One of the most serious issues facing health systems in low- and middle-income countries is also one of the most solvable. **Healthcare facilities in developing countries are compromised in their ability to provide safe, quality care because they lack the basic essentials: water, sanitation, hygiene, and healthcare waste management.** 1 in 4 healthcare facilities lack basic water, globally, 1 in 5 lack sanitation facilities, and 2 in 5 lack hand hygiene facilities at points of care. Additionally, every year in the Least Developed Countries, 17 million women give birth in facilities with inadequate WaSH (JMP, 2019).

The alarm was sounded in 2015 when WHO and UNICEF release their first report on this neglected crisis. Between 2015 and 2018, the agencies and their partners raised awareness of the issue and action began to move ahead. Since 2018, momentum around WaSH in healthcare facilities advocacy and implementation has increased dramatically:

- **March 2018**: UN Secretary General issues a global call to action to ensure sustainable WASH in all healthcare facilities. WHO and UNICEF are leading the follow-up.
- **April 2019**: JMP releases the first baseline report on WaSH in Healthcare Facilities. WHO and UNICEF also publish a complementary document outlining the practical steps countries should take, in response to the Call to Action.
- **May 2019**: Member States at the 72nd World Health Assembly unanimously pass a resolution calling for action on WASH in healthcare facilities, based on the practical steps.
- **June 2019**: Global Health Council and Global Water 2020 host a WaSH in Healthcare Facilities Stakeholder Commitments Gathering, where over 80 commitments are announced on advocacy, implementation, technical guidance, research, and funding. Twenty-five of the commitments include a research and learning component.
- **September 2019**: WHO and UNICEF organize a meeting of national governments, UN officials, and external partners in order to generate pathways to 100% WaSH coverage in healthcare facilities, hosted by the government of Zambia.

In 2016, experts from the WASH and health sectors met to discuss the WASH in healthcare facilities research agenda. Key areas requiring further research were identified, including burden of disease, costing analysis, qualitative research on hygiene behavior change, and evaluation of tools and training. While the broad WaSH in Healthcare Facilities agenda has propelled forward in the past year, the discussion around the research agenda has not been revisited for revision and reorientation. Since 2016, most WaSH in HCF research efforts have been ad-hoc – and lacking a comprehensive strategy.

The goal of this lunch session is to appraise the “state of the evidence” on WASH in HCF since the initial agenda was set and revisit which research topics which should be prioritized moving forward, including issues of costing, sustainability, implementation science and best practices. Ideas generated from this session will start to take the shape of a “working” research agenda, which will be shared for further feedback.
Summary of research topics identified during 2016 meeting in London on WaSH in HCFs

- **Cost-effectiveness, financing, sustainability**: Innovative financing mechanisms for improvements are needed, for example business pay for performance models. In addition, innovative technologies, for example those that use less water, or that use waste as power (e.g. for lighting) should be considered. Communities need to be involved in managing services and helped to provide local, sustainable solutions.

- **Education and capacity building**: New approaches for education and staff capacity building are needed. Ideas included using formal education structures (e.g. degrees, diploma programs) for professional health training, peer-to-peer learning and support tools (e.g. apps) for staff. Findings ways to increase the standards of cleaners was also considered important.

- **Health systems and scaling up**: Health systems are complex and consist of many elements, all of which should be considered when making facility improvements. The task team could work with other professional groups (for example behavioral economics) and use more accessible language and terminology to facilitate change.

- **Behavior change and empowerment**: Behavioral change needs to happen at many levels. Behavior is context specific and it is important to document what works and what does not so that tools and approaches can be translated to other contexts and settings. Behavioral change needs to be enabled and incentivized. An example was shared where a picture of a pair of eyes were put over hand hygiene stations to encourage hand washing in a facility which improved hand washing rates.

- **Accountability and rewards**: Health care professionals, patients and community members should be empowered to demand better services. There are standards for facilities but there is still a lack of awareness that these exist. Improvements should be made within existing accountability mechanisms. In addition, including energy and building design experts would be useful for creating for more efficient WaSH designs.
Summary of research progress since 2015
Conditions & Infrastructure Assessments


Monitoring


Implementation

Rajasingham, Anu, et al., 2018. Water treatment and handwashing practices in rural Kenyan health care facilities and households six years after the installation of portable water stations and hygiene training. J Water Health 16(2), 263-274.


Sustainability


Costing
Towards a research agenda for WaSH in Health Care facilities
UNC Water & Health Conference 2019


Behaviors


Care Seeking Behaviors & Patient Satisfaction


Health Impacts

Cleaners

Gender

Enterprise

Health systems & enabling environment
Towards a research agenda for WaSH in Health Care facilities  
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**Research for action continuum for WaSH in HCFs**

- **Salience**: clearly describing the extent of WaSH in HCF challenges, and impacts on health, economic, social welfare, and other relevant outcomes.
- **Identifying solutions**: identifying the hardware (e.g. interventions) and software (e.g. management and regulatory changes) enablers that improve, and barriers that prevent adequate WaSH in HCF.
- **Enhancing implementation**: demonstrating solutions and linking them to salient outcomes through implementation science, efficacy studies, and impact evaluations.
- **Increasing adoption**: working with local and national governments, NGOs, and external support partners to identify and minimize barriers to adoption of strategies and solutions at scale.

**Domain topics**
- Water
- Sanitation
- Hygiene
- Waste management
- Infection prevention and control (IPC)/cleaning
- Etc.

**Hardware and software components of each domain topic**
- Technology
- Sustainability
- Behavior change
- Costing
- Etc.

**Levels of assessment**
- Health systems / enabling environment (international, national, subnational/local)
- Facility
  - Size/type
  - Wards within facilities
- Individual (health care worker, patient, etc.)

**Research methods to explore domain topics and components**
- Systematic reviews
- Case studies
- Qualitative research
- Operational research/Implementation science
Towards a research agenda for WaSH in Health Care facilities
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- Quality improvement
- Impact evaluations
- Etc.

Group work

Select a WaSH in HCF domain topic for your group (water, sanitation, hygiene, waste management etc.). Below are some guiding question to consider as you identify key research needs for your domain topic.

- What are the hardware and software research questions that need to be addressed for your topic?

- What are some of the key challenges that need to be addressed at the health systems level, facility level, ward level, and individual level?

- What are some of the research methods you might deploy to address these challenges?

- Which research questions and methods are appropriate for practitioners to use vs. academic researchers? Where might there be opportunities for academic / practitioner collaboration?