Why we need to scale up hygiene

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Why does hygiene matter?

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Wed 27th May

Improving health worldwide

www.lshtm.ac.uk
What is hygiene?

Five domains of hygiene behaviour

- Disposal of Human Faeces
- Domestic & Environmental Hygiene
- Water & Personal Hygiene
- Food Hygiene
- Use & Protection of Water Sources

from Actions Speak, Edited by M Boot & S Cairncross, 1993
Why handwashing?

1.5 million child deaths from diarrhoea and pneumonia in 2013

Liu et al., 2014; Freeman et al., 2014; Rabie & Curtis + Luby & Sandora, 2005
Health impacts:
• Diarrhoea (including cholera)
• Respiratory infections
• Neonatal infections
• Health-care associated infections
• Puerperal sepsis / infections (maternal morbidity & mortality)
• Co-infections among PLWHA

Other impacts:
• Under-nutrition
• Child growth & development
• Deemed a very cost effective intervention (WHO)
Where is handwashing important?

Post-2015 targets: universal adequate and equitable handwashing (and MHM)

Health care settings

Households

Schools

Water & sanitation infrastructure and its active management is needed for all three hygiene issues
When is handwashing important?

Luby, PLOS Med, 2011
What about in a health care setting?

WHO – My Five Moments for Hand Hygiene
Why do we (still) need to intervene?

- Hands are rarely washed after defecation....
- WASH facilities in health centres are poor....

Global prevalence = 19%

66,000 facilities in 54 countries:
- No water = 38%
- No soap = 35%
- No latrine = 19%

Freeman, TMIH, 2014
How can we measure what we do?

- Self-report
- Structured observation
- Video observation

Behavior at recommended times

- Handwashing demonstration
- Soap consumption
- Accelerometer-embedded soap
- Use of cleansing agent

Handwashing demonstration

- Presence of soap anywhere in the home
- Soap and water at a handwashing place
- Hand microbiology
- Observed hand cleanliness

Proxies of handwashing behavior

Slide credit: Layla McCay
Variations in prevalence by wealth quintile - household

Percentage of households observed to have soap for handwashing anywhere in the dwelling, by wealth quintile, MICS, 2009-2013, Africa and the Middle East

Slide credit: Layla McCay
Improving measurement

• How well does presence of soap correlate with handwashing?

• Triangulate with:
  • Knowledge assessment?
  • Observation data?
  • Correlation issues?

• Measuring sustained changes?

Biran et al 2008, Luby et al 2011, Ram et al (various)
Improving our interventions

Achieving sustained behaviour change on a large scale is difficult

We need:

• formative research to better understand the drivers of behaviour in each setting
• to continue to develop and rigorously test innovative interventions that are grounded in theory
• to contribute to the evidence-base about what works by channeling what we learn back into the design process
• to improve systems to support service delivery