

# Implementing cost-effective multimodal interventions to improve hand hygiene (HH) compliance in Ayder Hospital, Ethiopia

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# Ayder Hospital, Mekelle, Ethiopia



## Ayder Comprehensive Specialized Hospital (ACSH)

- more than 500 beds
- offers healthcare services to more than 8 million people
- College of Health Sciences established in 2003

Ethiopia: prevalence of HAI in tertiary care hospitals reaches 19.4%\*

- Scarcity of (safe) water
- Scarcity of hand sanitizer and disinfectant dispensers
- Dysfunctional sanitary facilities



\* Antimicrob Resist Infect Control. 2018 Jan 5;7:2. doi: 10.1186/s13756-017-0298-5. eCollection 2018

Map: <https://www.worldatlas.com/af/et/ti/where-is-mekele.html> (16.03.2019)



# Targets

## Improvement of hand hygiene

- A To study the efficacy of a multimodal intervention strategy to improve hand hygiene compliance
- B To avail cost-effective resources for hand hygiene practice



# Multimodal Interventional strategy

May 2018-May 2019

## Preparation

- Training on infection prevention for one month was given to two clinicians and one microbiologist in Bochum, Germany

## Start

- World hand hygiene day was celebrated in May 2018

## New structures

- Implementation of a multidisciplinary infection prevention committee
- Assigning nurse representatives for hygiene in each ward

## Staff education

- Training in hand hygiene (HH)

## Performance review

- HH-Compliance Observation using the WHO compliance observation checklist

**World Health Organization** | **Patient Safety** | **SAVE LIVES**  
A World Alliance for Safer Health Care | Clean Your Hands

**Observation Form**

Facility: \_\_\_\_\_ Period Number\*: \_\_\_\_\_ Session Number\*: \_\_\_\_\_  
 Service: \_\_\_\_\_ Date: (ddmmyy) / / \_\_\_\_\_ Observer: \_\_\_\_\_  
 Ward: \_\_\_\_\_ Start/End time: - / - : \_\_\_\_\_ Page N\*: \_\_\_\_\_  
 Department: \_\_\_\_\_ Session duration: (mm) \_\_\_\_\_ City\*\*: \_\_\_\_\_  
 Country\*\*:

Prof.cat Code N°	Prof.cat Code N°	Prof.cat Code N°	Prof.cat Code N°
1	1	1	1
2	2	2	2

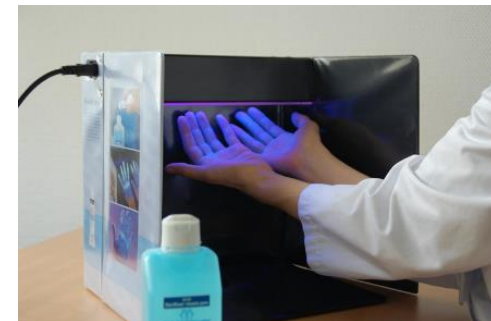
# Multimodal Interventional strategy

May 2018-May 2019



Staff education based on ‘my five moments of hand hygiene’

- Placing hand hygiene posters in visible areas, like in the doctors’ and nurses’ rooms
- The right technique of hand disinfection was practiced with UV-light training.
- Verbal reminders by pointing out the lapse to health care workers whenever a breach occurred



# Avail Cost-effective resources for hand hygiene practice



**In-house production of hand sanitizer and dispenser holders for every patient bed**

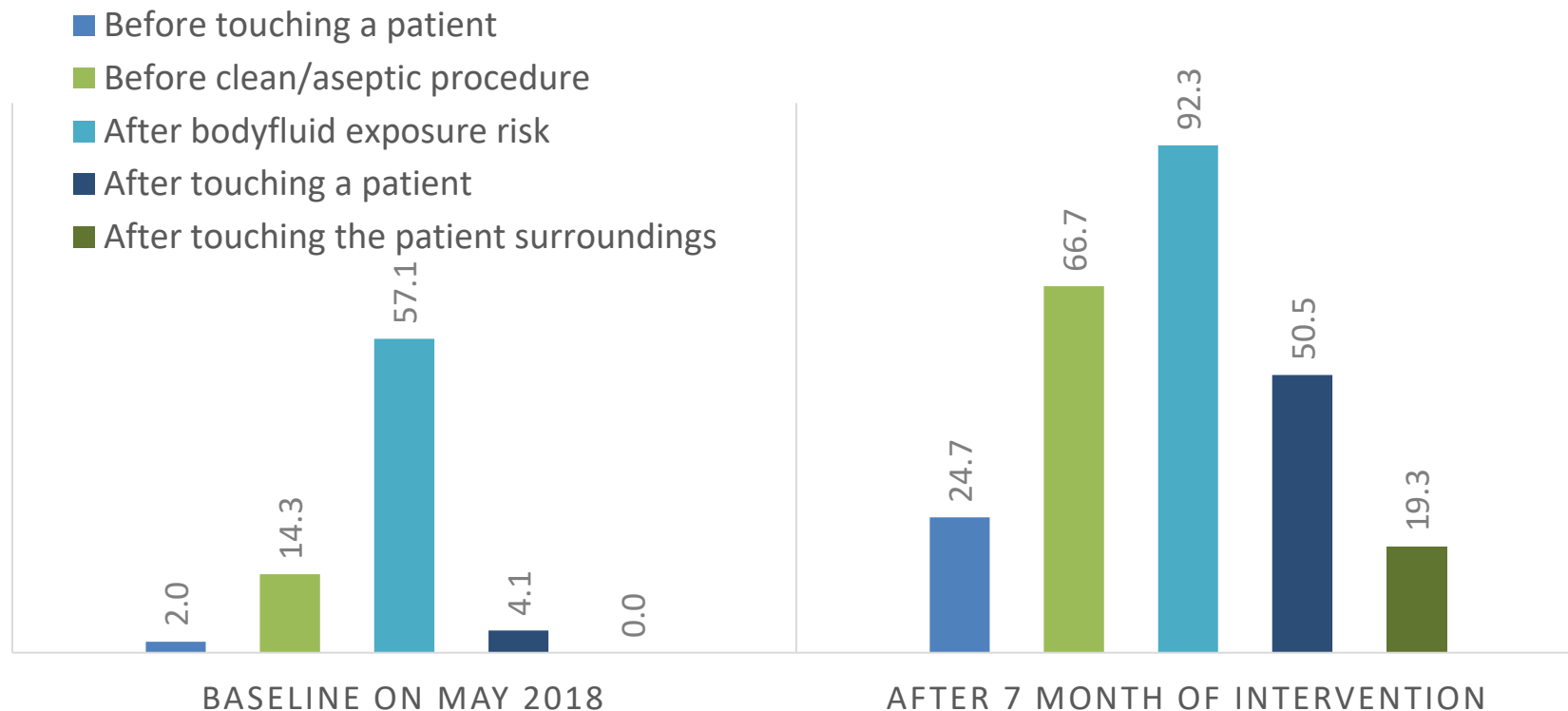
Nurse representative for hygiene while filling a dispenser

In-house manufacturing of hand sanitizer bottle holders



# HH Compliance-Observation

## HANDHYGIENE COMPLIANCE (%) INDICATION-RELATED COMPLIANCE



HH-compliance (Handrub) increased from 4.8% (269 observ.) to 37.3% (737 (observ.).  
No major differences in compliance between nurses (5,4% before and 37,1% after intervention)  
and physicians (4,1% before and 39,5% after intervention) (Data not shown in the diagram)



# Lessons learned

- Hand rub is accepted as the main disinfection method
- Infection prevention has become a hospital-wide emphasized topic
- HH campaigns in developing settings profit from multimodal strategies
- Utilization of local resources should be further emphasized





# Next activities

- Training of nurses and environmental health experts in Germany
- Establishing department of infection prevention reporting to the Clinical Director
- Assigning staff working full time for the infection prevention activities
- Doing third round of compliance observation after 10 month of intervention
- Introducing cleaning and disinfection policy
- Introducing other cost-effective measures to improve hospital hygiene (e.g. microbiological surface monitoring)

# Thank you



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