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# THE ROLE OF CLEANERS IN INFECTION PREVENTION - NEGLECTED FRONT LINE WORKERS IN HEALTHCARE FACILITIES

Professor Wendy J Graham and Dr Giorgia Gon

London School of Hygiene and Tropical Medicine

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November 12, 2019



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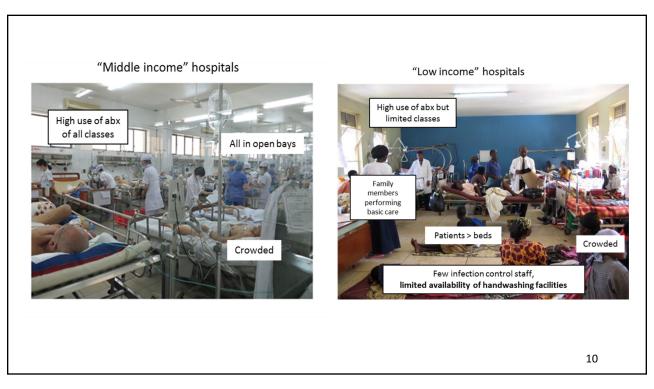
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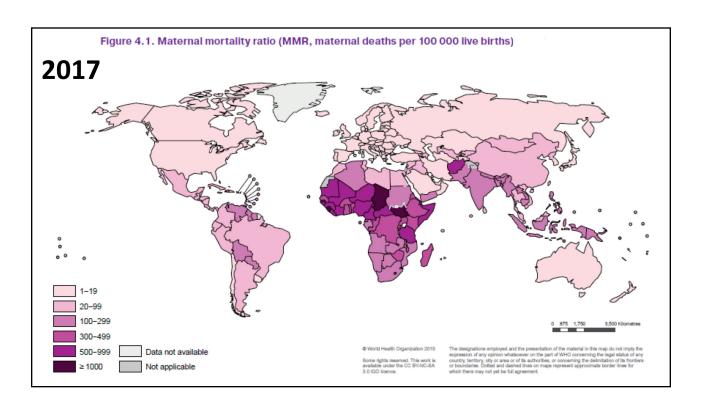
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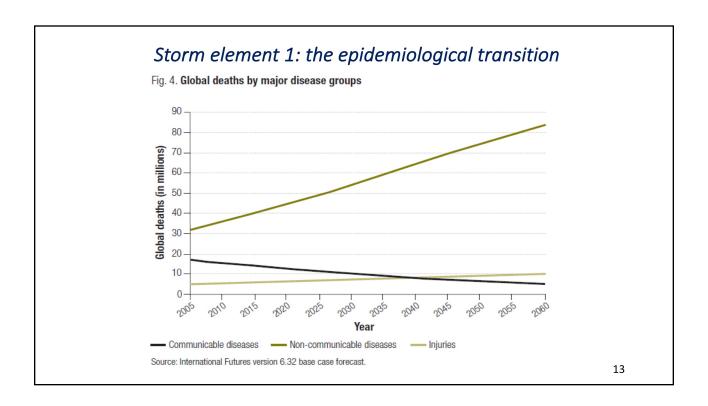


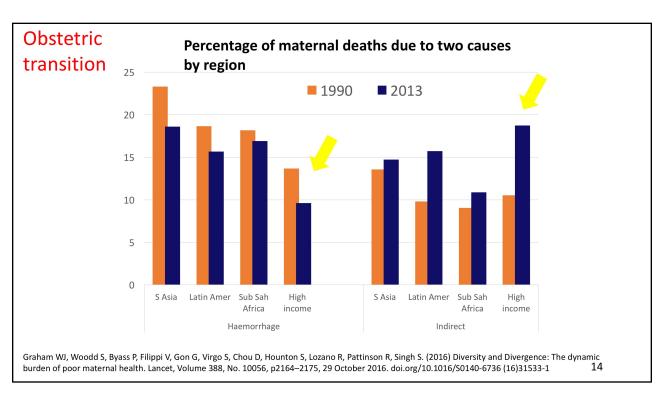
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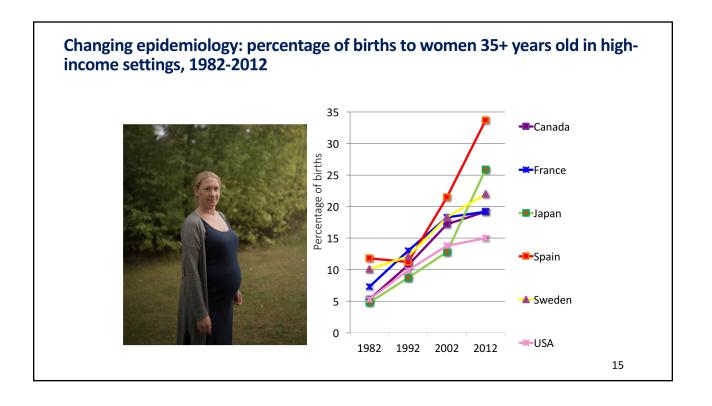
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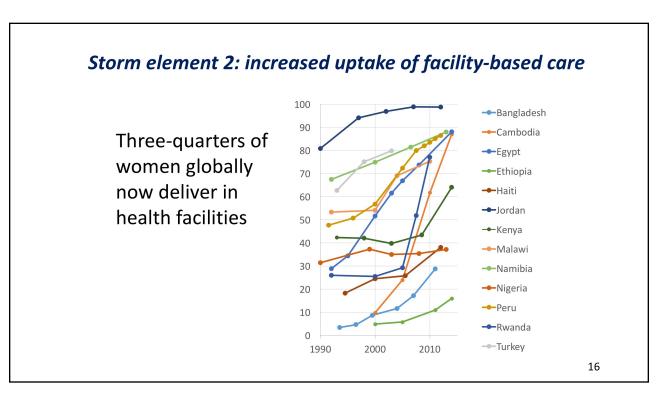




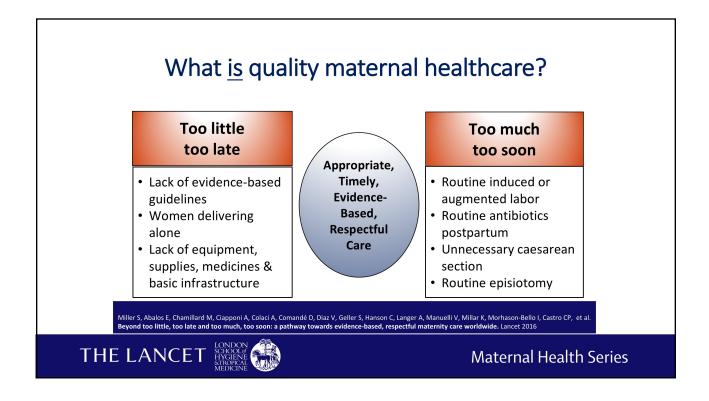


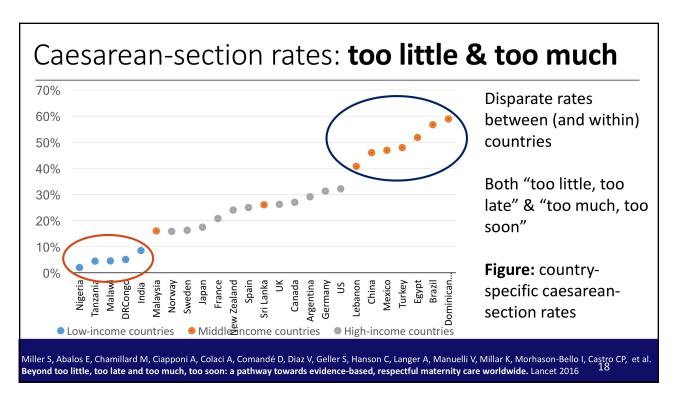




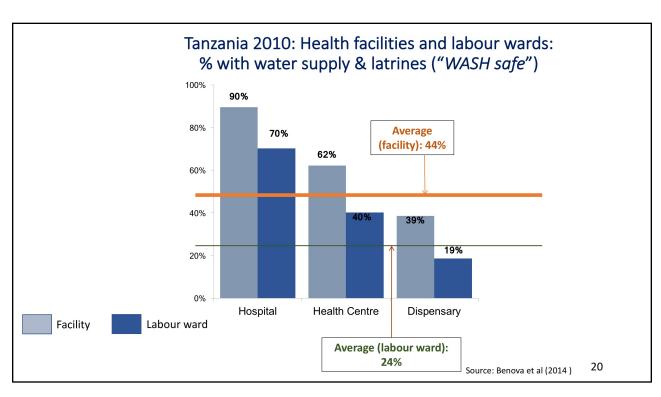


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#### Storm element 4: poor infection prevention and control







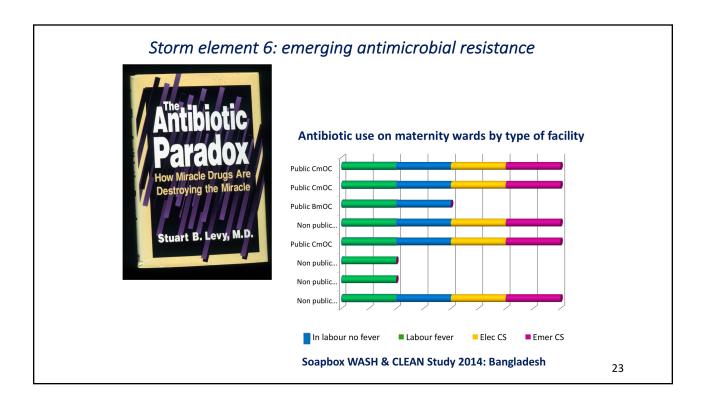
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## Storm element 5: weak health information systems & surveillance



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## What are the infection-related risks of care in health facilities – "healthcare-associated infections"? (1)

- Hundreds of millions of patients are affects by HAIs worldwide each year
  - HAIs affect both high-income (HIC) and low- to middle-income countries (LMIC)
- Of every 100 hospitalized patients:
  - 7 in HIC will acquire at least one HAI
  - 15\* in LMIC will acquire at least one HAI
- Most countries lack surveillance systems, therefore absence of reliable data
- Surgical site infections are the most common HAI in LMIC (versus urinary tract infection in HIC), and these affect up to two-third of operated patients in LMIC (up to 9 times higher than in HIC)

Source: Adapted from Molly Patrick, Water & Health conference, 2018

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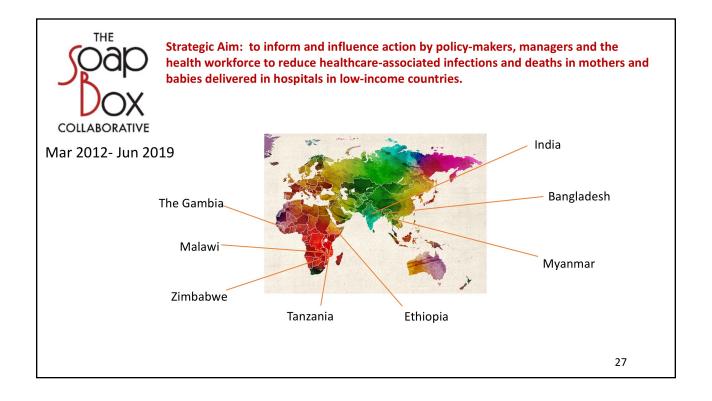
## What are the infection-related risks of care in health facilities – "healthcare-associated infections"? (2)

- Patients in intensive-care units (ICU) particularly at-risk in LMICs
  - Frequency of infection 2-3 times higher than in HIC
- Neonatal population particularly at-risk in LMICs
  - Infection rates 3-20 times higher than in HIC
- Transmission of bacteria to patients (HAIs risk) via surfaces + hands, equipment and air
- Environmental hygiene: cleaning & disinfection of surfaces (including cleaning linen) + waste disposal

Source: Adapted from Molly Patrick, Water & Health conference, 2018

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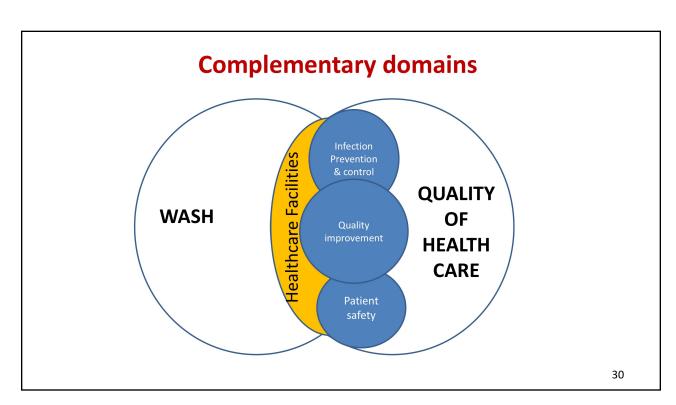


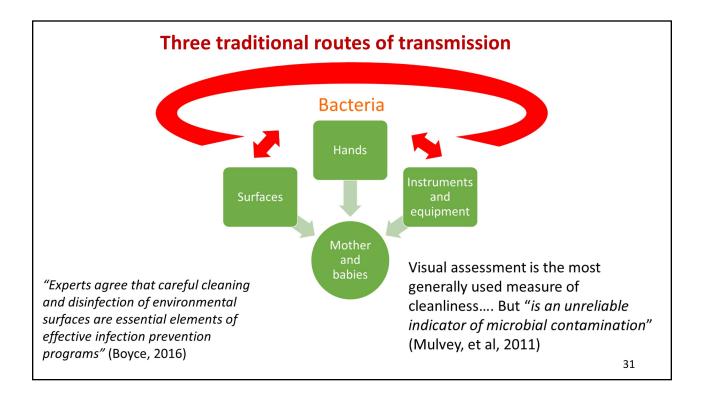


#### What did we do? (2012-19)

- Improved understanding on the state and the determinants of hygiene at birth in health facilities.
- Contributed to local solutions and action to improve hygiene at birth (Back to Basics).
- Increased awareness of the needs, opportunities and challenges of reducing HCAIs in maternity units.
- Strengthened the network and community of actors addressing hygiene at birth.







#### Behind surface cleanliness: the cleaners!

Our findings from Gambia, India, Bangladesh, Zanzibar, Myanmar (about 100 facilities)

#### Cleaners/Orderlies

- No formal training translates into poor storage of cleaning equipment and poor cleaning practices
- Shortage of staff
- Lack of policies and protocols (e.g. of job descriptions, cleaning procedure guidelines, cleaning schedules, etc.)
- Multiple responsibilities

"Other tasks that I do apart from cleaning are delivering women, dressing wounds, giving injections, caring for the newborn, and distributing food. We just work from experience without any training."



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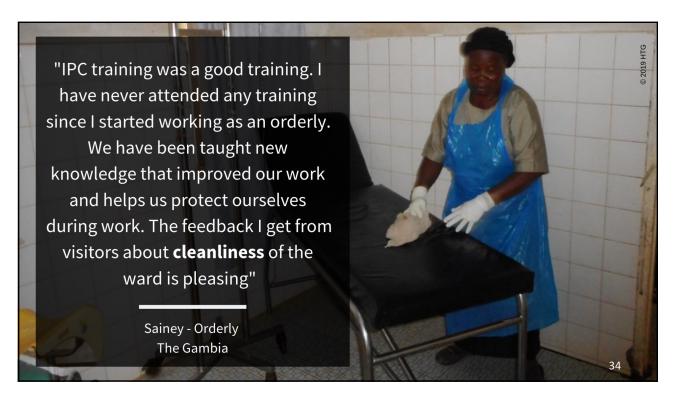
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#### The TEACH-CLEAN training package

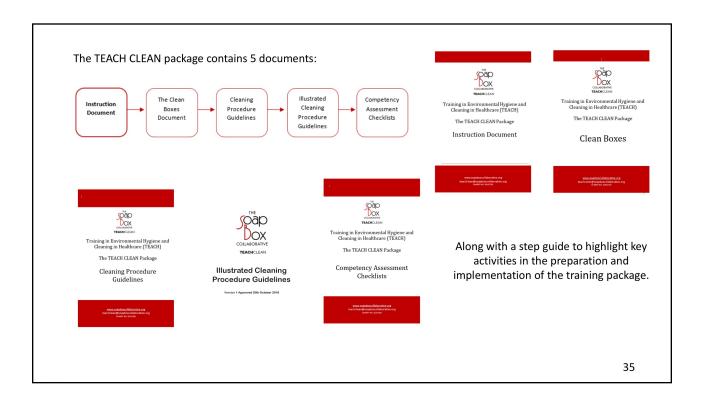
- No pre-existing training identified for low literate staff
- Based on international and national guidelines & standards
- In consultation with NHS Grampian; advice from ICAN
- Principles of adult learning, participatory techniques
- Training adapted to local country context in consultation with local expertise
- Trainers sourced from health facilities
- A training of trainers (cleaning champions)
- Piloted in Gambia (Horizons&MoH 4 facilities) → results: knowledge ↑,
   practice ↑ & empowerment ↑
- Used in India (IIPHG, 10 facilities), Cameroon (CDC, 28 facilities)

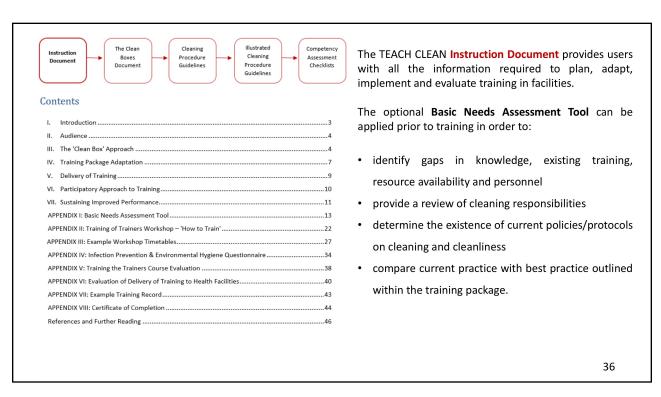
https://www.lshtm.ac.uk/research/centres/march-centre/soapbox-collaborative/teach-clean

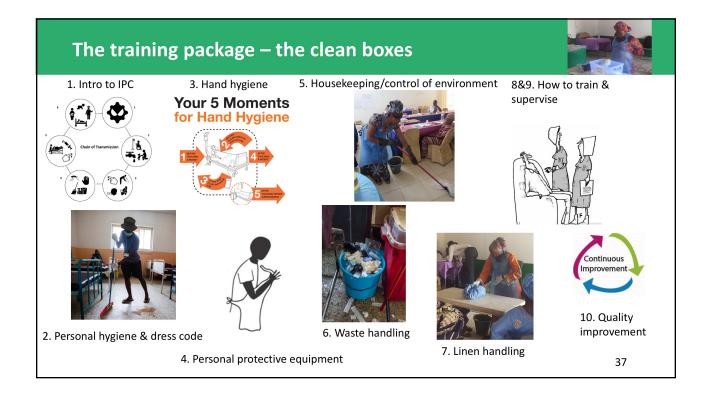
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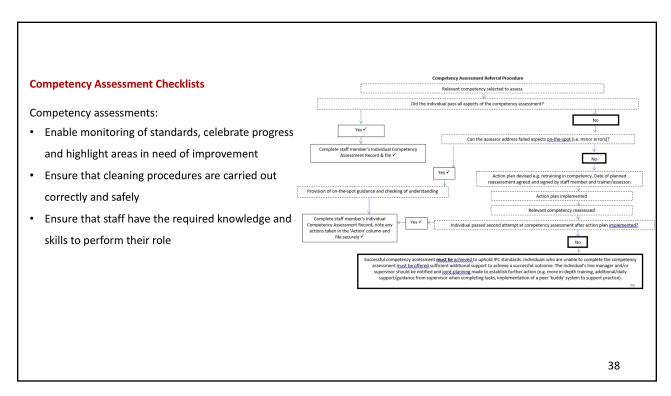


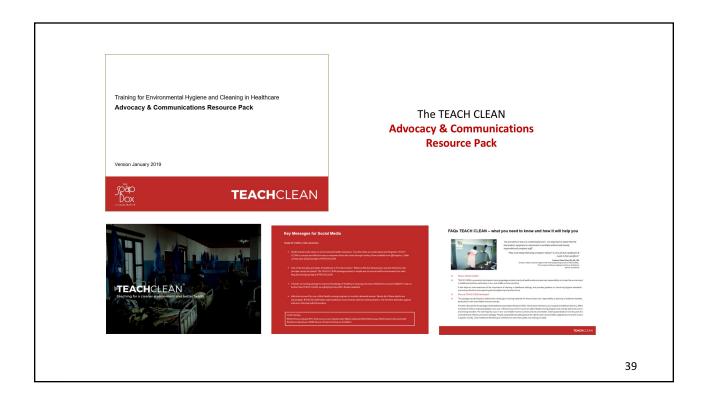
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#### **Situation in Tanzania**



Tanzania Service Availability and Readiness Assessment (2017)

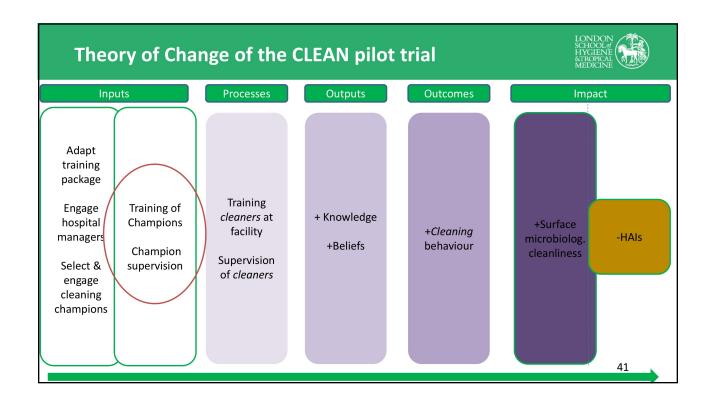
• 70% of facilities did not have a system for safe final disposal of infectious waste

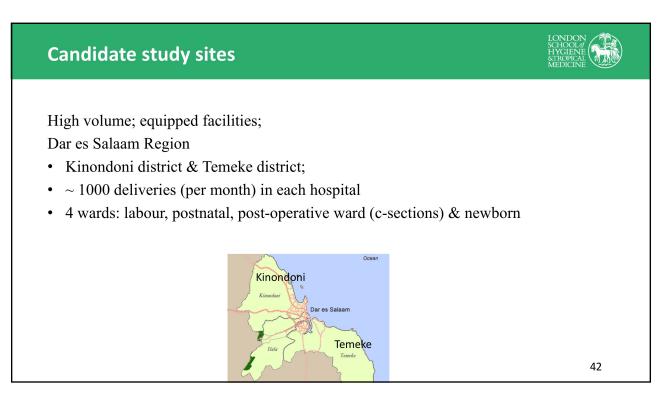
Tanzania Service Provision Assessment (2015/2016)

• 80% of hospitals did not meet all three basic cleanliness indicators (floor, ceiling, surfaces)



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#### Impact evaluation design



- Aim: to assess the effect of the intervention on cleaning behavior & microbiological cleanliness
- Before and after design; 6 months;
- Unit of measurement are surfaces = key hand touch sites+



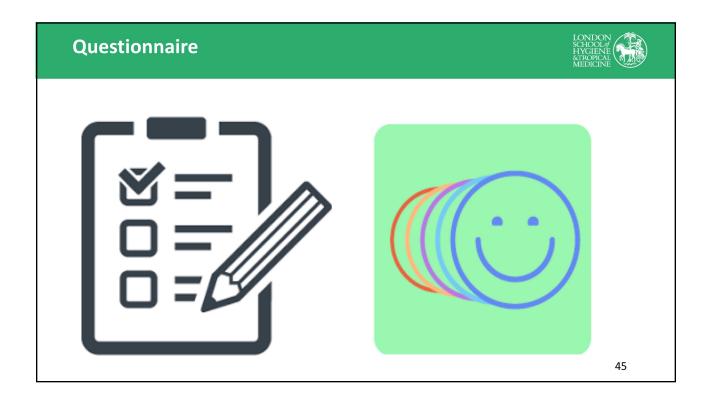
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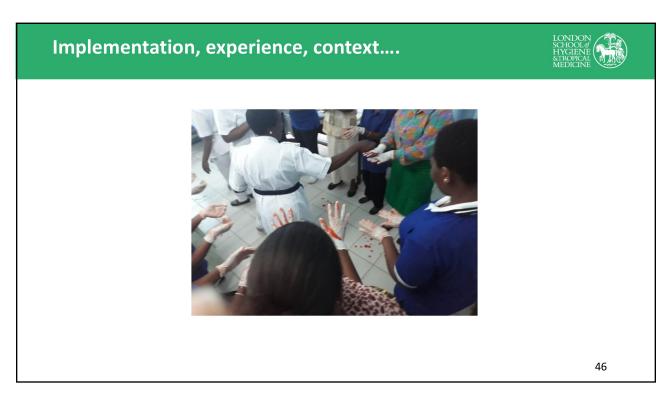
# Knowledge and attitudes questionnaire | Control of the Control of

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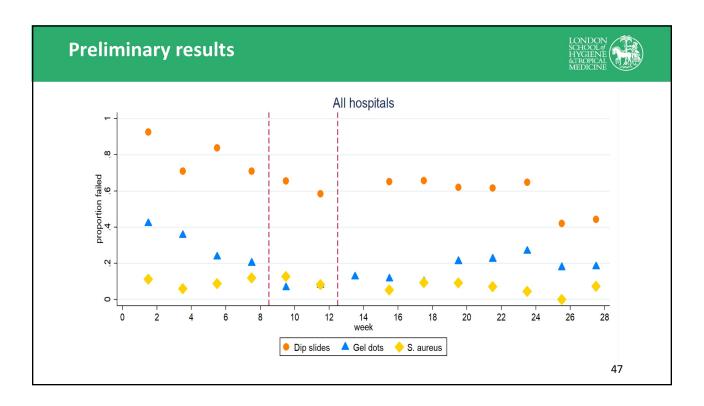
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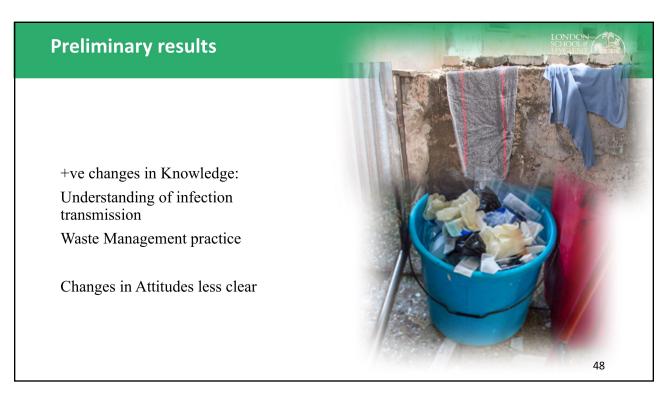
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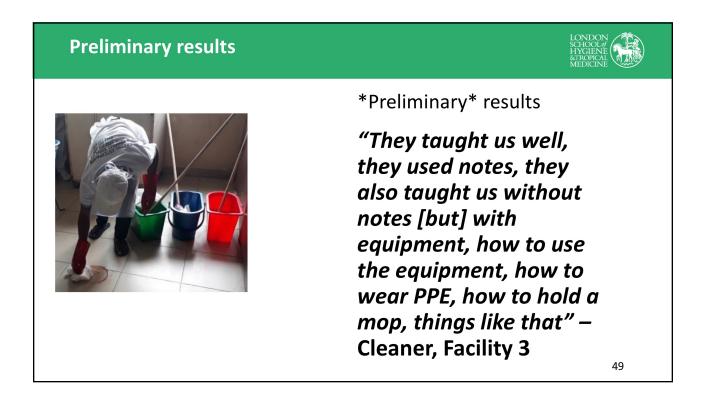
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#### Opportunities on a global scale – policies & documents



At the facility level IPC education should be in place for all health care workers by utilizing teamand task-based strategies that are participatory and include bedside and simulation training to reduce the risk of HAI and AMR.

The **national** IPC programme should support education and training of the health workforce as one of its core functions.

Evidence (15 studies at facility level) shows that IPC education that involves frontline health care workers in a practical, hands-on approach and incorporates individual experiences is associated with decreased HAI and increased hand hygiene compliance

WHO
Implementation
manual
supporting
prevention of
CRO infections cleaning chapter



#### WHO UNICEF

Water, sanitation and hygiene in health care facilities Practical steps to achieve the global vision of universal access

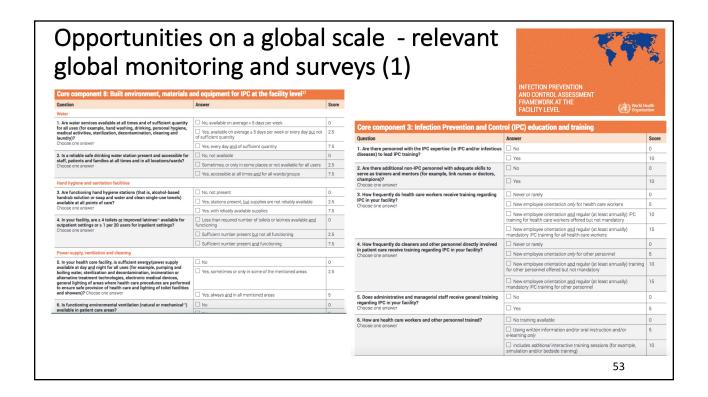


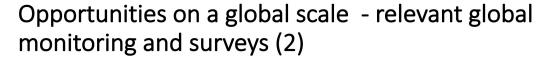


CDC & ICAN Best Practices for Environmental Cleaning in Healthcare Facilities (LMICs)

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Global Monitoring of Country Progress on AMR (3.0) 2018







Global Monitoring of Country Progress on Antimicrobial Resistance (AMR):

Tripartite AMR country self-assessment survey (TrACSS)

Version 3.0

- 6. Country progress on strategic objective 1: Improve awareness and understanding of AMR through effective communication, education and training:
- ENVIRONMENTAL HYGIENE INC WASH

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• "We are very happy afterwards because, for me, to be frank enough, they surprised me. Because me, I don't know that they are so much talented... I underrate them... but the time I stood in front of them to teach them, the ideas they bring out and their understanding level is very fast...They can even teach [us], so this is it. We are very happy."

Environmental Hygiene & IPC Trainer, Serrekunda Major Health Centre, The Gambia



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PREVENTION PREVENTION AND CONTROL PROGRAMS: A NEW APPROACH

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