Global Learning Event
Water, sanitation and hygiene in health care facilities: action-oriented solutions and learning

Kathmandu, Nepal
28-30 March 2017

Meeting Report

Contents

1. Meeting summary 4
2. Background 4
3. Introduction 5
3.1 Welcome and introduction 5
3.2 Formal opening by the Government of Nepal 6
3.3 Update on the Global Action Plan 6
4. Spotlight on Nepal 7
4.1 Overview of WASH in health care facilities in Nepal 7
4.2 Post emergency initiatives for WASH in health care facilities 7
5. Working groups: case study presentations 8
5.1 Assessments for action 8
5.2 Engaging health facility staff, users and the community 9
5.3 Monitoring mechanisms 9
5.4 Innovative methods for IPC and environmental hygiene 10
5.5 Facility-based quality improvement programs 11
5.6 Addressing the enabling environment: systems analysis and change 11
5.7 Developing an IPC-WASH package & strengthening multi-level collaboration 12
5.8 From the facility to campaigns for change 13
5.9 Working in the maternity unit and beyond 13
5.10 Technologies for interventions in health care facilities 14
6. Technical Sessions 15
6.1 WASH FIT and WASH FIT Mobile 15
6.2 Quality and Universal Health Coverage 16
6.3 Maternal and newborn health 16
6.4 Health care waste management 17
7. Realities from the Ground 18
7.1 Midwifery and WASH 18
7.2 WASH as a prerequisite for quality of care 18
7.3 WASH in community clinics in coastal districts of Bangladesh 18
7.4 Accessible WASH 18
7.5 Pathological waste treatment and disposal 19
7.6 Cleaners training in The Gambia 19
1.1 Actions and ways forward 19
8. Conclusions and next steps 22

Appendix 1: Agenda 23
Appendix 2: List of participants 26

Abbreviations

AMR	Antimicrobial Resistance
BAT	Best Available Technologies
BEP	Best Environmental Practices
GLAAS	Global Analysis and Assessment of Sanitation and Drinking-Water
GLL4QUHC	Global Learning Laboratory for quality Universal Health Coverage
HMIS	Health Management Information System
IPC	Infection Prevention and Control
JMP	Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
MNCH	Maternal, Newborn and Child Health
MOH	Ministry of Health
NGO	Non-Governmental Organization
QI	Quality improvement
ROSA	Regional Office for South Asia
SDG	Sustainable Development Goal
UHC	Universal Health Coverage
UNICEF	United Nations Children's Fund
US CDC	United States Center for Disease Control
WASH FIT	Water and Sanitation for Health Facility Improvement Tool
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WSH	Water Sanitation, Health and Hygiene Unit

1. Meeting summary

From 28 -30 March 2017, WHO and UNICEF, in collaboration with the Government of Nepal, co-hosted a global learning event on water sanitation and hygiene (WASH) in health care facilities in Kathmandu, Nepal. The purpose of the meeting was to provide an opportunity for actors at all levels to share solutions for strengthening WASH in health care facilities. Specific objectives were to:

- share regional, national and local examples of successful strategies and approaches for improving WASH in health care facilities;
- engage health sector colleagues to further streamline WASH in health care facilities into health programming and initiatives;
- orient stakeholders to the global action plan and identify concrete actions and commitments from partners to advance the work of WASH in health care facilities.

Seventy participants including government representatives, researchers, policy-makers, health facility administrators and planners, international organizations, NGOs, frontline health workers, WASH and health practitioners, and UNICEF and WHO technical staff, from more than 20 countries, participated in the meeting.

A number of key outcomes and action items from the meeting are documented in Section 6. These include commitments from various partners to continue to engage health colleagues on including aspects of WASH in health advocacy, financing, policy and implementation, strengthening and harmonizing monitoring, and empowering facility staff and leaders to to improve and sustain services and hygiene behaviour. It was also agreed to better document lessons learned and how to overcome key challenges at the global, national and facility level.

2. Background

The three-day meeting built upon the global meetings that took place in in 2014 (Madrid, Spain)[1], 2015 (Geneva, Switzerland)[2] and March 2016 (London, UK)[3]. The purpose of the global learning event was to provide an opportunity for actors at all levels (local, national, regional and global) to share solutions for overcoming barriers to strengthening WASH in health care facilities, including standards, policies and services, through a series of case studies. A strong focus was placed on lessons learned from embedding WASH in health care facilities with other health efforts and initiatives, including maternal and child health, quality universal health coverage (qUHC), health systems resilience, infection prevention and control (IPC) and antimicrobial resistance (AMR).

[1] WHO/UNICEF, 2014. Meeting the Fundamental Need for Water, Sanitation and Hygiene Services in Health Care Facilities. Meeting report, Madrid, March 2014. https://www.washinhcf.org/documents/WASHinHCF_Madrid_meeting-report_Final.pdf

[2] WHO/UNICEF (2015) Water, sanitation and hygiene in health care facilities – urgent needs and actions. Meeting report, Geneva, Switzerland, March 2015. https://www.washinhcf.org/documents/WASHinHCFmeetingReportMarch2015_Final.pdf

[3] WHO/UNICEF, 2016. Global strategy, burden of disease and evidence and action priorities. Meeting report, London, UK, March 2016 http://www.who.int/water_sanitation_health/healthcare_waste/wash-in-hcf-london.pdf

In 2015, a global action plan was drafted which includes five change objectives to guide the realization of the long-term vision to provide universal access to quality WASH services by 2030. Four task teams (comprised of health and WASH specialists) were established to address the change objectives. The four task teams are: Advocacy; Monitoring; Operational Research and Evidence; and Policy, Standards and Facility-based Improvements.

This report documents the meeting discussions, learning points and outcomes. Appendices to this report include the meeting agenda (Appendix 1) and list of participants (Appendix 2). All presentations from the meeting, more detailed case studies and the meeting report are available on the WASH in health care facilities knowledge portal[4].

3. Introduction

3.1 Welcome and introduction

Mr Bruce Gordon, Coordinator of the Water, Sanitation, Health and Hygiene (WSH) unit, WHO Headquarters, Geneva

Mr Gordon opened the event by highlighting the shared belief that all participants had in caring about quality and respectful health care. Mr Gordon praised the resilience of the host country, Nepal, which while still facing the great challenge of rebuilding the health system after the 2015 earthquake, has begun setting standards and developing a national action plan for WASH in health care facilities. Mr Gordon highlighted the 2015 WHO and UNICEF landscaping report[5], which was the first comprehensive, multi-country analysis of the status of WASH in health care facilities in low and middle income countries. The findings of the report were alarming and led to the launch of the global action plan on WASH in health care facilities.

Dr Jos Vandelaer, WHO Representative, Nepal

Dr Vandelaer began by highlighting the importance of having good treatment, competent health workers, appropriate diagnostic facilities and the availability of medicines in order to provide quality care. He pointed out that there was a tendency not to think beyond these expectations and questioned how it was possible to provide good care if the basics were not in place. He reflected on the findings of the 2015 WHO and UNICEF Global Status Report on WASH in health care facilities with 38% of health facilities not having a water supply, 19% without improved sanitation and 35% lacking equipment for hand washing. He stressed that WASH in health care facilities underpins many other health issues and that the Sustainable Development Goal (SDG) targets will not be achieved unless we act quickly and collectively. He said that expectant mothers are likely to be deterred from choosing to deliver in a facility if adequate WASH services are not available. He explained that while strategies and global action plans exist, the Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) indicated that only a quarter of countries had implemented sanitation plans with fewer having a plan for drinking water and hygiene. He declared that it was now time to put these plans into action.

[4] www.washinhcf.org/resources

[5] WHO/UNICEF (2015) Water, sanitation and hygiene in health care facilities. Status in low- and middle-income countries and way forward. Geneva: World Health Organization.

Mr Philippe Cori, Deputy Regional Director, UNICEF Regional Office for South Asia (ROSA)
Mr Cori called for action and committed to help support and facilitate a range of actors including government counterparts and NGOs to carry the work of WASH in health care facilities forward across the region. He emphasized the need to engage the private sector, highlighting their increasing role in supporting communities. He suggested extending an invitation to private sector representatives for future meetings and recommended aligning WASH in health care facilities with nutrition programs. Mr Cori suggested prioritising low-cost, high-impact interventions and the need for more cross-sectoral collaboration. Mr Cori concluded by committing UNICEF's support to the meeting in the interest of sharing experiences and developing a team spirit and finished by applauding the resilience of the Nepali and their progress on WASH in health care facilities after the 2015 earthquake.

3.2 Formal opening by the Government of Nepal

Mr Ram Chandra Devkota, Joint Secretary, Ministry of Water Supply and Sanitation, Nepal
Mr Devkota welcomed participants on behalf of the Ministry of Water Supply and Sanitation. He explained that with 87% coverage of basic water supply in Nepal, future efforts will be focused on the availability and sustainability of safe water and adequate sanitation facilities. This new focus is reflected in the draft Sector Development Plan (2016-2030). He highlighted ongoing work to make Nepal open defecation free and noted challenges in increasing WASH coverage and improving functionality of water sources and water quality. He committed to implementing water quality standards, ensuring water quality surveillance and health care waste management in Nepal.

Dr Senendra Raj Upreti, Secretary, Ministry of Health
Dr Upreti noted that infection control was a key priority to ensure quality of care in health care facilities. He stressed the importance of adequate WASH in health care facilities to prevent infection of both staff and patients, uphold the dignity of workers and protect vulnerable population groups particularly women and children and people with disabilities. Failure to address WASH in health care facilities compromises the most important aspect of health care: quality of care. He made reference to low income settings where WASH in health care facilities was often not prioritised due to limited resources and competing needs. Dr Upreti stated that Nepal will now focus on ensuring safe water, adequate sanitation and appropriate health care waste management in its health care facilities. With no existing national standards for WASH in health care facilities, he expressed hope that the meeting would catalyse the development of standards. He called for commitment from all actors, including policy makers and the Ministry of Health, to prioritise WASH in health care facilities; for health care workers to participate in hygiene training; and, health and WASH sectors to collaborate more closely. Finally, Dr Upreti committed to improving the monitoring of water quality.

3.3 Update on the Global Action Plan

Ms Arabella Hayter, WHO Headquarters
Ms Arabella Hayter provided an update of the Global Action Plan. The SDGs provide an important opportunity for catalysing action, specifically through SDG 3 (Good health), SDG 6 (Clean Water and Sanitation), SDG 7 (Renewable Energy), SDG 13 (Climate Action) and SDG 17 (Partnerships for the Goals).

Progress and achievements on all five change objectives was highlighted. WASH in health care facilities has been integrated into three key global strategies and frameworks: Global Action Plan for Antimicrobial Resistance[6]; Standards for Improving Quality of Care for Maternal and Newborn Health; and, the updated Core Components of IPC[7]. Global Indicators have been set for monitoring WASH in health care facilities in outpatient departments and work is underway to develop indicators for other settings. A systematic literature review on the health impacts of poor WASH in health care facilities and a review on patient satisfaction and WASH in health care facilities is being carried out and finally, the Water and Sanitation for Health Facility Improvement Tool (WASH FIT) has been developed by WHO and UNICEF and implemented in a number of countries.

4. Spotlight on Nepal

4.1 Overview of WASH in health care facilities in Nepal

Ms Shrijana Shrestha, Senior Public Health Administrator, Management Division, Department of Health Services, Ministry of Health, Nepal

Ms Shrestha began the spotlight on Nepal by showing a video on the situation of WASH in Nepalese health facilities and efforts to improve services. She highlighted recent successes in water and sanitation, including an increase in the coverage of water supply and sanitation (now 85% and 90% respectively), a reduction in open defecation by 56% since 1990, and a significant reduction in under five mortality linked to diarrhoeal disease. Four major studies and assessments of WASH in health care facilities have been undertaken since 2011, including a 2015 Nepal Health Facility Survey in 963 health institutions. WASH in health care facilities is a core component in the Multi-Sector Nutrition Plan, Water Quality Surveillance and the Hospital Management Strengthening Program (2016). The Nepal Health Sector Strategy III (2015-2020) has also prioritised WASH in health care facilities along with access to clean water and water conservation. Ongoing development of national WASH in health care facilities standards[8] and health care waste management guidelines demonstrate government commitment to improving WASH in health care facilities, however numerous challenges remain. Operation and maintenance of WASH facilities, insufficient knowledge and poor attitudes and practices of health care workers, lack of institutionalisation of WASH in health care facilities within the current federal transitional phase, and a lack of clarity on roles and responsibilities within and between ministries and institutions all need improving.

4.2 Post emergency initiatives for WASH in health care facilities

Ms Arinita Maskey Shrestha, Emergency WASH Specialist, UNICEF, Nepal

Ms Shrestha noted that the past five years had seen considerable attention to WASH in health care facilities, particularly after the 2015 earthquake, where 900 health care facilities were destroyed, many water supplies were damaged and health care facilities were replaced with temporary health camps. Following the earthquake, more than 500 health facilities received

[6] WHO (2015) Global action plan on antimicrobial resistance. http://www.who.int/antimicrobial-resistance/global-action-plan/en/

[7] WHO (2016) Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level. http://www.who.int/gpsc/ipc-components/en/

[8] A one day national workshop to review the standards was held on 31 March to capitalize on the discussions held at the Global Learning Event.

WASH support, many of which were in the most remote and badly affected areas of the country. New water and sanitation facilities were constructed and certificates of practical completion were issued to strengthen local accountability. The 2016 cholera outbreak was catalytic in improving water quality surveillance with improvement of operational, institutional and third party monitoring. Equipping frontline health workers to carry out surveillance (rather than laboratory workers) has been successful. Implementation of water safety plans in all 75 districts has also had a positive impact.

Lessons learned included the ability to get a high return on small investments to improve IPC; the importance of engaging local organizations for endorsement of activities, insurance and continuum of service; and that most change occurs in health care facilities where the staff in charge are motivated. The following priorities for the future were proposed: clarification of roles and responsibilities within and between the WASH and health sectors; strengthening of WASH within health worker training, orientation and coaching programmes; improvements in resource allocation and supply mechanisms (for both human resources and materials); scaling up of water quality surveillance in health care facilities; adequate budgets for operation and maintenance of WASH services to ensure sustainability; integration of WASH datasets within health management information systems (HMIS); and finally development of national standards for WASH in health care facilities addressing both emergency and development contexts. Nepal's resilience and vision for "building back better" has been a driving force for change. Strong government leadership and a commitment to achieve results, inter-sectoral collaboration between health, WASH, nutrition and emergency clusters and a culture of working together have all helped to make improvements.

5. Working groups: case study presentations

The following section provides a summary of key discussion points, challenges and potential solutions from the working group sessions. Summaries of the case studies presented are in Appendix 3.

5.1 Assessments for action

Case study 1: Understanding WASH in Health Care Facilities in Bhutan. *Mr Rinchen Wangdi (Ministry of Health, Bhutan).*
Case study 2: WASH in health facilities in Indonesia – Evidence & Action. *Dr Linda Siti Roheaeti & Ms Indah Hidayat (Ministry of Health, Indonesia).*

Representatives from the Ministries of Health in Bhutan and Indonesia presented case studies on national level assessments on WASH in health care facilities to develop an evidence-base to inform action. In countries such as Bhutan and Indonesia where WASH in health care facilities conditions are still not clearly documented or prioritized, conducting assessments is an important step to raise awareness, inform advocacy and guide action. Both Bhutan and Indonesia conducted national level assessments that looked beyond the availability of infrastructure and integrated aspects of functionality, use and quality of services.

Challenges in conducting assessments were encountered where standards (e.g. water quality standards) are lacking or still being developed. Where standards do exist, inadequate resources

and capacity to test all necessary parameters pose limitations. Mobilizing technical and financial resources is challenging as the mandate to deliver WASH services sits across different directorates, programmes and departments, and within multiple ministries. Discussions focused on efforts towards the integration of WASH into national facility accreditation programmes and major national health programmes including nutrition and maternal, neonatal and child health during the planning and assessment process. For water quality specifically, equipping provinces and districts with a laboratory for testing, establishing a monitoring plan and logistical means for sampling should be prioritized. Facility-based water testing kits for key parameters (e.g. E.coli) is a potential interim solution.

5.2 Engaging health facility staff, users and the community

Case study 3: Deliver Life project: Improving access to, and use of, sustainable WASH services in communities and health facilities for increased maternal and neonatal health in Malawi. *Ms Natasha Salome Mwenda (WaterAid, Malawi).*
Case study 4: Genderised WASH - WASH in the context of maternal health and menstrual hygiene - How Indian and Ugandan health centres manage the sanitation needs of special user groups. *Ms Petra Kohler (EAWAG/EPFL, India and Uganda).*

The two case studies presented highlighted the need to engage health facility staff and communities to provide user-friendly services and sustainable methods for hygiene behaviour change, and for accountability systems. The Deliver Life project in Malawi connects WASH in health care facilities with community WASH, focusing on infrastructure and behaviour change through positive reinforcement. Genderised WASH in India and Uganda provided needs-based, gender sensitive, technically appropriate and socially acceptable solutions to the problems identified through facility assessments. Policy briefs and publications are in production to inform action at local, regional and national levels.

Both approaches identified sustainability as a major challenge due to hygiene, IPC and WASH not being prioritized at the decision-making level, insufficient budgets, operation and maintenance, and poor staff motivation to comply with guidelines even when there was good knowledge about basic hygiene. Advocacy from the facility to national level is needed to generate buy-in for WASH services and encourage leadership and ownership of health facilities within communities. Understanding the factors that influence compliance is necessary to develop facility-based incentive schemes. Integrating performance indicators that reflect good behaviour both at the individual and facility level can help commitment and increase accountability. Engaging facility management and establishing clear roles and responsibilities is essential. Leveraging WASH and IPC committees and community health committees was also suggested to improve service provision.

5.3 Monitoring mechanisms

Case study 5: Sustainable improvement of access to WASH in health care facilities in two regions of Mali*. Mr John Brogan (Terre des homes) & Dr Lydia Abebe (University of North Carolina).*
Case study 6: From Assessment to Action: WASH in HCF Conditions in Zambia, Uganda, and Malawi. *Ms Lindsay Denny (Emory University) & Dr Opong (World Vision International).*

This session provided examples of monitoring mechanisms for WASH in health care facilities across Mali, Zambia, Uganda and Malawi and described how to effectively engage staff, community groups and patients in the process. The application of WASH monitoring tools such as Emory University's WASH Conditions Assessment tool (WASHCon) encourage team work and participation of support staff, community groups and patients, as well as medical staff. Mobile data tools provide a valuable opportunity to improve supervision through real time data. The tools are also exciting and novel. Developing and applying WASHCon in Zambia, Uganda and Malawi lead to country specific plans to improve WASH conditions.

When clear roles and responsibilities are not established, accountability is a challenge. Community-based, participatory monitoring in which patients play a fundamental role, can improve accountability. Continuous supervision (in comparison to global monitoring) is important, however it comes with administrative burdens and can lead to loss of impact through repetitive data collection. Facility level monitoring should vary according to the country context and fit into existing structures, such as the community associations in Mali who are responsible for managing facilities and who may be better placed to monitor services. There is a need to expand capacity and invest in capacity building at regional and district levels, and collaborate with the private sector to leverage additional funding and resources to support training and implementation of monitoring tools. Discussions focused on using recognition as an incentive for staff motivation.

5.4 Innovative methods for IPC and environmental hygiene

Case study 7: Soapbox Collaborative Basic Environmental Hygiene Training Package Pilot – The Gambia. *Ms Suzanne Cross (The Soapbox Collaborative)*
Case study 8: Nosocomial Infection Prevention in Burkina Faso. *Mr Siaka Bannon & Ms Fanny Boulloud (Antenna Foundation)*

This session consisted of case studies from The Gambia and Burkina Faso exploring innovative ways to improve IPC and environmental hygiene. From targeted training packages for health facility cleaners, to the autonomous production of high quality, cost-effective disinfectant to prevent nosocomial infections, complex environments require innovative solutions. Successful implementation is underpinned by contextual awareness and appropriate use of available resources. In Burkina Faso, monitoring best practices and developing new devices has increased the momentum to come up with alternatives in the health system. Generating buy-in from facility management is necessary to ensure that training is translated into action and learning and knowledge exchange occurs across facilities.

Challenges experienced in Burkina Faso include the lack of commitment from health facility staff to turn knowledge into practice and high staff turnover impacting monitoring and evaluation activities. In the Gambia, lack of commitment of management towards training and development of non-medical staff as part of overall quality improvement was an issue. However, the training was met with enthusiasm from trainers and participants alike. There was also concern over health facility staff (including cleaners) being overburdened, impacting efficiency. One of the main challenges in Burkina Faso, where production of high quality disinfectants was introduced, was adapting the capacity of the disinfectant-making device to meet the needs of the facility. Solar power was recommended in rural areas to meet energy

requirements. Discussions identified the need to clarify roles and responsibilities for task allocation and for staff to understand and perform their roles. Training initiatives should aim to address the needs of the entire facility. In hospitals, the 11 best practises monitored over the two-year pilot programme showed that behaviour change regarding on-site chlorine production was greatly improved, ensuring sustainability of local disinfectant production. Additionally, focusing on specific units such as maternity is important but may not be as effective as it could be if other areas of the facility are not addressed.

5.5 Facility-based quality improvement programs

Case study 9: Clean and Safe health care facilities (CASH) initiative, Ethiopia. *Mr Molla Godif Fisehatsion (Ministry of Health, Ethiopia).*
Case study 10: Save the Children, USA): Clean Clinic Approach in Haiti. *Mr Ian Moise (Maternal and Child Survival Program (MCSP).*

This session described interventions from Ethiopia and Haiti to improve WASH and quality at the facility level. It is essential to empower health care facilities and communities through education and practical skills. In Haiti, the Clean Clinic Approach targeted health system strengthening and quality improvement by enabling health care facilities to improve WASH themselves. The CASH initiative in Ethiopia was implemented in accordance with the Ministry of Health's five-year strategic plan focusing on the provision of quality health services. An audit tool was developed to monitor and ensure operational standards. CASH has high level political commitment and leadership.

Engaging the staff and community in all processes is needed to develop ownership and responsibility for WASH in health care facilities improvements and help ensure continuity of services. Operation and maintenance of WASH services and infrastructure continues to be challenging as a result of poor financing, training and reporting issues. Consistently monitoring progress with clear, detailed and comprehensive data while not overburdening staff and losing the impact of reporting also emerged as a challenge.

Recommendations included the need to support communities and facilities to make improvements that are relevant to the setting, while fostering ownership and addressing sustainability, particularly through operation and maintenance. Institutionalising WASH initiatives and partnering with the private sector was also suggested to ensure continuation of funding, supply chains and training. WASH should be integrated with IPC and both included in audit tools. Communication and coordination between all levels of the health system can help develop a shared vision, for example considering what cleanliness means to each stakeholder.

5.6 Addressing the enabling environment: systems analysis and change

Case study 11: WASH in Cambodian Health Care Facilities. *Dr Ir Por (National Institute of Public Health, Cambodia) & Ms Lindsay Denny (Emory University, USA).*
Case study 12: WASH in Health Care Facility Assessment – Systems Review. *Dr So Pyay Naing (WaterAid, Myanmar).*

Myanmar and Cambodia presented a situational analysis and training needs assessment, with a summary of available data, existing policies and standards and where efforts were most needed.

The Cambodian situational analysis revealed inadequate training for facility staff in WASH and IPC and insufficient data for decision making. Following this, a national assessment of WASH in health care facilities and pilot training intervention took place. In Myanmar, an assessment of WASH in health care facilities is being conducted to identify practical, scalable solutions for sustainably improving WASH in health care facilities in conjunction with a systems assessment to understand the gaps in policy, standards and protocols.

In both contexts, the complexity of monitoring systems, human resources, political will, financing, training, and guidelines and standards proved challenging with a lack of accountability throughout. Both countries found using the JMP indicators in their assessments challenging, for example due to sampling difficulties. Collecting data on post-delivery infection and re-admission for infection is particularly important to understand the magnitude of the problem and evaluate the real impact of WASH and IPC interventions. In Cambodia, a quality and equity policy for health care facilities is currently being developed which is an opportunity to integrate WASH and IPC within the policy landscape and mobilize financial resources for health care facilities to make quality of care and WASH improvements.

5.7 Developing an IPC-WASH package & strengthening multi-level collaboration

Case study 13: Health Centre Hygiene Program. *Mr Nasrat Rasa (UNICEF, Afghanistan) & Dr Raz Mohammad-Khankhell (Ministry of Health, Afghanistan).*
Case study 14: Scaling up an Evidence-Based Package for Water, Sanitation and Hygiene (WASH) in 55 Healthcare Facilities in Zambia to mitigate healthcare-associated infections (HAI). *Dr Leah Namonje (Ministry of Health, Zambia) & Mr Lavuun Verstraete (UNICEF, Zambia).*

This session focused on integration and collaboration as a means to improve WASH in health care facilities, using a range of activities to generate buy-in from government. In Zambia, an evidence-based WASH-IPC package was developed and pilot tested and a health facility assessment study conducted. In both Afghanistan and Zambia, hand hygiene was used as an entry point to improve national systems for IPC, and IPC incorporated into training programs. Working with medical associations (for example midwives) and establishing partnerships with prominent health programs (such as maternal, newborn and child health (MNCH)) were important steps to increase awareness of WASH-related issues and engage the health sector.

The perceptions and knowledge of basic hand hygiene in Afghanistan is problematic, with some doctors believing that frequently washing their hands would be a problem for patients due to cultural reasons. Dialogue with health facility staff, linking poor hygiene to increased risk of harm to themselves and others was used to increase motivation to wash hands before seeing patients. Health care personnel in Zambia alluded to the lack of water, soap and the absence of hand hygiene monitoring for the low rates of hand washing. UV technology was used to visually illustrate pathogens on hands and surfaces. Findings from the study have provided a strong advocacy instrument to get buy in from the government stakeholders at national and decentralized levels and to allow a revision of National IPC guidelines. In both countries, behavior change triggers were used to encourage better hand hygiene practices harnessing the power of peer influence on social norms. Hygiene ‘police’ were appointed in Afghanistan to monitor hygiene behaviors and sanitation practices, with penalties used to purchase supplies or

finance social events. Where possible, education sessions on social norms where all facility staff including managers, doctors, nurses and cleaners attend are recommended.

5.8 From the facility to campaigns for change

Case study 15: Healthy Start Campaign – to ensure safe and adequate water, sanitation and hygiene services in healthcare facilities in India. *Ms Arundati Muralidharan (WaterAid, India).*
Case study 16: Developing and implementing a revised Tool Box for the assessment of WASH beyond the labour room in urban healthcare facilities. *Dr Deepak Saxena (IIPHG, India).*

Two new approaches to sustaining change in India were shared: using a facility-level assessment (tool box) to generate evidence and a large-scale public awareness raising campaign (Healthy Start). The tool box included a needs assessment, walkthrough activities and microbiological assessment, building on an existing tool box for assessing the labour room. This work recognises that improving and managing WASH services requires strong and consistent monitoring to measure progress and direct efforts where most needed. The Healthy Start Campaign was initiated to reduce maternal and neonatal deaths through safe and functional WASH in health care facilities by raising awareness amongst health decision makers of the importance of WASH services on health outcomes, strengthening health delivery (through national, state, district and local policies, standards and systems) and increasing demand in services by establishing community monitoring of WASH in healthcare facilities and improving sanitation by strengthening the social status of sanitation workers. Campaign events included media mobilisation to highlight key issues, a multi-city public campaign launch, strong collaboration with government and partners and use of social media.

Generating political and facility management buy-in has been challenging, due to the paucity of country level data sets on WASH in health care facilities and the difficulty of quantifying campaign impacts (particularly those relating to MNCH). Improving public awareness of WASH requirements in health care facilities through the use of state report cards was lead to a significant increase in the demand for 'WASH secure' healthcare services. Using a range of media, including Facebook and radio could increase campaign reach.

In facilities where the tool box was used, managers were sometimes reluctant to undertake assessments, infection control was not prioritised over the use of broad spectrum antibiotics and cleaning practices were still inadequate. Assessing the status of WASH services in facilities is essential for developing WASH policies and can show the benefits of preventive, rather than just curative, healthcare.

5.9 Working in the maternity unit and beyond

Case study 17: Baseline assessments for Maternal and Newborn Health and WASH services: Process in three countries (Bangladesh, Ghana and Tanzania). *Dr Nabila Zaka, Mr Fabrice Fotso & Dr Sufang Guo (UNICEF).*
Case study 18: Quality of Reproductive, Maternal and Newborn Health (RMNH) & WASH Services in Njombe Region, Tanzania. *Dr Edward Maswanya (National Institute of Medical Research, Tanzania).*

Case study 19: Creating an enabling environment for basic water, sanitation and waste management facilities in a primary health care facility in Bangladesh. *Dr Zaid Hassan (UNICEF, Bangladesh).*

This session focused on assessments for MNCH and WASH services according to UNICEF's Every Mother Every Newborn (EMEN) approach. Case studies covered process, assessment and implementation in health care facilities across Bangladesh, Ghana and Tanzania. Quality Improvement (QI) steering committees at national, regional and district levels are being utilized to conduct periodic monitoring of MNCH and WASH services to generate individual facility data and focus efforts to drive change. Cleanliness and environmental hygiene training is being integrated into curricula for all health facility staff, not just cleaners. Involving cleaners in this process is important to understand their specific tasks, workloads and needs (e.g. budgets). In Bangladesh, the number of cleaning staff increased as a result and 'Plans for Cleaners' with tasks and schedules established and monitored by nurses.

Challenges experienced included inadequate human resources, including shortages of cleaning staff and frequent turnover of QI-trained focal points, and an unpredictable supply of materials. Clarifying ('who does what and when'), documenting and communicating roles and responsibilities with all facility staff is essential. It is important to understand what drives patients to use facilities, documenting user satisfaction (particularly taking into account women) and how to engage facility staff according to the contexts. This can be achieved by working with other experts, such as anthropologists. Generating a strong evidence base to drive action and support implementation should be prioritized, and learnings shared and communicated back to all levels from cleaning staff to Ministers.

5.10 Technologies for interventions in health care facilities

Case study 20: Plumbing Design Solutions. *Ms Megan Lehtonen (International Association of Plumbers and Mechanical Engineers/World Plumbing Council)*
Case study 21: Health Care Waste Treatment & Disposal. *Dr Ute Pieper (WHO Consultant).*

This session provided examples of technologies for WASH infrastructure and health care waste management that can be adapted and applied in a range of contexts. The Community Plumbing Challenge (CPC), organized by IAPMO with global partners, have implemented community-based projects to improve WASH conditions in Singapore, India, South Africa and Indonesia. Plumbing designs aim to ensure long-term environmental and economic sustainability and should be accompanied by technical, marketing and behaviour change training.

High turnover of trained personnel can pose a challenge for ongoing operation and maintenance. Inefficiencies in reporting functionality issues exposed the need to develop standard operating procedures and reporting processes. As standardization of equipment is donor and manufacturer dependent, quality assurance across settings is variable. Efforts should be focused on the development of minimum standards, procedures and operation manuals as a pre-requisite to installation, advocating for donor and manufacturer commitment while building capacity of local suppliers, and partnering with the private sector to enable skill sharing, resource mobilisation and ongoing training.

6. Technical Sessions

6.1 WASH FIT and WASH FIT Mobile

Ms Arabella Hayter (WHO, Geneva) and Mr John Feighery (mWater, USA)

Ms Hayter provided an overview of the Water and Sanitation for Health Facility Improvement tool (WASH FIT), its application and use to date. WASH FIT is risk-based, continuous improvement framework for undertaking WASH improvements as part of wider quality improvements[9]. Institutionalizing WASH FIT at all levels of the health system, ensuring buy-in from health facility leadership and integrating it with existing tools and national health and quality of care action plans or programs are all critical for scalability and sustainability of the tool. Table 1 provides a snapshot of some of the countries which have implemented WASH FIT.

Location	Year commenced	Focus	Number of facilities covered
Chad	2015	Cholera hotspots	13 rural health facilities, with an additional 24 planned for phase II (pending funding)
Mali	2015	Maternal and child health	22 rural health facilities (including 2 referral hospitals) across two project districts
Liberia	2015	Ebola recovery, with a focus on IPC	94 trainer of trainers trained across the whole country, with the aim of rolling out WASH FIT nationwide
Madagascar	2016	Health care waste management	1 pilot district
Laos	2017	General condition of health care facilities, with pilot facility choosing to focus improvements on health care waste management	1 pilot district, to be scaled up in 2018

mWater have developed a mobile version of WASH FIT. Mr Feighery presented an overview of the tool and participants had the opportunity to explore the platform and use the tool through a hypothetical WASH FIT example. The advantages of such an electronic tool is that results can be viewed and acted upon in real-time allowing facilities to quickly address do-able actions and government and partner organizations to better prioritize longer-term support. Documentation, training and webinars will be organized in the future to orientate users to the app. Hardware requirements for installing WASH FIT mobile are basic and available in most basic smartphones commonly available in low and middle income countries.

[9] WASH FIT mobile, the WASH FIT field guide and associated training materials are available at www.washfit.org

The field guide and set of training materials are available at www.washinhcf.org/resources. The guide will also be available in French, Spanish, Russian and Arabic and training modules in French and Russian.

6.2 Quality and Universal Health Coverage

Ms Melissa Bingham and Ms Alison Macintyre (WHO, Geneva)

This session included a brief overview of quality universal health coverage (UHC) and the role of water, sanitation and hygiene (WASH); the current status and strategy of WHO's Global Learning Laboratory for Quality Universal Health Coverage (GLL4QUHC); and examples from initiatives started in Ethiopia and Cambodia where national policies, strategies and programs have included WASH in health care facilities as part of broader quality of care initiatives aimed at driving quality UHC. These examples will be shared on the GLL4QUHC[10].

Ms Bingham gave a presentation on the GLL4QUHC explaining the rationale, architecture and functionality of the platform. There was agreement that a global knowledge harvesting platform focused on communicating and sharing experiences of programmes and policy work in the context of quality UHC would be useful. There was particular interest for this to be focussed on joint IPC/WASH work and participants stressed the importance of linking with other relevant technical areas (e.g. MNCH). Key messages from the session included the need for WHO to link with external organizations/partners on WASH, qUHC and IPC (with an emphasis on improving communication and coordination between these three areas); to explore how to provide basic information on quality health services to the people that receive them; and to stimulate dialogue between academia and health care providers. Next steps are to finalise and activate the WASH/IPC learning pod, and involve participants in future GLL4QUHC activities.

6.3 Maternal and newborn health

Ms Anna af Ugglas (WHO consultant) and Dr Pavani Ram (USAID).

This technical session focused on how WASH underpins the quality of maternal and newborn care in health care facilities. The 2016 WHO Standards for improving quality of maternal and newborn care in health facilities[11], particularly Standard 8 on Essential physical resources, were presented. Sepsis accounts for 15% of neonatal and 11% of maternal mortalities and pre-term births account for 36% of newborn mortality[12]. Special precautions are needed to prevent infections and reduce mortality in these vulnerable groups. Environments need to be adapted to enable promotion of continuous skin-to-skin contact, sanitation facilities must be in close proximity and staff must improve their hand hygiene. Participants worked together to identify actionable approaches to improve the quality of maternal and newborn care through WASH services, behaviors and the enabling environment. Actions identified were divided into three levels: health facility, health system and the enabling environment.

Infrastructure (including access to water, hand hygiene facilities at critical points, supplies for clean care and waste management facilities) is an essential component of quality care. Action

[10] The GLL4QUHC is accessible at http://www.who.int/servicedeliverysafety/areas/qhc/gll/en/

[11] WHO (2016) Standards for improving quality of maternal and newborn care in health facilities. Geneva; World Health Organization.

[12] Say et al. (2014) Global causes of maternal death: a WHO systematic analysis. Lancet Global Health 2:6, Pages e323-e333. http://www.thelancet.com/journals/langlo/article/PIIS2214-109X(14)70227-X/abstract

must also be taken to address human resource gaps, increasing the number of auxiliary workers and midwives and providing better training. Adherence to standards, feedback from monitoring and ensuring appropriate accreditation of facilities will also improve quality of care. To improve hand hygiene practices and quality service provision, regular supportive supervision of health care workers and an emphasis on WASH in pre- and in-service training, education and curricula is needed. Health systems actions include improving monitoring (e.g. through HMIS), strengthening the evidence base, increasing financing and ensuring clear planning and coordination across all levels of the health system. Efforts should be made to engage the community (e.g. holding "town hall meetings", using comment books and boxes to provide feedback on facility services, quality of care and staff behaviour), encourage the community to hold the facility and one another to account, improve gender equity within the facility and raise awareness among patients and families, health care workers and the community on the issue of WASH and quality maternal and newborn care. To create an enabling environment, supportive policies, monitoring, leadership and coordination among key stakeholders (including the private sector) must be developed.

6.4 Health care waste management

Dr Ute Pieper (WHO consultant)

Safe health care waste management (HCWM) includes segregation, collection, transportation, treatment and waste disposal, which need to be planned at the national, regional, district and facility level. All HCWM practices should follow environmentally sound management (ESM) of hazardous waste or other waste, best environmental practices (BEP) and best available techniques (BAT) in accordance with the Basel[13] and Stockholm[14] Conventions and relevant national regulations and requirements.

Dr Pieper provided a quick review of treatment and disposal options and their advantages and disadvantages and highlighted the risks of poor HCWM practices to patients, visitors, health care workers and the general public. The importance of education and training for all staff responsible for waste segregation and collection was highlighted. The session involved an intensive discussion on incineration versus non-burn technologies, wastewater and solutions for small and remote facilities. Incineration poses risks of exposure to dioxins and furans (as well as other risks) and while discouraged by WHO and the Stockholm Convention, it is frequently the only practical solution in remote locations and emergency settings. Alternatives include several non-burn thermal technologies and alkaline hydrolysis chemical treatment, however this is often not realistic as it is more costly than incineration and requires electricity. Incineration versus non-burn technologies is an ongoing debate. Recognizing the reality on the ground and considering incremental improvements in place of the "gold standard" is a more realistic approach to HCWM. It was also agreed that an international guidance document on wastewater management in health facilities is needed. WHO are currently developing guidelines on sanitation in the community which could form a basis for more specific recommendations in health care facilities.

[13] UNEP (1989) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal http://www.basel.int/portals/4/basel%20convention/docs/text/baselconventiontext-e.pdf

[14] UNEP (2004). Stockholm Convention on Persistent Organic Pollutants. http://chm.pops.int/TheConvention/Overview/tabid/3351/Default.aspx

7. Realities from the Ground

This session (which was in place of a site visit[15]) consisted of presentations from two midwives on their experiences of how WASH in health care facilities impacts the quality of midwifery care, followed by a series of short visual presentations showcasing WASH conditions in a range of contexts.

7.1 Midwifery and WASH

Ms Bandana Das, President of the Society of Midwives India (SOMI) and Ms Elisha Joshi, Midwifery Society of Nepal (MIDSON))

Ms Anna af Ugglas introduced this session, stating that midwifery care accounts for 87% of maternal care for women and newborns. The day of birth is the most critical for mothers and newborns (accounting for 46% of maternal deaths, 40% of neonatal deaths and 40% of still births) and WASH is the foundation for providing quality care. However, there is not enough acknowledgement of the importance of WASH in midwifery. Ms Das and Ms Joshi gave short presentations on their impressions and experiences of how WASH in health care facilities affects frontline workers, patients and families and both highlighted the difficulties of delivering babies without adequate WASH services[16].

7.2 WASH as a prerequisite for quality of care

Mr Fabrice Fotso (UNICEF)

Mr Fotso presented a series of images highlighting common WASH problems, including unhygienic surfaces, unsafe infrastructure and the absence of equipment to practice hand hygiene. A clean, safe environment for staff, patients and families are the prerequisites for quality of care: the availability of WASH infrastructure should not compromise staff and patient safety.

7.3 WASH in community clinics in coastal districts of Bangladesh

Dr Zaid Hassan (UNICEF Bangladesh)

Dr Hassan provided an overview of WASH in community clinics in Bangladesh. Assessments revealed water quality to be a major challenge, maternal mortality rates and under nutrition in children to be high, and care seeking half the regional average. Health posts are the first point of contact for patients but do not receive much attention, particularly in hard to reach places. Less than half of users expressed satisfaction with health services. Comprehensive WASH activities have now been implemented in 40 community clinics in seven coastal districts with promising results.

7.4 Accessible WASH

Ms Channa Sam Ol (WaterAid Cambodia)

[15] A site visit to a local health care facility was originally planned but it was decided that it would not be feasible due to logistical constraints.

[16] The UNICEF Nepal Communication team interviewed Ms Das and Ms Joshi about their experience of delivering a baby without WASH services and the importance of safe water, sanitation and hygiene around the time of delivery. The blog post is available at: https://blogs.unicef.org/blog/a-clean-start-to-life/.

Ms Ol presented a series of images of WASH infrastructure, highlighting barriers to access for people with disabilities. She pointed out the critical need to address accessibility for people with limited mobility including pregnant women, newborns, post-surgery patients and older people. Hygiene education should accompany installation of appropriate, user-friendly services. An accessibility audit tool would ensure WASH in health care facilities addresses all user needs, ensuring designs comply with safety standards.

7.5 Pathological waste treatment and disposal

Dr Ute Pieper (WHO Consultant) & Mr Nimesh Dhakal (Lalitpur Municipality, Nepal)

Dr Pieper presented images of pathological waste treatment in different contexts. Placenta pits need to be enclosed from animals and other disease vectors to ensure safe management of waste. Interim waste management solutions can be used such as installing twin pits and switching between the two for efficiency. Pits should be fenced and contain odor release valves. Mr Dhakal showcased a bio digester recently installed in Kathmandu, which is one option for environmentally friendly waste management and works in a similar way to the human digestive system.

7.6 Cleaners training in The Gambia

Ms Suzanne Cross (Soapbox Collaborative, UK)

Ms Cross presented a short video documenting the Cleaners Training Package Pilot in The Gambia. 'Clean boxes' which contain all the materials necessary to run training are used and the training is designed to be accessible to low-literate populations. For example, the package uses baby powder as an effective and simple, interactive method to educate non-medical staff on the transmission of pathogens.

1.1 Actions and ways forward

The meeting identified a series of actions to be undertaken at the global, national and facility levels. These are summarized below.

a) Global actions

Utilize a systems approach and engage health sector leadership and staff. WASH in health care facilities should be approached from a health systems perspective, thinking beyond infrastructure to integrate WASH budgets, services and staffing within existing health systems and initiatives. WASH should be a central component of quality initiatives, from planning, developing standards, through to implementation, monitoring and reporting. Sustaining improvements requires health sector ownership and, in particular, health workers and administrators taking responsibility for WASH. Operational evidence which gives practical examples of this integration and the resulting benefits will help the sectors work more closely together in future.

Develop a mechanism to capture lessons learned and document what works. WHO and UNICEF, with partners, will develop a concise report outlining challenges and solutions to improve quality care through WASH in health care facilities, defining a strategic vision within larger health efforts. The document will distil lessons learned from implementation into a key

set of challenges and solutions and will build upon the case studies shared at the meeting. In addition, WHO and UNICEF will continue to monitor and evaluate WASH improvement efforts, for example through the WHO/UNICEF Quality of Maternal and Newborn Care Network and WASH FIT implementation in a range of contexts. Operational evidence will be shared through a variety of avenues, including through the WHO Global Learning Laboratory for Quality Universal Health Coverage (GLL4QHC) which has a dedicated "learning pod" on IPC-WASH.

Improve monitoring of WASH in health care facilities. The WHO/UNICEF Joint Monitoring Programme (JMP) will produce a global status report in Q3 2018 on WASH in health care facilities as part of monitoring Sustainable Development Goal (SDG) 6. A formal process for providing feedback on the JMP core indicators for monitoring WASH in health care facilities will be established. Additional support and guidance for using these indicators at the country level, including sampling methodology, data analysis and how to manage the complexities of monitoring in larger facilities, should also be produced. A guidance note on how to integrate core indicators on WASH in health care facilities and questions into national monitoring systems, e.g. HMIS is also needed. The JMP will look to revisit their expanded indicators on WASH in health care facilities and develop a set of indicators for WASH in maternity settings.

Establish mechanisms for addressing WASH in health care facilities in emergency settings. The focus of the Global Action Plan on WASH in health care facilities is on non-emergency settings[17]. Lessons learned from the global action plan should be adapted for emergency contexts, in particular improving guidance for emergency settings, such as refugee camps and cholera treatment centres. Improving WASH services in health care facilities can strengthen preparedness and resilience of health care systems to cope with future emergencies and reduce the spread of outbreaks once they occur.

Improve data on WASH costing. At present there is limited synthesized data on costing and cost-benefits of scaling-up WASH in health care facilities for planners, decision makers and implementers. This gap, particularly at the national level, was identified multiple times during the meeting. Understanding the financial landscape and mechanisms for financing and budgeting of WASH in health care facilities within health systems, as well as potential cost savings from investing in WASH, and the cost implications of doing nothing, is essential to improving WASH. Discussions and research in this area would be useful and various partners committed to synthesizing and sharing their own data on costs of their specific efforts.

Advocate for increased financing of WASH in health care facilities. The lack of, or inadequate, financing and budgeting for WASH in health care facilities is consistently a challenge, preventing facilities from making and sustaining necessary improvements. Governments, partners and donors need to recognize WASH as fundamental for improving quality of care and increase investment in this area.

Engage the private sector. Private enterprises involved in providing and maintaining WASH technologies and services in health settings should be involved in future events and discussions

[17] WHO/UNICEF (2015) Global Action Plan on WASH in health care facilities. https://www.washinhcf.org/documents/24-WASHinHCFGlobalActionPlanOct2015.pdf

on WASH in health care facilities where possible and appropriate. Understanding how private sector challenges and successes differ from public service providers and opportunities for sharing technical expertise between sectors may support progress on both sides. Organizations to consider include early adopters such as Procter and Gamble, Unilever and General Electric Foundation who could be mobilized for Global Hand Hygiene Day (5th May).

b) National level actions

Strengthen advocacy, policy and system change knowledge. The cross-sectoral nature of WASH, compounded by the lack of clarity of roles and responsibilities between multiple ministries and organizations, can make it difficult to identify entry points. National advocacy is needed to bring together the various ministries around common goals (i.e. reducing preventable maternal and newborn deaths) and using existing monitoring mechanisms and programme initiatives to engage in joint action. In addition, learning from joint health systems and WASH country "deep dives[18]" should be synthesized and a methodology developed for conducting future national and regional analyses, in order to inform WASH and broader quality of care improvements.

Develop nationally relevant standards and policies. Countries need technical guidance to adapt WHO global minimum standards for WASH in health care facilities into nationally relevant and applicable standards. Such standards should be based on a review of existing national regulations and guidelines, institutional bottlenecks and opportunities for partnerships, particularly with the health sector. Some countries want to develop more rigorous, advanced standards than those set out in the WHO basic WASH in health care facility standards (for example water quality for medical uses) and need technical assistance to do so.

c) Facility level actions

Scale up WASH FIT training and implementation. Institutionalizing WASH FIT at all levels of the health system, ensuring buy-in from health facility leadership and integrating it with existing tools and national health and quality of care action plans or programs, as well as testing the tool and documenting its use, are all critical for scalability and sustainability of the tool. CDC are working on an evaluation framework for WASH FIT and developing indicators to track facility improvements and health outcomes related to WASH FIT. mWater will continue to work on the digital version of WASH FIT to support implementation and data collection at the facility level. WASH FIT guide is being translated into multiple languages to make it more accessible. In addition, this work will be streamlined with other related tools, including "Clean Clinics" which has been successfully implemented in a number of countries by Save the Children.

Improve accountability. Improved or innovative accountability mechanisms which ensure there is positive reinforcement at the facility level and can support maintenance and improvements in WASH infrastructure and practices at scale. For example performance-based accreditation

[18] "Deep dives" examining entry points and synergies with WASH and quality Universal Health Coverage have been conducted in Ethiopia and Cambodia. Refer to the WASH in HCF knowledge portal for details. https://www.washinhcf.org/resources/publications/

schemes, intra-facility competitions, peer-to-peer learning and mentoring schemes, or proper budgeting and reinvestment of profits are all possibilities with some demonstrated success.

Address gaps in technical and managerial expertise. Specific technical gaps commonly found at the facility level include: water quality testing; health care waste management and methods for increasing sustainability of operations, maintenance and supply. Limited engagement and accountability of management and leadership are also common. These gaps need to be addressed through professional development, mentorship, supportive supervision and regular facility level training.

Integrate infection prevention and control (IPC) and WASH. Without WASH services, infection prevention cannot take place. Development of joint training initiatives for health facility staff, including health care workers and cleaners is needed, using hand hygiene as an entry point for jointly addressing WASH and IPC. WHO, UNICEF and the Infection Control Africa Network (ICAN) will conduct and evaluate an IPC-WASH training curriculum (including WASH FIT) for a number of African countries in South Africa in July 2017.

Linking WASH as a key outcome of maternal and newborn health. WHO, UNICEF and partners will continue to engage with the aforementioned Network on maternal and newborn health which is currently focused on implementation efforts in nine priority countries. Review and adaptation in the focus countries specifically of the indicators for birth settings to improve the quality of care for mothers and their newborns is one important area of work.

8. Conclusions and next steps

The final sessions of the event synthesized learning, and participants planned next steps and discussed informal commitments to translate learnings into action. The overall outcomes and next steps from the meeting are highlighted in the beginning of this report. A global meeting in 2018 was suggested as a means to continue driving progress on WASH in health care facilities. In the meantime, learning, guidance, opportunities, events and documentation on WASH in health care facilities will be shared via the learning portal (www.washinhcf.org).

Mr Bruce Gordon and Ms Therese Dooley (Regional WASH Advisor, UNICEF ROSA) reflected on progress to date and emphasized the need to adapt to constantly changing environments. Priorities are now to generate global commitment, establish comprehensive guidelines and standards and to continue to align work with other sectors and mobilize resources collectively. There is much to learn from within the WASH Sector, especially concerning work in schools, wastewater and wastewater re-use. Learnings from the realities of work on the ground will inform small, doable actions that can generate lasting change. In doing so, we will ensure that we are investing in people, for people, and all groups will benefit from improved WASH, including mothers and children, health care workers, cleaners, maintenance staff and all other facility users.

Appendix 1: Agenda

Global Learning Event 2017
Water, sanitation and hygiene in health care facilities: action-oriented solutions and learning
Hotel Yak and Yeti, Kathmandu, Nepal
28-30 March 2017

Tuesday 28th March		Speaker/ Moderator
8h00-09h00	Registration	
09h00-09h10	Welcome	Mr Bruce Gordon, WHO HQ
09h10-10h10	**Introductory session** WHO and UNICEF Opening remarks (20 min) Formal Opening by Government of Nepal (20 min) Security briefing (10 min)	 Dr Jos Vandelaer, WHO Nepal Mr Phillippe Cori, ROSA Mr Ram Chandra Devkota, Joint Secretary, Ministry of Water Supply and Sanitation Dr Senendra Raj Upreti, Secretary, Ministry of Health UNDSS
10h10-10h50	**Global Action Plan update** Update on the Global Action Plan activities (20 min) Discussion	 Arabella Hayter, WHO
10h50-11h15	**Overview of Global Learning Event** Overview of the GLE (5 min) Icebreaker - Introduction of participants	 Alison Macintyre, WHO & Fabrice Fotso, UNICEF
11h15-11h45	*Coffee break*	
11h45-13h00	**Session 1: Spotlight on Nepal** Overview of WASH in health care facilities in Nepal Moderated Discussion	 Ministry of Health, Government of Nepal Therese Dooley, UNICEF
13h00-14h00	*Lunch*	
14h00-15h15	**Working group Session 1** **Group A**: Assessments for Action *Indonesia (MoH) and Bhutan (MoH)* **Group B**: Engaging health facility, users and the community *Malawi (WaterAid) and India & Uganda (EAWAG)*	
15h15-15h45	*Afternoon tea*	

15h45-17h00	**Working group Session 2**		
	Group A: Monitoring mechanisms *Mali (Terre des homes & UNC) and WASHCon (Emory)*	**Group B**: Innovative methods for IPC and environmental hygiene *Gambia (Soapbox) and Burkina Faso (Antenna)*	
17h00-17h30	**Feedback from working group sessions**		Fabrice Fotso, UNICEF
18h00-19h30	**Cocktail** Launch of WHO/UNICEF WASH FIT Showcase of WASH in HCF videos		

Wednesday 29th March			Speaker/ Moderator
09h00-09h15	Introduction Lessons learned from Day 1		Irene Amongin, UNICEF
09h15-10h45	**Technical Sessions**		
	Session 1: WASH FIT and WASH FIT mobile *mWater and WHO HQ*	**Session 2:** Quality of care and Universal Health Coverage *WHO qUHC (with Ethiopia & Cambodia)*	
10h45-11h15	*Coffee break*		
11h15-12h45	**Working group Session 3**		
	Group A: Facility-based quality improvement programs *Ethiopia (MoH) and Haiti (Save the Children)*	**Group B**: Addressing the enabling environment: systems analysis and change *Cambodia (WaterAid/MoH) and Myanmar (MoH)*	
12h45-13h45	*Lunch*		
13h45-15h15	**Working group Session 4**		
	Group A: Developing an IPC-WASH package & strengthening multi-level collaboration *Afghanistan (MoH) and Zambia (MoH)*	**Group B**: From the facility to campaigns for change: India *India (WaterAid and IIPHG)*	
15h15-15h45	*Afternoon tea*		
15h45-17h00	**Session 6: Realities from the ground** Midwife's experiences of WASH in health care facilities, Nepal and India (10 min each) Stories and photos from WASH in HCF experiences around		Ms Elisha Joshi, Nepal Ms Bandana Das, India

	the world	Various
17h00-17h30	**Feedback from working group sessions**	Pavani Ram, USAID

Thursday 30th March

			Speaker/ Moderator
09h00-09h15	Introduction Lessons learned from Day 2		Fabrice Fotso, UNICEF
09h15-10h45	**Technical Sessions**		
	Session 3: Maternal and newborn health *UNICEF, WHO, USAID, midwives*	**Session 4:** Health care waste management *WHO HQ*	
10h45-11h15	*Coffee break*		
11h15-12h45	**Working group Session 5**		
	Group A: Working in the maternity unit and beyond *Tanzania (NIMR) and Bangladesh (UNICEF)*	**Group B**: Technologies for WASH in HCF interventions *Burkina Faso (Antenna) and IAPMO (International Association of Plumbers)*	
12h45-13h45	*Lunch*		
13h45-15h00	**Workshop solutions and next steps** *Group activity* Synthesize learning from the workshop Next steps for Global Action Plan Discussion		Alison Macintyre, WHO
15h15-15h45	*Afternoon tea*		
15h45-17h00	**Closing** Commitments from participants Closing of the workshop		Bruce Gordon, WHO TBC, UNICEF Government of Nepal

Appendix 2: List of participants

AFGHANISTAN
1. Mr Nasrat Rasa
UNICEF

2. Dr Raz Mohammad- Khankhell
Ministry of Health

AUSTRALIA
3. Ms Madelline Miller
WaterAid Intern
Australia

BANGLADESH
4. Dr Zaid Hassan
UNICEF

5. Dr Boluwaji Onabolu
UNICEF

BHUTAN
6. Mr Rinchen Wangdi
Ministry of Health

BURKINA FASO
7. Mr Siaka Banon
Ministry of Health (Antenna)

CAMBODIA
8. Ms Sophary Phan
WHO

9. Ms Channa Sam Ol
WaterAid

10. Dr Ir Por
National Institute of Public Health

ETHIOPIA
11. Mr Molla Godif Fisehatsion
Ministry of Health

INDIA

12. Dr Deepak Saxena
Indian Institute of Public Health Gandhinagar (IIPHG)

13. Ms Bandana Das
Society of Midwives of India (SOMI)

14. Ms Arundati Muralidharan
WaterAid

INDONESIA
15. Ms Indah Hidayat
Ministry of Health

16. Dr Linda Siti Rohaeti
Ministry of Health

MALAWI
17. Ms Natasha Salome Mwenda
WaterAid

MALAYSIA
18. Dr Ute Pieper
WHO Consultant

MAYANMAR
19. Dr So Pyay Naing
Water Aid

NEPAL
20. Mr Raja Ram Pote Shrestha
WHO

21. Ms Yeshoda Aryal
Ministry of Health

22. Mr Badri Nath Jnawali
Department of Health Services

23. Dr Guna Nidhi Sharma
Department of Health Services

24. Mr Biswo Ram Shrestha
Department of Health Services

25. Mr Suresh Mahaju
Ministry of Water Supply and Sanitation

26. Mr Prem Krishna Shrestha
Department of Water Supply and Sewerage

27. Mr Narayan Prasad Khanal
Department of Water Supply and Sewerage

28. Mr Shanker Mani Gyawali
Ministry of Water Supply and Sanitation

29. Mr Hari Prasad Timalsina
Ministry of Water Supply and Sanitation

30. Mr Nimes Dhakal
ISWMP

31. Ms Shreejana Shrestha
Department of Health Services

32. Ms Nadira Khawaja
SNV Netherlands Development Organisation

33. Ms Linda Kentro
USAID

34. Ms Arinita Maskey Shrestha
UNICEF

35. Dr Aasha Pun
UNICEF

36. Mr Hom Nath Acharya
UNICEF

37. Mrs Tripti Rai
WaterAid

38. Ms Upama Adhikari Tamang
WaterAid

39. Mr Gobinda Neupane
DFID

40. Mr Tejendra Thapa
GIZ

41. Ms Elisha Joshi
Midwifery Society of Nepal (MIDSON)

42. Dr Sufang Guo
UNICEF

PHILIPPINES
43. Mr Terrence Thompson
Water & Environment International

SWAZILAND
44. Dr Emmanual Opong
World Vision

SWEDEN
45. Ms Anna Ugglas
WHO Consultant

SWITZERLAND
46. Ms Fanny Boulloud
Antenna

47. Ms Melissa Bingham
WHO Consultant

48. Ms Petra Kohler
Swiss Federal Institute of Technology Lausanne (EPFL)

49. Mr John Brogan
Terre des hommes

TANZANIA
50. Dr Edward Maswanya
National Institute of Medical Research

UNITED KINGDOM
51. Ms Suzanne Cross
SoapBox

UNITED STATES OF AMERICA
52. Dr Lydia Abede
University of North Carolina (UNC)

53. Ms Lindsay Denny
Emory University

54. Mr John Feighery
mWater

55. Mr Ian Moise
Save the Children

56. Ms Megan Lehtonen
International Association of Plumbers and Mechanical Engineers (IAPMO)

57. Dr Pavani Ram
USAID

ZAMBIA
58. Mr Lavuun Verstraete
UNICEF

59. Dr Leah Namonje
Ministry of Health

SECRETARIAT
60. Ms Irene Amongin
UNICEF HQ

61. Ms Therese Dooley
UNICEF ROSA

62. Mr Fabrice Fotso
UNICEF

63. Mr Siddhi Shrestha
UNICEF

64. Ms Smriti Sijapati
UNICEF

65. Ms Namrata Shrestha
UNICEF

66. Mr Hom Nath Acharya
UNICEF

67. Dr Sudan Raj Panthi
WHO
Nepal

68. Mr Bruce Gordon
WHO
Switzerland

69. Ms Arabella Hayter
WHO
Switzerland

67. Ms Alison Macintyre
WHO/WaterAid
Australia