



Interclean
**Healthcare
Cleaning
Forum**

Why you should help your clients assess their environmental hygiene programs and how to do it (HEHSAF presentation)

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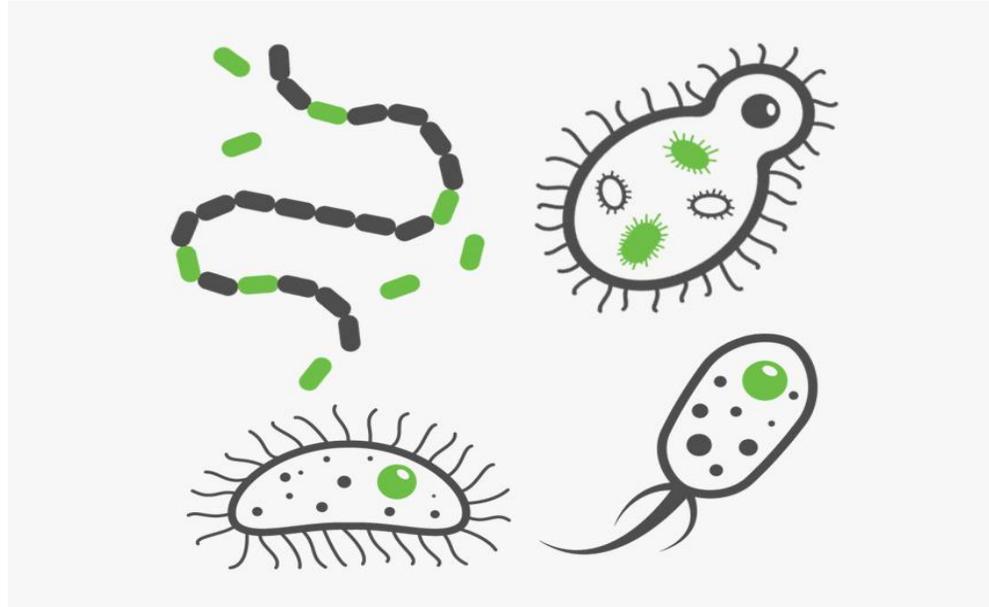


Why you should help your clients assess their environmental hygiene programs and how to do it

Alexandra Peters, PhD

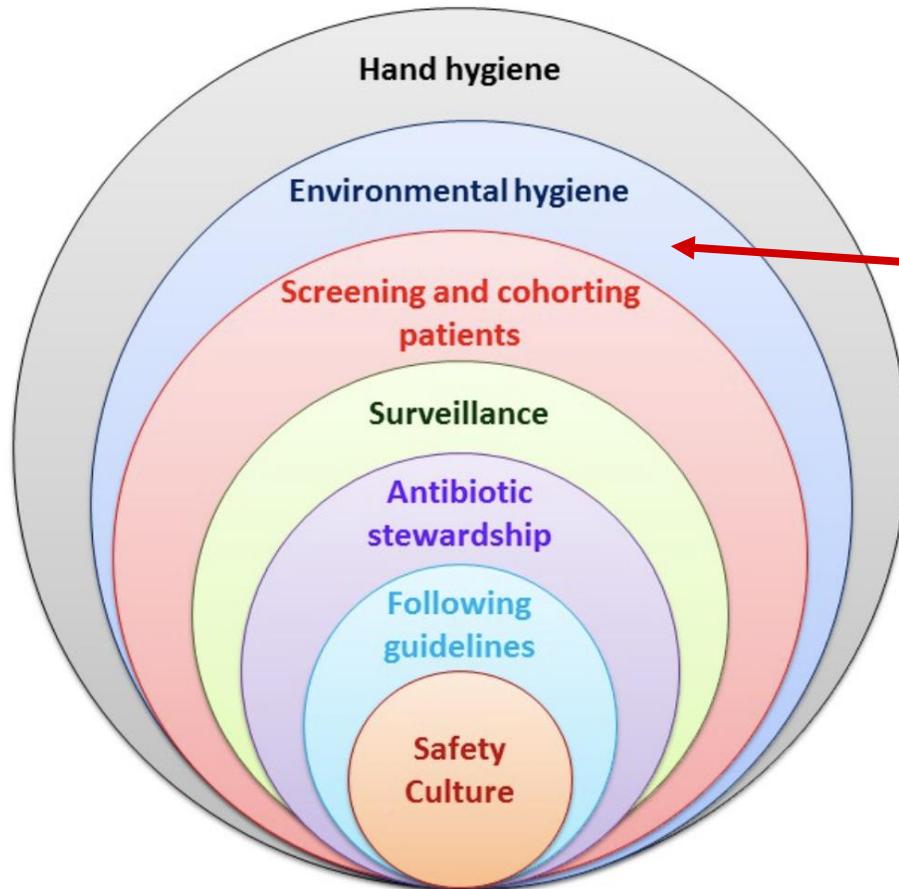
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Healthcare-associated infections in Europe



- Currently, 1 out of every 15 patients will get an HAI during their hospital stay
- If we are able to reduce 20% through improved HEH and HH that means 1/19 will get an HAI
- If we are able to reduce 40% through improved HEH and HH that means 1/25 patients will get an HAI

Strategies for reducing HAI



Very important, but understudied and usually underfunded

The bad news

HEH is still VERY understudied and underfunded in most settings

This means that:

- HEH is quite low among the priorities of most healthcare facilities
- The environmental services (EVS) workforce is often underpaid and not trained adequately
- There is often very little internal oversight of HEH programs



The bad news (continues...)

- There is often little understanding of the return of investment for improving HEH
- There is little information about how HEH is actually performed worldwide
- It is difficult to estimate the average burden of the healthcare environment on healthcare-associated infections

These issues make it difficult to improve HEH on a global scale; we simply don't know enough yet



The good news: the whole field of healthcare environmental hygiene is growing rapidly

A search for “environmental cleaning systematic review” in PubMed (a major database for medical research) in December 2023

Resulted in:

- 0 articles before 2001
- 11 articles between 2001-2010 (avg. 1.1 per year)
- 82 articles between 2011-2019 (avg. 9.1 per year)
- 150 since 2020 (avg. 37.5 per year)

Recent national guidelines

- US: Best Practices: Environmental Cleaning in Global Healthcare Facilities with Limited Resources, Version 2, 2019 (*Also available in French, Spanish, and Portuguese*)¹
- Germany: DIN 13063 Hospital cleaning - Requirements for cleaning and disinfection cleaning in hospitals and other health care facilities, 2021²

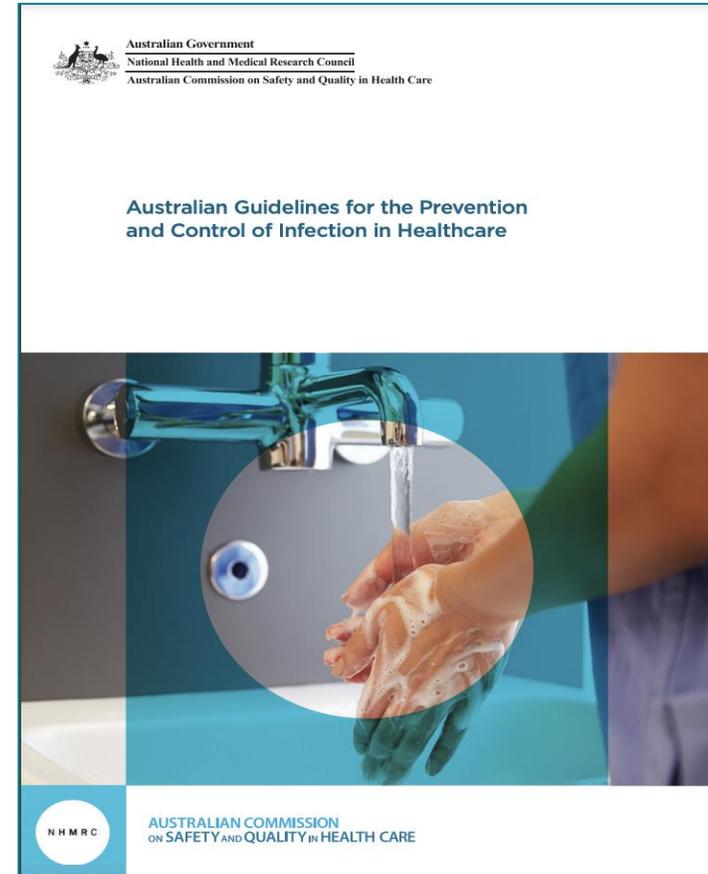


¹<https://www.cdc.gov/hai/prevent/resource-limited/index.html>

²<https://www.din.de/en/getting-involved/standards-committees/nagesutech/publications/wdc-beuth:din21:342791036>

Recent national guidelines (cont.)

- Canada: Public Health Ontario: Best Practices for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings, 3rd Edition, 2018¹
- UK: National Standards of Healthcare Cleanliness 2021²
- Australia: and Control of Infection in Healthcare Australian Guidelines for the Prevention and Control of Infection in Healthcare, 2020³



¹https://www.publichealthontario.ca/-/media/Documents/B/2018/bp-environmental-cleaning.pdf?rev=4b78a8dee04a439384bf4e95697f5ab2&sc_lang=en

²<https://www.england.nhs.uk/wp-content/uploads/2021/04/B0271-national-standards-of-healthcare-cleanliness-2021.pdf>

³<https://www.nhmrc.gov.au/sites/default/files/documents/infection-control-guidelines-feb2020.pdf>

Still no international guidelines! Why?...

- HEH is still quite a new/developing field
- Until a few years ago, there simply wasn't enough scientific evidence in the literature!



How do people see HEH?



Challenges:

Healthcare facilities often have trouble identifying where their environmental hygiene programs are lacking and how to improve them!

Challenges:

- Too busy
- Unaware of literature
- Unaware of how HEH is performed elsewhere
- Too much “price pressure”



The journey

We know there is a problem, but there is little available information about its extent...

Until more is known about the scope, it will be difficult to tackle
In order to improve HEH globally, we first need to:

- Assess the level and need
- Understand how it is being performed

This was the goal of developing the HEHSAF



Development of the HEHSAF part 1: The pilot survey

- Developed with the Clean Hospitals working group and representatives from partner hospitals
- Focused on both the technical and human elements of HEH
- Based on the Multimodal Improvement Strategy



Theoretical Framework: the Hand Hygiene Multimodal Improvement Strategy

1. System change
2. Training & Education
3. Monitoring & Feedback
4. Workplace Reminders
5. Institutional Safety Climate

- Developed in Geneva
- In use for Hand Hygiene promotion since 2009
- The basis of three WHO global surveys since, with thousands of hospitals involved



How well is HEH being performed around the world?

American Journal of Infection Control 000 (2022) 1–9



ELSEVIER

Contents lists available at [ScienceDirect](#)

American Journal of Infection Control

journal homepage: www.ajicjournal.org



Major Article

Results of an international pilot survey on health care environmental hygiene at the facility level

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The HEH pilot survey:

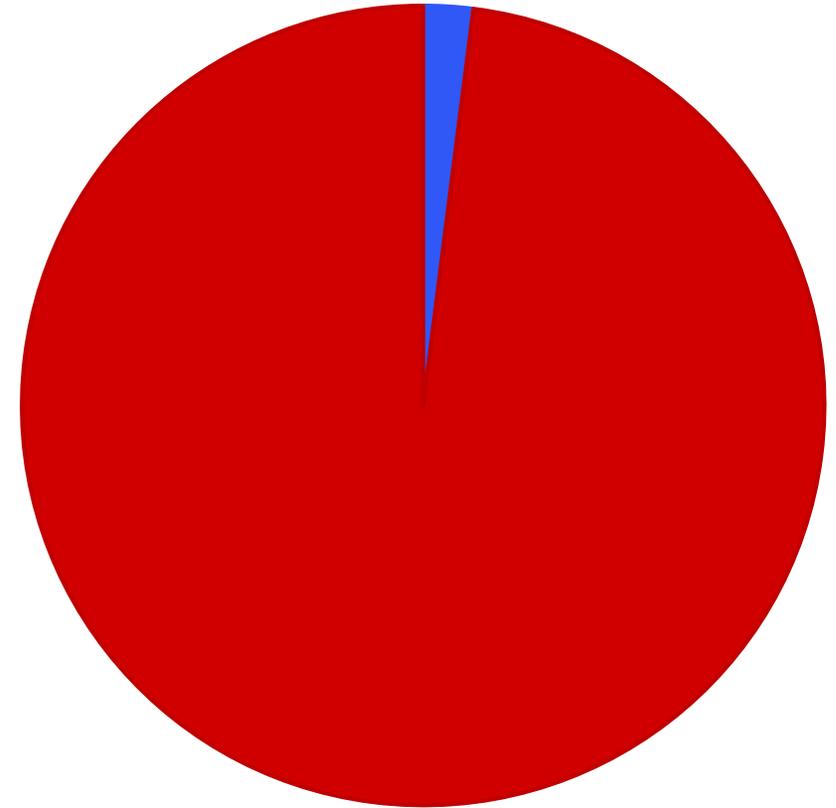
51 facilities from 35 countries

- **37%** (13/35) high-income economies
- **26%** (9/35) upper-middle income economies
- **14%** (5/35) lower-middle income economies
- **23%** (8/35) low-income economies



Pilot survey results: HEH programs are insufficient across ALL resource levels

98% (50/51) of HCFs were majorly lacking in at least one of the components of the multimodal strategy
(more on this later!)



Key results of the pilot survey

- Mops and buckets for cleaning floors were still used in most HCFs; only 4% (2/50) reported exclusively using bucket-less mopping systems
- 12% (6/50) of HCFs did not separate normal waste from medical / hazardous waste
- 22% (11/50) of HCFs reported having an open dump site nearby
- Only 30% (7/23) of HCFs in higher-income countries and 7% (1/14) in lower-income countries indicated that EVS staff received comprehensive formal training



Key results of the pilot survey (cont.)

- 49% (23/47) of HCFs had EVS managers on-site less than once per week or not at all
- 18% (9/49) did not use any workplace reminders, including the minimum required safety posters or instructions
- Concerning communication on the work floor, 16% (8/50) of respondents reported that EVS staff and nursing staff did not speak the same language
- Upward communication with direct superiors was possible in only 25% (12/48) of HCFs



Development of the HEHSAF part 2: Developing the tool

- Used data from pilot survey to assess the need as well as identify issues
- Conducted semi-structured interviews to improve the tool
- Reworked the tool to its present state with the input of over 100 people
- Put online on REDCap platform
- Validated survey in an additional international group of hospitals
- Translated into 10 languages (validation in additional languages is ongoing)



Designed to support facility improvement (not to meet a pre-defined level)



World Health
Organization

Patient Safety

A World Alliance for Safer Health Care

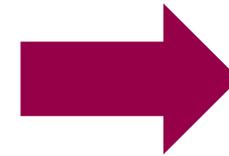
SAVE LIVES

Clean Your Hands

Hand Hygiene Self-Assessment Framework 2010

Introduction and user instructions

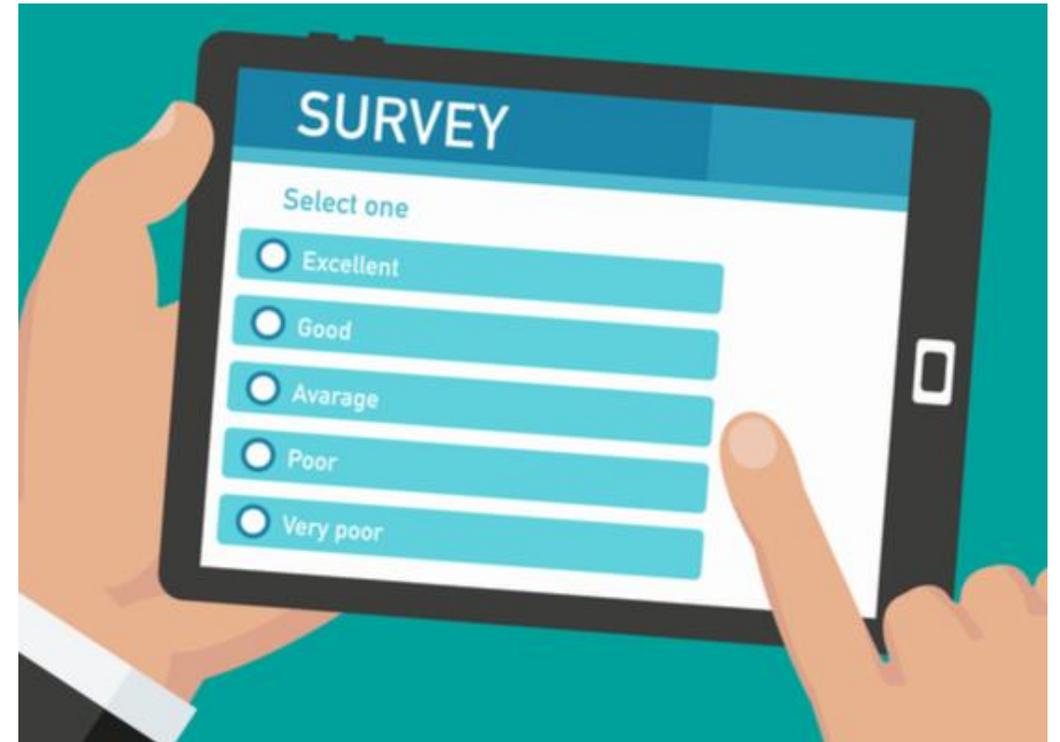
Total Score (range)	Hand Hygiene Level
0 - 125	Inadequate
126 - 250	Basic
251 - 375	Intermediate (or Consolidation)
376 - 500	Advanced (or Embedding)



Healthcare
Environmental Hygiene
Self-Assessment
Framework
(HEHSAF)

The HEHSAF

- A secure online tool for healthcare facilities (HCFs) to analyze and assess their healthcare environmental hygiene (HEH) programs
- Can be used as a benchmark for improvement over time
- The first time a global snapshot for HEH is being attempted



HEHSAF status of the data

- Translated in 10 languages
- Over 180 completed surveys
- 44 additional incomplete surveys with useable data
- Currently over 30 participating countries



What are we really assessing?

1. System change
2. Training & Education
3. Monitoring & Feedback
4. Workplace Reminders
5. Institutional Safety Climate

Human factors!!

HEH human components

Career development



Workflow



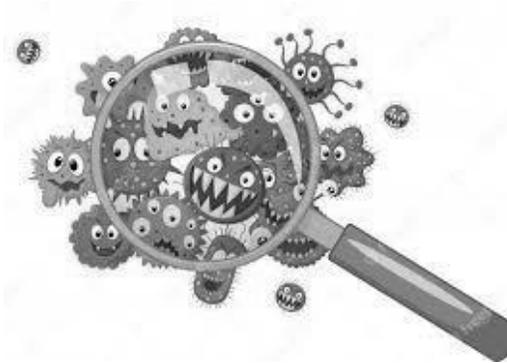
Cost and value



Training



Management



Monitoring

Workforce



All of these elements are...

Career development



Workflow



Cost and value



Training



Management

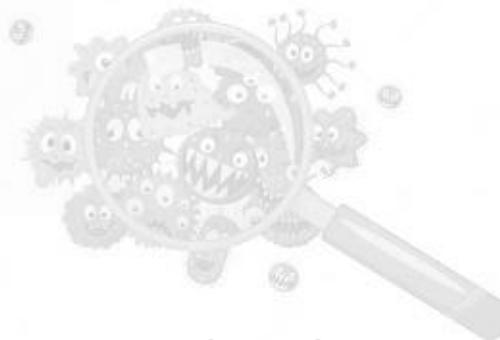


RELATIONSHIPS

Workforce



Monitoring



These relationships are improved when:

- Industry partners become trusted solution providers
- They accompany healthcare facilities through their journey of improvement



Why use the HEHSAF?

- Using a validated self-assessment tool can help facilities identify specific areas for improvement
- Companies can more easily identify and communicate their ability to help HCFs address gaps
- HCFs can measure their improvement after implementing interventions
- Industry can obtain valuable insights into how a facility's HEH program functions



How to access the HEHSAF

cleanhospitals.com/hehsaf/

clean hospitals

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Go to Website >

HEHSAF Scoring Answer Key

Download PDF >

The Healthcare Environmental Hygiene Self-Assessment Framework is available in the following languages (choice at top right):

- English
- Chinese (中國人)
- Croatian (Hrvatski)
- French (Français)
- Spanish (Español)
- Turkish (Türkçe)

HEHSAF Answer key (2)

- Each scorable question is given points
- The answer key lets you see how many points each question is worth

Clean-Hospitals-HEHSAF-Scoring-Rubric.pdf 4 / 16 | 100%

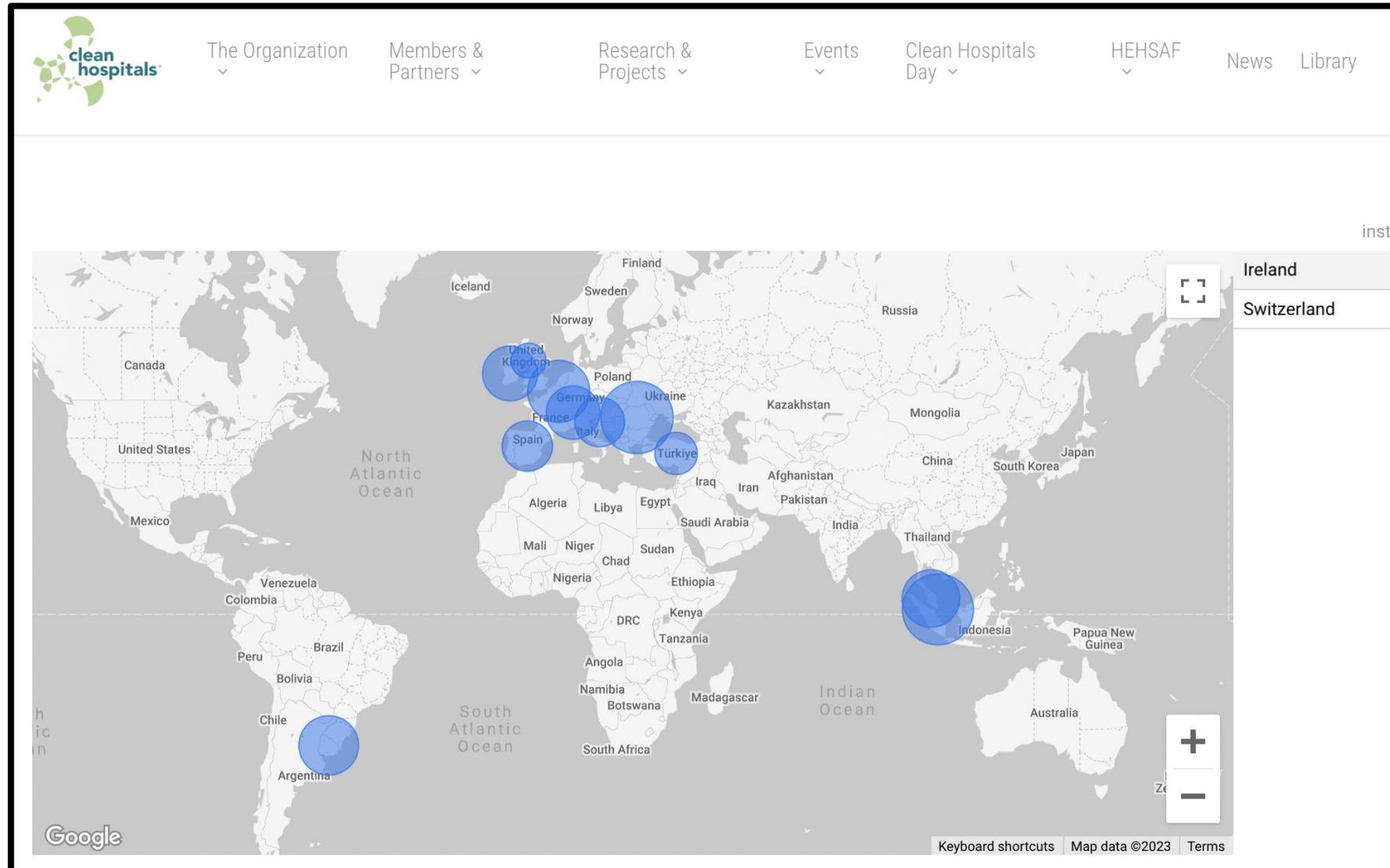
	is adequately staffed, this number should be 1 or greater than 1.		
2.4	Do you follow international and/or national guidelines for healthcare environmental hygiene?	Yes	8
		No	0
		Don't know	0
2.5	Does your healthcare facility have different protocols for different risk zones (Example: offices vs. patient rooms vs. operating theaters)?	Healthcare environmental hygiene protocols do not vary from one zone to the next	0
		Some protocols are adapted to high-risk zones, such as operating theaters/transplant wards	4
		All healthcare environmental hygiene protocols are adapted to each risk zone	8
		Don't know	0
2.6	Are there additional protocols available for the person who cleans the patient zone?	Yes	7
		No	0
		Don't know	0
2.7	Is there a plan in place to improve HEH in your facility (either at the individual program or institutional level)?	Yes	7
		No	0
		Don't know	0
2.8	Does your facility have an antibiotic stewardship program in place?	Yes, there is a full program in place	8

HEHSAF scoring levels

The scores are calculated out of a maximum of 500 points

Total Score (range)	Level of Healthcare Environmental Hygiene
0-125	Inadequate
126-250	Basic
251-375	Intermediate (or Consolidation)
376-500	Advanced (or Embedding)

Interactive map



Interactive map



The Organization
Members & Partners
Research & Projects
Events
Clean Hospitals Day
HEHSAF
News
Library

This interactive tool is possible thanks to the generous support of InterClean Amsterdam



Check your HEH Score

Compare your score with other Healthcare Environmental Hygiene scores.

Your Score:

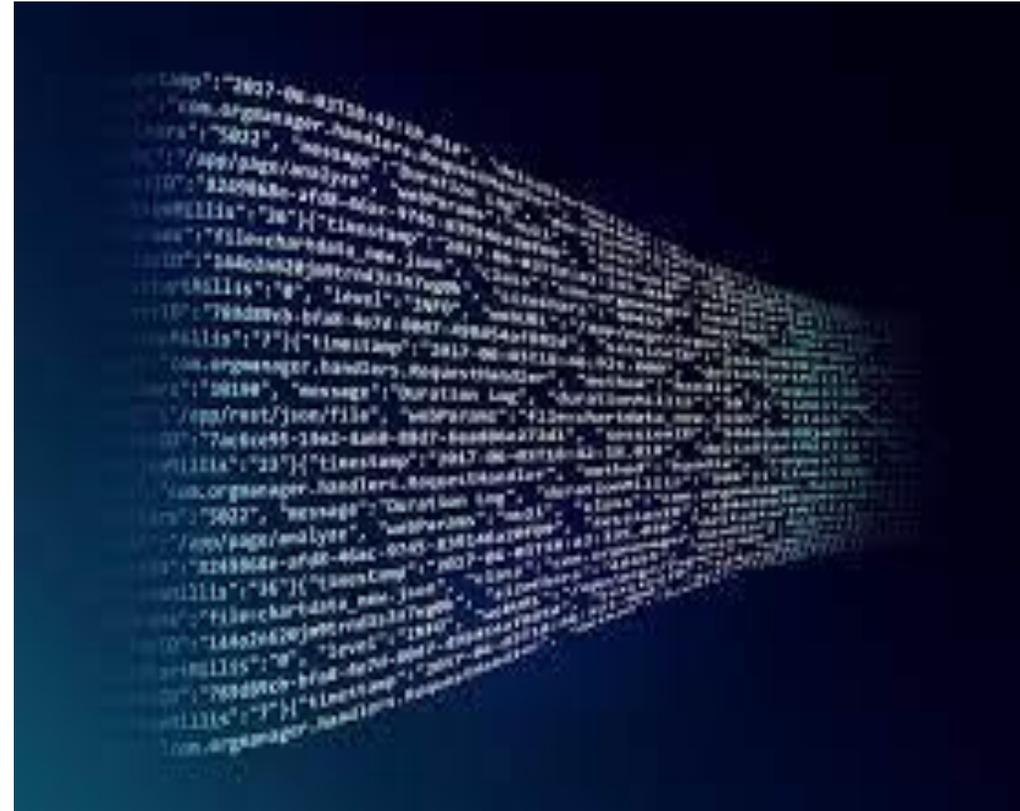
Your Country:

Where do I find my score ?

Your score	350	Your Performance
Average score in Ireland	330	6.06%
Average score in all countries	306	14.38%

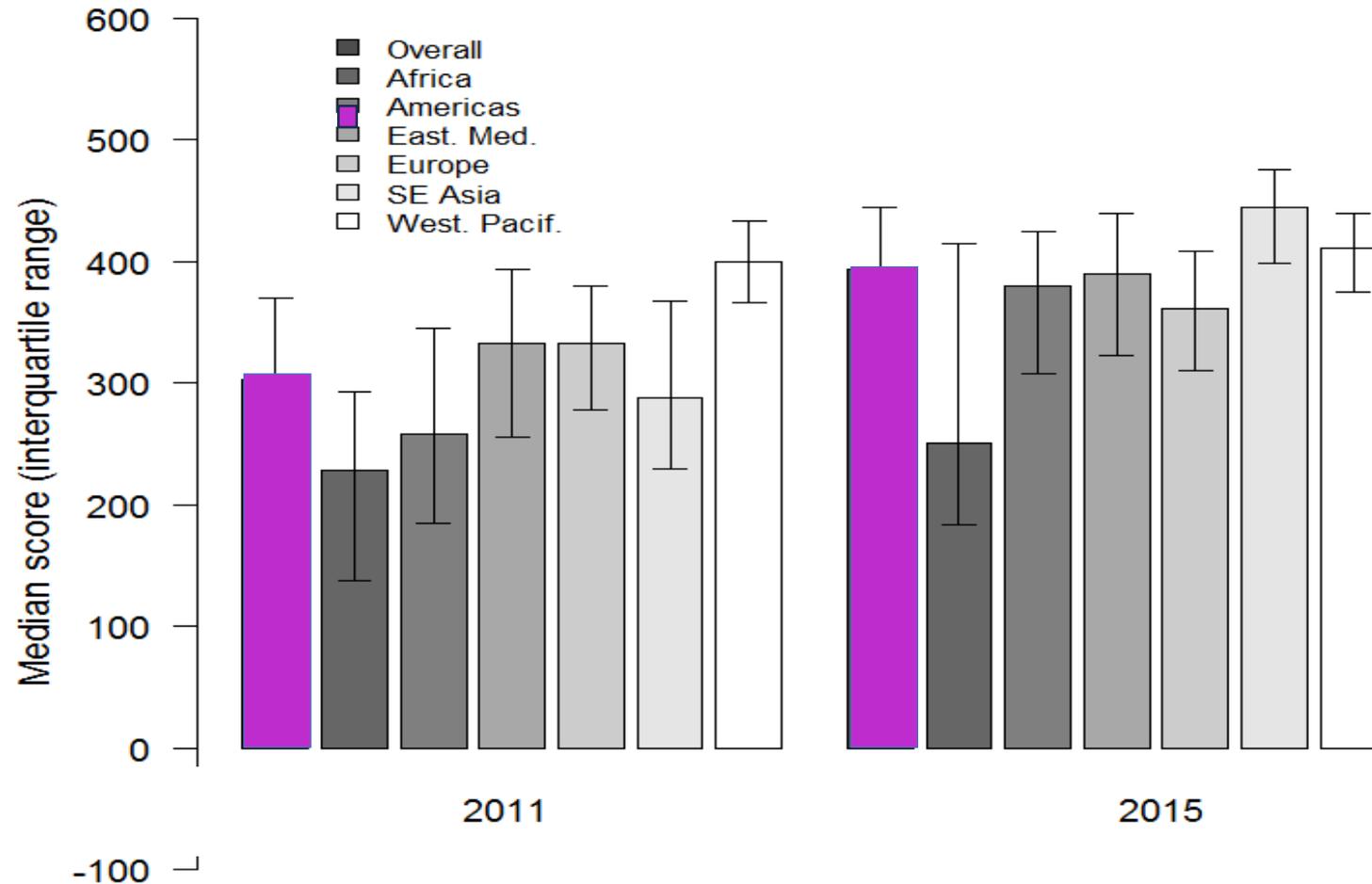
Potential of self-assessment tools

- For the HHSAF (the hand hygiene self-assessment survey) there were three global surveys implemented by WHO with thousands of hospitals joining around the world
- A global survey for HEH could have major implications for program improvement globally and a potential increase in healthcare facility investment in HEH
- Identifications of trends in geographic regions can help MoH or other organizations coordinate improvement campaigns



Tracking improvement

WHO Hand Hygiene Self-Assessment; Total score in hospitals* in 2011 & 2015

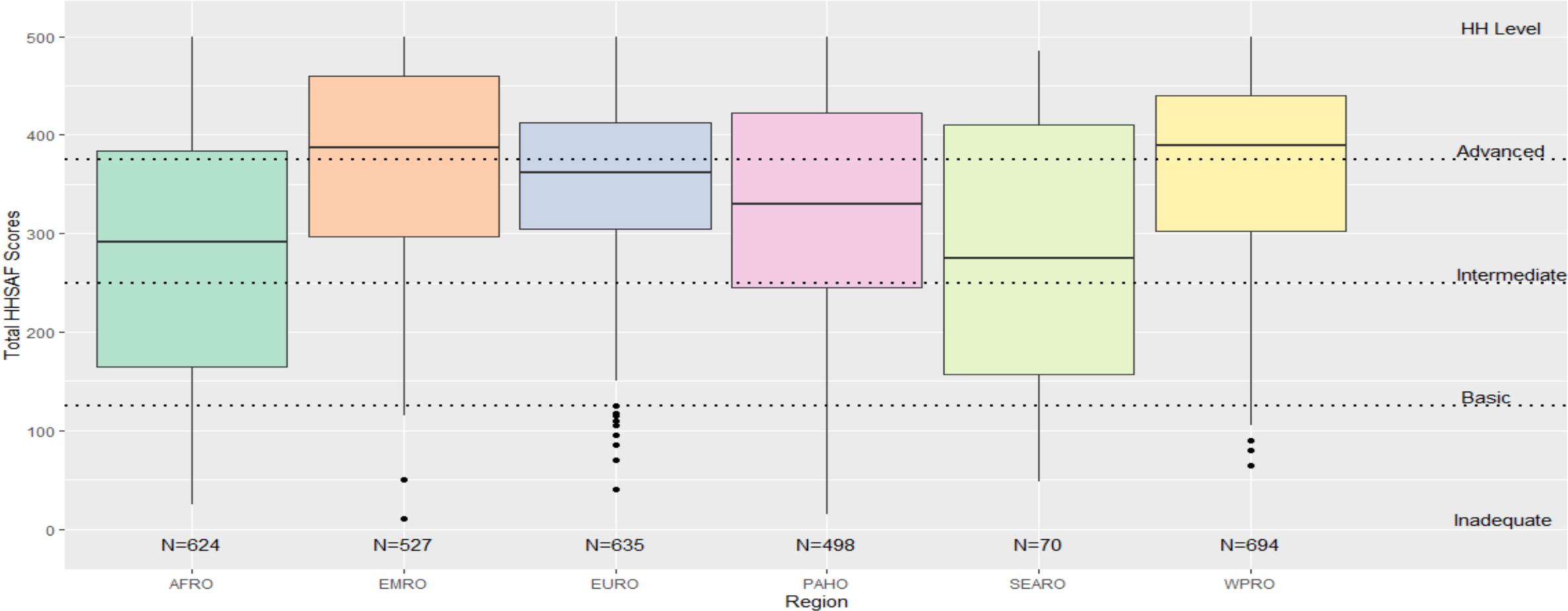


Kilpatrick et al. *J Hosp Infect* 2018 *only in hospitals participating in both surveys in 2011 & 2015



Regional comparisons

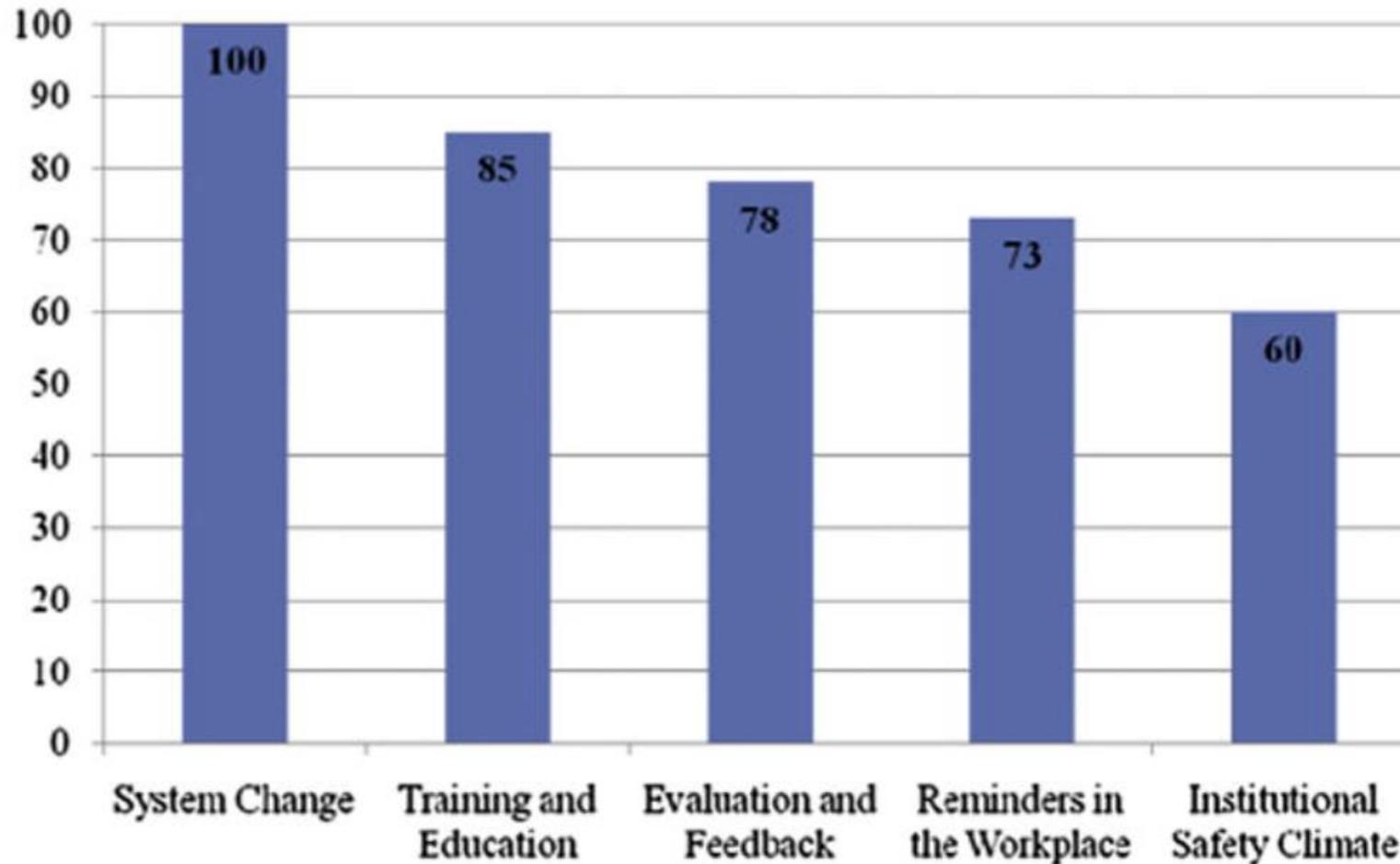
Worldwide hand hygiene implementation level by WHO region



SEARO 276 (IQR 157-411, Intermediate) versus EMRO 388 (297-460, Advanced) *The Lancet Inf Dis*



Identification of areas for improvement



Median component scores for US facilities participating in the WHO HHSF survey 2011 (n = 129)
B Allegranzi, L Conway, E Larson, D Pittet, *Journal of Hospital Infection* (2014) 42:224-30



Using the HEHSAF with your clients can help you:

- Have meaningful conversations about HEH with healthcare facility decision makers
- Accompany your clients through the process of identifying areas for improvement
- Give you a vision of the topography of each facility's HEH program, allowing you to better position your possible solutions
- Better position your business in respect to the healthcare facility's needs
- Help develop comprehensive solutions for their clients
- Be a part of something bigger and....



Help improve patient safety worldwide!!

4 in 10 patients
are harmed in primary and outpatient health care



**Speak up
for patient safety!**

 World Health Organization

 World Patient Safety Day