD
	09:15	10:00	00:45	Innovationen in der Förderung der Händehygiene weltweit	Prof. Didier Pittet
	10:00	10:45	00:45	Überwachung der Compliance und Validierung der Beobachtenden	Carolina Fankhauser MSc
	10:45	11:00	00:15	Kaffeepause	
	11:00	11:30	00:30	Hand Hygiene Excellence Award – Erfahrungen der Preisträger	
	11:30	12:30	01:00	Erfahrungen, Erfolge und Herausforderungen in der Händehygiene Präsentationen und Diskussion Teil – 1	
	12:30	13:30	01:00	Mittagspause	
	13:30	14:00	00:30	Erfahrungen, Erfolge und Herausforderungen in der Händehygiene Präsentationen und Diskussion – Teil 2	
	14:00	15:30	01:30	Kommentare und Empfehlungen	Profs Didier Pittet & Andreas Widmer
	15:30	16:15	00:45	Evaluation nach Kursende	TTT IPC-Team
	16:15	16:30	00:15	Kaffeepause	
	16:30	16:45	00:15	Schlussbemerkungen	
	16:45	17:00	00:15	Zusammenfassung und Kursevaluation	TTT IPC-Team
	17:00	18:00	01:00	Offizieller Abschluss der Veranstaltung Zertifikatsverleihung und offizielles Gruppenfoto	Prof. Didier Pittet & Co.

EXPECTED RESULTS

- Significant increase in IPC knowledge
- Improved hand hygiene compliance (context-dependent)
- Standardized observation and feedback practices
- Development of local trainers and national programmes
- Sustainable implementation over time

TTT EXPERIENCE WORLDWIDE

- Implemented in **15+ countries across all continents**
- Delivered in **multiple languages ($\geq 6-8$ languages)**
- 300 participants trained in early international evaluation
- Proven **replication (“snowball”) effect**
- Sustained outcomes documented at 1–2 years follow-up

EVIDENCE FROM LITERATURE

- Significant **pre–post knowledge improvement** across sites
- Sustained knowledge retention over time
- Effective **simulation-based training model**
- Supports **local adaptation and scalability**
- Linked to improved IPC indicators (compliance, ABHR use, HHSAF)

KEY MESSAGES

- Scalable, evidence-based programme
- Combines science, practice, and implementation
- Builds sustainable IPC capacity worldwide

Part III: Relevance for Austria...

A Unique Opportunity for Austria

- Launch of the **TTT Hand Hygiene Programme in Austria**
- Under the auspices of **ÖGHMP**
- Delivered by **international IPC leaders**
- Designed to **strengthen national capacity**

- 👉 *A strategic step for IPC excellence in Austria*

Why This Programme Matters

- Healthcare-associated infections remain a **major challenge**
- Hand hygiene = **most effective prevention measure**
- Implementation is **complex** → **requires leadership**
- TTT bridges the gap between **guidelines and practice**

- 👉 *From knowledge to real-world impact*

What Makes TTT Different

- Not a traditional course
- **Train-the-Trainers model (cascade effect)**
- Focus on **implementation, not theory only**
- Simulation-based, highly interactive
- Builds **future national experts and trainers**
- 🙌 *Designed to create long-term change*

Programme Structure (3 Days)

- **Day 1:** Foundations & WHO strategy
- **Day 2:** Measurement & observation skills
- **Day 3:** Implementation & leadership
- Practical tools:
 - “My 5 Moments”
 - Observation & feedback methods
 - Real-life scenarios

👉 *Hands-on, practical, immediately applicable*

What Austria Will Gain

- Development of a **national network of trainers**
- Strengthening of **hospital IPC programmes**
- Standardisation of **hand hygiene practices**
- Improved **compliance and patient safety**
- 👉 *Building sustainable national expertise*

Proven International Impact

- Implemented in **15+ countries worldwide**
- Across Europe, Asia, Africa, Americas
- Delivered in **multiple languages**
- **>300 professionals trained** in early evaluations ; **> 3000 trained worldwide**
- Demonstrated **sustained impact over time**
- 👉 *A globally validated model*

Evidence-Based Programme

- Significant **knowledge improvement (pre–post)**
- Sustained gains at **1–2 years follow-up** and **up to 5 years follow-up**
- Supports:
 - Compliance improvement
 - ABHR consumption
 - HHSAF progression
- 👉 *Backed by peer-reviewed research*

Excellence & International Recognition

- Linked to global initiatives:
 - WHO Hand Hygiene Strategy
 - Hand Hygiene Excellence Award (HHEA)
- Focus on **long-term performance & sustainability**
- 👉 *From training to excellence*

A Strong International Faculty

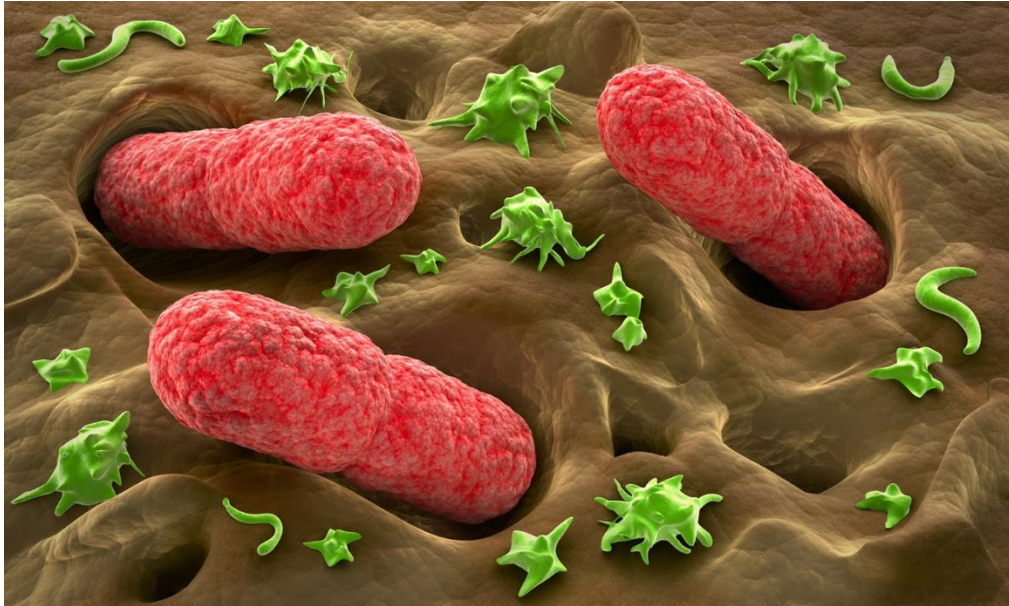
- World-leading experts in IPC
 - Extensive field experience
 - Global implementation expertise
 - Active involvement throughout the course
-
- 👉 *Learning from the best in the field*

Join the Initiative

- First opportunity to deploy TTT in Austria
- Limited number of participants
- Target: **motivated IPC leaders**

- 👉 ***Be part of the national transformation***
- 👉 ***“This is not just a course — it is the foundation for building Austria’s future leadership in infection prevention.”***

Vielen Dank für Ihre Aufmerksamkeit!



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