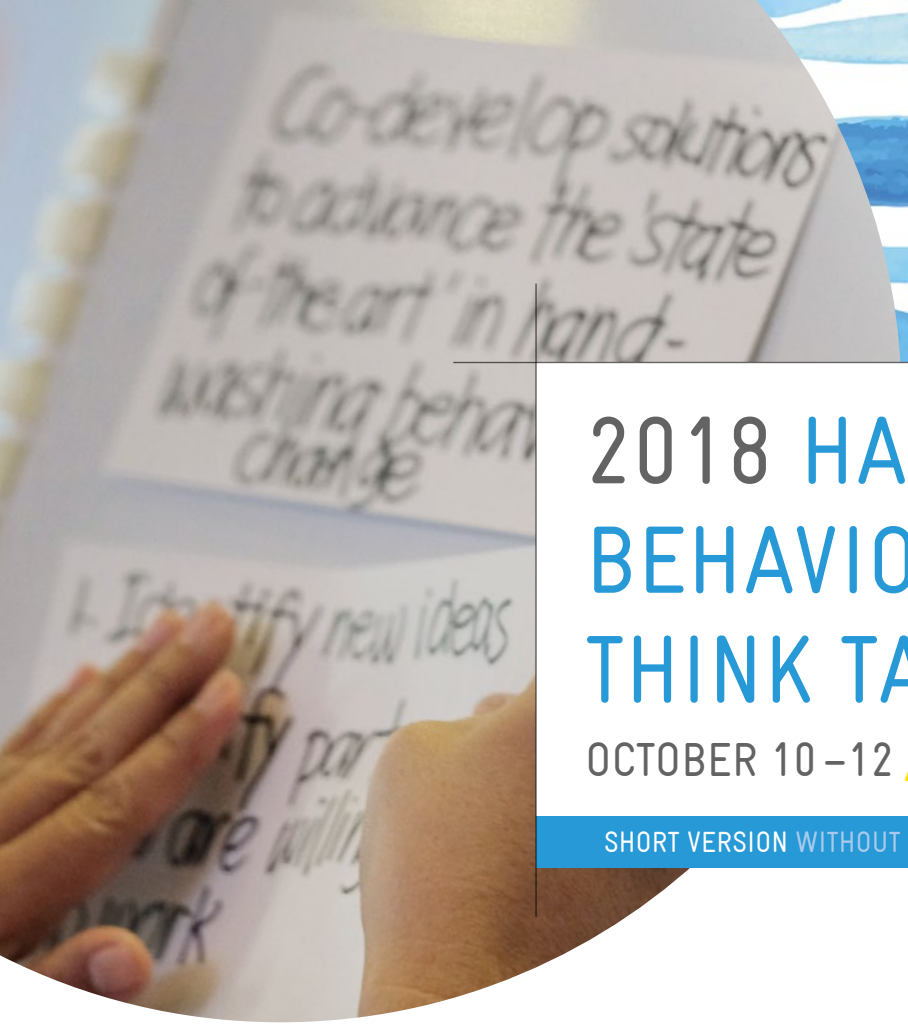

2018 HANDWASHING BEHAVIOR CHANGE THINK TANK // REPORT

OCTOBER 10–12 // MANILA PHILIPPINES

SHORT VERSION WITHOUT PRESENTATIONS

All presentations from the event are available for download here: https://globalhandwashing.org/2018-handwashing-behavior-change-think-tank

ACRONYMS & ABBREVIATIONS

ABCDE	Assess, Build, Create, Deliver, Evaluate
ABHR	alcohol-based hand rub
AMR	Antimicrobial resistance
ASEAN	Association of Southeast Asian Nations
Asia P3 Hub	People, Public and Private Sectors (P3)
asmr	autonomous sensory meridian response
BCC	Behavior Change Communication
C2C	Child-to-Child
CHoBI7	Cholera-Hospital-Based-Intervention-for-7-Days
CHSI	Center for Health Solutions and Innovations
CLTS	Community-led total sanitation
DepEd	Department of Education
DOH	Department of Health
ECED	Early Childhood Education and Development
EED	environmental enteric dysfunction
EHCP	Essential Healthcare Package
FHI 360	(formerly Family Health International)
GHP	Global Handwashing Partnership
GIZ	Deutsche Gesellschaft für internationale Zusammenarbeit GmbH
HCAI	Healthcare-associated infections
HCF	healthcare facility
HCWH	Health Care Without Harm
HP	hygiene promotion
HPCS	Health Promotion and Communication Service
HW	handwashing
HWWS	handwashing with soap
iccdr,b	International Centre for Diarrhoeal Disease Research, Bangladesh
IDP	Internally displaced persons
IEC	Information, Education and Communication
IPC	Infection prevention and control
IYC	Infant and Young Children
LED	Light-emitting Diode
LSHTM	London School of Hygiene and Tropical Medicine
M&E	Monitoring and Evaluation
mHealth	mobile health
MNCH	Maternal Newborn and Child Health
MWC	Manila Water Company
MWF	Manila Water Foundation
NNC	National Nutrition Council (of the Philippines)
O&M	Operation and Maintenance
P&G	Procter & Gamble
PAMET	Philippine Association of Medical Technologists
PH	Philippines
PTA	Parent Teacher Association
RCT	randomized control trial
SBC	Social and Behavior Change
SDG	Sustainable Development Goals
SHINE trial	Sanitation, Hygiene, Infant Nutrition Efficacy trial
SPLASH	schools promoting learning achievement through sanitation and hygiene
TSA	Three-Star Approach
UNICEF	United Nations Children's Fund
UP	University of the Philippines
USAID	United States Agency for International Development
WA	WaterAid
WASH	water, sanitation and hygiene
WHO	World Health Organisation
WinS	WASH in Schools

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1. INTRODUCTION

1.1 CONTEXT

Handwashing with soap is critical to preventing disease and protecting health. Research shows that proper handwashing with soap can prevent some of the most common causes of death, particularly for vulnerable groups including young children. Handwashing with soap also has long-lasting benefits related to health, economic growth, education, and equity. Handwashing is included in Sustainable Development Goal 6: Ensure availability and sustainable management of water and sanitation for all. Hygiene is measured in SDG target 6.2, but the effects of handwashing with soap can drive progress in education, equity, economic growth, and across the 2030 agenda.

Around the world, stakeholders from multiple sectors are working to change handwashing behavior and ensure access to handwashing facilities. However, rates of proper and consistent handwashing remain low. Only an estimated 19 % of people globally wash their hands with soap after contact with feces[1], and the 2017 Joint Monitoring Program estimated household access to a handwashing station at less than 10 % in some countries.[2]

Handwashing promotion, behavior change, and hygiene infrastructure continue to be pressing needs and high priorities in the Philippines. The Department of Health (DoH), Department of Education (DepEd), and partners from the public and private sectors are leading a range of programs to increase handwashing in the Philippines.

1.2 ABOUT THE THINK TANK

The Global Handwashing Partnership Think Tank series brings together hygiene experts from civil society, government, research institutions, and the private sector to drive learning and action in handwashing behavior change. The 2018 Think Tank was hosted in Manila, Philippines, from October 10–12.

The objectives of the 2018 Think Tank:

1. FACILITATE IMPROVED COLLABORATION AMONG STAKEHOLDERS WORKING IN HYGIENE
2. SHARE LEARNING AND EXPERIENCE FROM DIVERSE PERSPECTIVES
3. CO-DEVELOP SOLUTIONS TO ADVANCE THE 'STATE OF THE ART' IN HANDWASHING BEHAVIOR CHANGE

[1] Freeman MC, Stocks ME, Cumming O, Jeandron A, Higgins JP, Wolf J, Prüss-Ustün A, Bonjour S, Hunter PR, Fewtrell L, Curtis V. Hygiene and health: systematic review of handwashing practices worldwide and update of health effects. Trop Med Int Health, 2014 Aug; 19(8): 906–16.
[2] Progress on Drinking Water, Sanitation and Hygiene: 2017 Update and SDG Baselines. WHO, UNICEF, 2017. https:/unicef.org/publications/files/Progress_on_Drinking_Water_Sanitation_and_Hygiene_2017.pdf

SDGs AFFECTED BY HANDWASHING

1.3 WELCOME & OPENING REMARKS

// The 2018 Handwashing Behavior Change Think Tank opened with a welcome from the co-hosts and opening remarks from the Departments of Health and Education.

Carolyn Moore of the Global Handwashing Partnership and David Khoo of Procter & Gamble welcomed the diverse group of participants. David reminded the group of the urgency of handwashing behavior change, sharing data from the Philippine Hygiene Index which showed that while 7 in 10 adults in the Philippines said they washed their hands after using the bathroom, only 2 in 10 were observed to do so. Carolyn challenged participants to spend the next three days finding new partners, exploring new ideas, and facing some of the most challenging issues in handwashing behavior change.

The Assistant Secretary for Public Health Services Team in the Department of Health, Dr. Maria Rosario S. Vergeire, highlighted the scale of this challenge in the Philippines.

"Maghugas ng kamay—to wash our hands. It sounds simple and easy, but studies have found that the majority of Filipinos don't practice handwashing at the most critical times, such as after using the toilet."

Dr. Vergeire shared that through the FOURMula One Plus program, which focuses on boosting Universal Health Care, the Department of Health is committed to ensure that handwashing is integrated into health care facilities and outreach programmes at the community level.

"It is also critical to engage the support of other National Government Agencies so that water, sanitation and hygiene can be prioritized and inculcated in every sector."

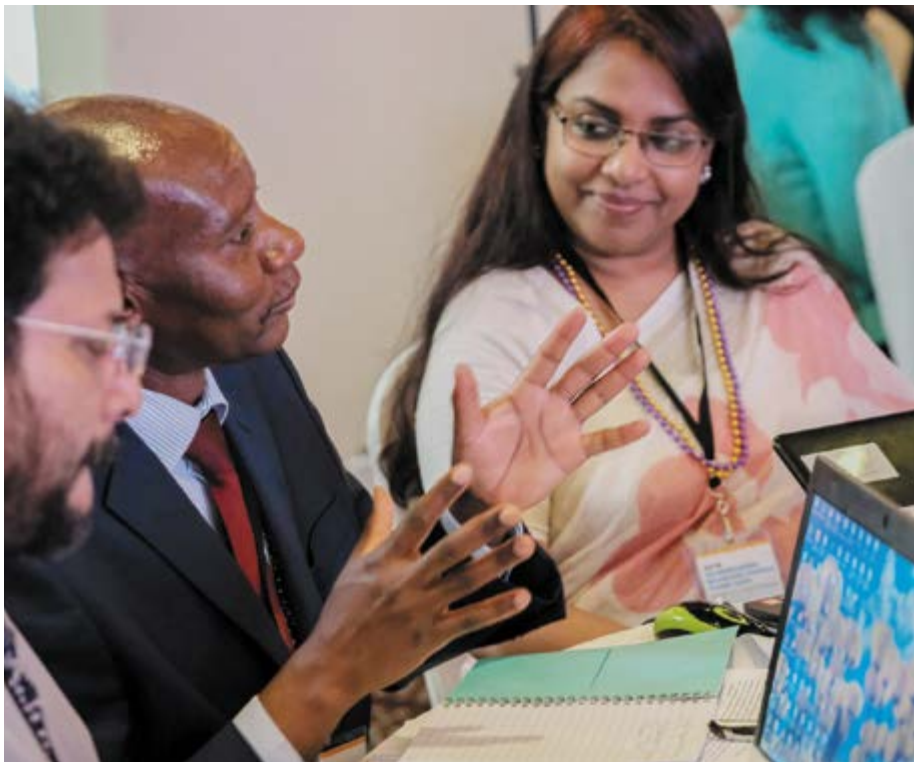
The Director III of the Bureau of Learner Support Services in the Philippines Department of Health, Dr. Ella Naliponguit, welcomed participants on behalf of the Department of Education. She reminded participants that the Sustainable Development Goal targets for water and sanitation provide encouragement and direction for hygiene programs. The Department of Education's National WASH in Schools (WInS) Policy includes daily group handwashing in all schools. In addition, DepEd's WASH in Schools Policy recognizes the importance of hygiene in school settings and mandates all schools in the country to practice daily group handwashing. Through the operationalization of this policy based on the Three Star Approach, there is currently strong momentum for handwashing in schools across the country.

1.4 EVENT OBJECTIVES & INDICATORS

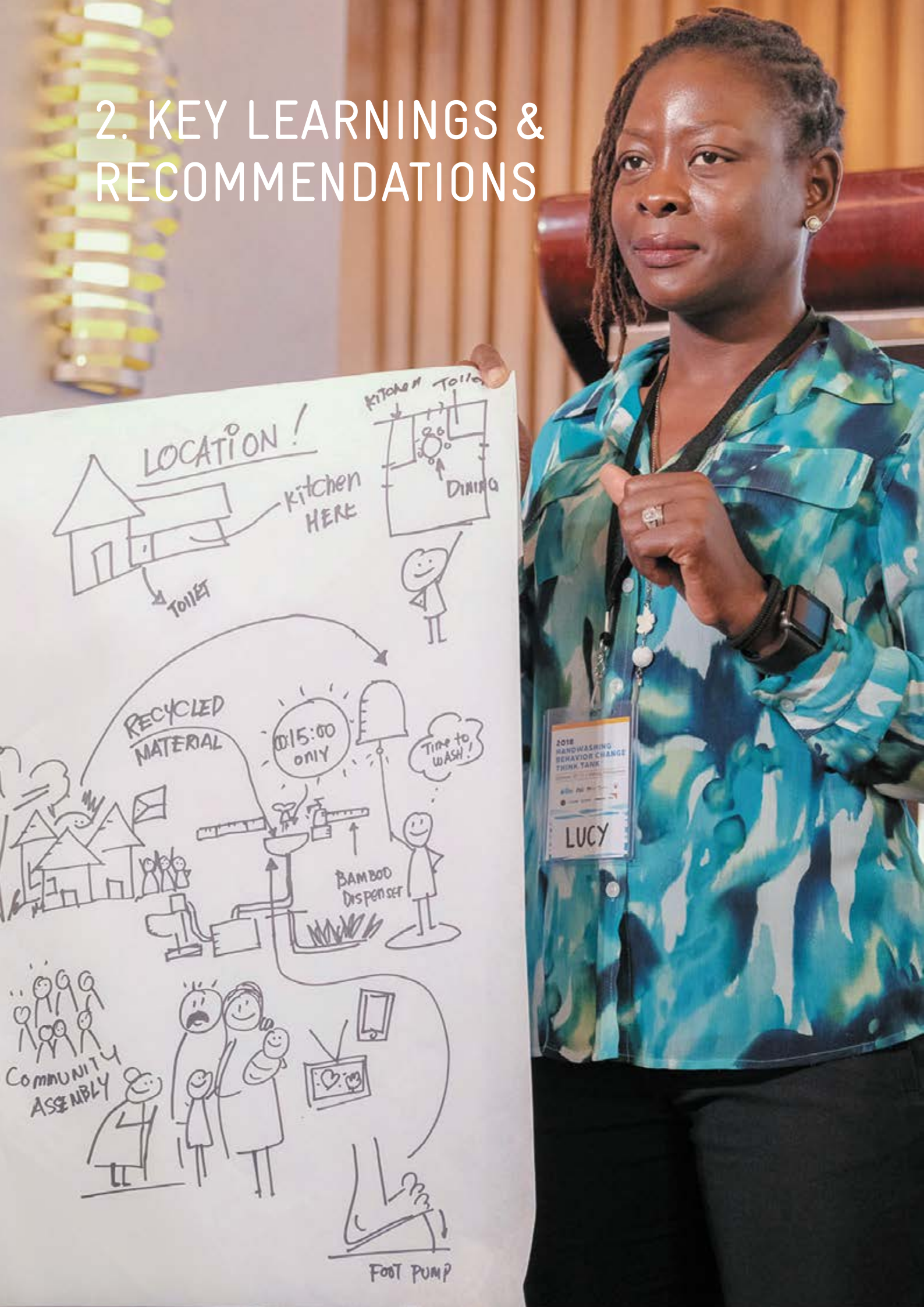
// Amy Weissmann and Kathy Pizzacalla introduced the Think Tank objectives and facilitated a discussion among participants. Participants discussed the event objective that they considered most critical, and how the group would know that the objective is accomplished. Examples of indicators for these objectives are summarized below.

// SAMPLE INDICATORS FOR EVENT OBJECTIVES

- An understanding of the landscape of stakeholders
- Leverage unconventional partnerships beyond the Think Tank
- Strengthen a multi-sector approach to execution and monitoring
- Develop an organized network/inventory of partners
- Increased usage of the 'state of the art' existing solutions
- Generate new ideas, 'out of the box' solutions
- Apply specific insights to existing behavior change programs
- Identify institutional gaps in handwashing behavior



2. KEY LEARNINGS & RECOMMENDATIONS



SUMMARY OF KEY LEARNINGS FROM THE THREE-DAY EVENT

// STRATEGIES

Strategies need to focus not only on the availability of water, soap and washing facilities, but also on behavior change. Best practices in handwashing behavior change have moved from educational and communication-based approaches to include the roles of other factors, including environmental and unconscious drivers.

// INFRASTRUCTURE

Addressing issues of sustained availability of soap and water is important, but insufficient to change handwashing practices.

// BEHAVIOR CHANGE

Handwashing programs should:

- use evidence-based behavior change strategies,
- consider the role of multiple approaches,
- recognize the limitations of information-based approaches,
- align interventions with the policies of the respective government ministries responsible.

// UNDERSTANDING THE USER

Hygiene behavior change requires us to develop a rich understanding of the people whose behavior we seek to change (for example through research, marketing principles, and design); and develop strategies accordingly. Avoid stereotypes and be mindful of the potential for programs to reinforce harmful norms.

// RESEARCH

Research to properly evaluate new ideas and programming approaches should be undertaken to inform decisions about scale-up and mainstreaming into national programs.

// LINKAGES

Consider the linkages between handwashing, other hygiene behaviors, and environmental factors. Handwashing is not a single solution to diarrhea, pneumonia, and other diseases related to poor hygiene; and other factors in the environment can influence the success or failure of disease prevention efforts.

// INTEGRATION

While WASH programming has not shown an additional effect on stunting compared to nutrition alone, there remain distinct benefits to WASH implementation. Programmatic reasons may still provide a compelling case for integration.

// SYSTEMS

Hygiene in schools and in health facilities is essential for health of individuals, but also supports the larger functions of the health and education systems. While the SDGs provide a framework for monitoring, there remains a need for national and sub-national level targets, implementation strategies, and incentives.

// COLLABORATION

The Think Tank discussions demonstrated the impact of open communication and shared learning between partners, institutions, and departments working on handwashing behavior change. Handwashing stakeholders should continue to develop platforms to share lessons, resources, and ideas.

3. PLENARY SESSIONS

3.1 NEW FINDINGS IN BEHAVIOR CHANGE

TOPICS & SPEAKERS

PRESENTATION 1 // HANDWASHING WITH SOAP: PAST, PRESENT AND FUTURE // MS. NGA KIM NGUYEN, USAID

› Senior Water, Sanitation and Hygiene and Social Behavior Change Adviser at USAID's Office of Maternal and Child Health and Nutrition // Nga brings over 15 years of field experience in social and behavior change working on a variety of behaviors. She led a large-scale hand-washing with soap promotion program for the World Bank in Vietnam, and has supported governments in Bhutan, Bangladesh, Nepal, Cambodia, Laos, Vietnam, the Philippines, East Timor and Kyrgyzstan to design and implement social and behavior change initiatives in WASH and in maternal and child health.

PRESENTATION 2 // HYGIENE BEHAVIOR CHANGE AT SCALE: WATERAID'S EXPERIENCE // DR. OM PRASAD GAUTAM, WATERAID

› A public health expert and behavior change scientist with more than 18 years of work and research experiences in WASH, environmental health, behavior change, child health, immunization, food hygiene/safety, diseases surveillance and HIV/AIDS program; has led large scale intervention research for WASH, food hygiene, integrating hygiene into vaccination program, and health/behavior change interventions; and currently works at WaterAid UK as a Senior WASH Manager – Hygiene (global lead on hygiene behavior change).

PRESENTATION 3 // WASHPaLS mHEALTH MESSAGING, AN INNOVATIVE APPROACH TO PROMOTE IMPROVED CAREGIVER AND CHILDHYGIENE PRACTICES IN BANGLADESH // DR. MUNIRUL ALAM, icddr,b

› Fellow American Academy of Microbiologists; Senior Scientist & Lead, Enteric Infections Head, Molecular Ecology and Metagenomic Laboratory Infectious Diseases Division, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b).

PRESENTATION 1 SUMMARY
// HANDWASHING WITH SOAP: PAST, PRESENT AND FUTURE
// MS. NGA KIM NGUYEN, USAID

// Ms. Nguyen shared a timeline of handwashing behavior change, including: the establishment of the Public-Private Partnership for Handwashing (now the Global Handwashing Partnership) in 2001, the first Global Handwashing Day celebration in 2008, and the launch of the Sustainable Development Goals in 2015, with SDG 6 devoted to water, sanitation and hygiene.

The WHO/UNICEF Joint Monitoring Program hygiene ladder and baseline data launched in 2017. This includes definitions of basic, limited, and no service. The ladder opens new opportunities for monitoring and advocacy.

Globally, handwashing rates remain low. Globally, only 19 % of people report washing their hands after contact with feces; 47 % of households in least developed countries were found to have no handwashing facilities.[3]

There have been several promising approaches to changing handwashing behavior. The field has evolved from information-based approaches (IEC), to focusing on other individual factors (BCC), then expanded further to include other social norms (SBCC). Current approaches no longer assume that communication is the best way to change behavior and seek to consider all aspects that influence behavior (SBC). This includes the use of nudges, unconscious cues that can lead someone to perform a given behavior.

[3] Freeman MC, Stocks ME, Cumming O et al.. Hygiene and health: systematic review of handwashing practices worldwide and update of health effects. Trop Med Int Health 2014, 19(8):906-16.

PRESENTATION 2 SUMMARY
// HYGIENE BEHAVIOR CHANGE AT SCALE: WATERAID'S EXPERIENCES
// DR. OM PRASAD GAUTAM, WATERAID

// There has been a key shift in hygiene promotion, adding a behavior change focus onto existing attempts to improve knowledge and infrastructure. This includes factors like creating social desire and norms for good hygiene behaviors, use of motivational drivers, and changing behavioral settings. This has been used as the basis for large scale institutional campaigns delivered either through a mainstreaming approach, integration approach, and campaign approach to achieve sustained hygiene behavior change at scale.

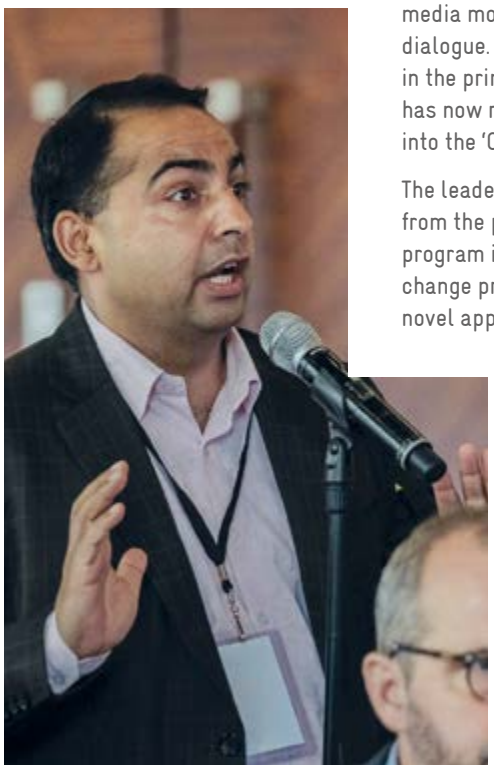
WaterAid and the Ministry of Health in Nepal worked to integrate hygiene and handwashing into the routine hygiene immunization program. This program relied on creative processes and emotional drivers. The campaign was branded with the aspiration to be an 'ideal family,' including public rewards for those who achieved behavior change. Participants received kitchen mirrors with illustrations of five key behaviors. These nudges had a set of behaviors and steps, and intended to disrupt the behavioral setting.

With composite data review, the mothers who reported the desired behaviors were also observed practicing the desired behaviors, with a shift on an individual data review. Reported behavior – 95 % and Observed behavior – 69 %. The overall outcome of the campaign had the target behaviors 2 % at baseline, and 53 % one year after implementation.

The program transitioned from a year-long pilot intervention in four districts into a national intervention, with governmental budgetary allocation in the transition phase. The pilot cost was around US$ 6 per household, and the cost for national scale up is US $1.3US per household.

WaterAid, UNICEF and the Government of Pakistan executed a 5-year national campaign on behavior change, 'Clean Campaign', and policy influencing utilized intensive mass media mobilization, community mobilization and policy dialogue. The first two-year campaign resulted in a change in the primary school curriculum. The 'Clean Campaign' has now received national attention and transitioned into the 'Clean Green Campaign'.

The leadership from the Government and technical support from the partner beginning with the inception phase of the program is desirable to implement a hygiene behavior change program at scale and it is essential to introduce novel approaches to a successful campaign.



PRESENTATION 3 SUMMARY
// WASHPaLS: mHEALTH MESSAGING: AN INNOVATIVE APPROACH TO PROMOTE IMPROVED CAREGIVER AND CHILD HYGIENE PRACTICES IN BANGLADESH // DR. MUNIRUL ALAM, icddr,b

// Rates of handwashing at key times are low in Bangladesh, and formative research found that household contacts of patients with cholera were at a 100 times higher risk of developing a cholera infection than the general population, highest in a 7-day high-risk period. The CHoBI7 intervention aimed to improve hygiene behaviors in households that had a child treated for cholera at the icddr,b hospital.

Formative research found that 95 % of the target households had soap available, prioritized for washing and bathing. The goal was to reinforce in these households the behavior of using soap for handwashing.

Through a module delivered by a community promoter, provision of soap and handwashing stations, and subsequent clinical and environmental surveillance, the first arm of the CHoBI7 intervention attained a 47 % reduction in overall cholera infections among household contacts. The hardware was as important as the messaging.

The second phase added mobile messaging to improve safe child feces disposal, improve food hygiene practices, and reduce childhood mouthing of soil and other contaminated objects. The mobile module has recorded messaging from icddr,b Hospital health workers to remind mothers of hand-washing, followed by a sequence of steps. For example, after delivering the message, there is a prompt for 'click yes if you believe this is true'. There is no live hotline; and messages are limited to one-way communication through SMS and interactive voice response.

3.2 HANDWASHING BEHAVIOR CHANGE LESSONS ACROSS CONTEXT

TOPICS & SPEAKERS

BREAKOUT GROUP 1 // CHILD-TO-CHILD APPROACH TO HYGIENE PROMOTION // MR. NAYCO YAP, ACTION AGAINST HUNGER

› Public health professional for more than 18 years, and has been involved in many projects and programs in Maternal and Child Health, TB control and prevention, health systems development, WASH, DRR and child labor education; currently works with Action Against Hunger as the WASH Coordinator.

BREAKOUT GROUP 2 // WASH AND LEARN: BEHAVIOR CHANGE FOR PRE-SCHOOL CHILDREN

// MS. FAUSTINA MOLINA-VIRIÑA, CHSI › More than 30 years of professional experience in private sector advertising, mass media production, advocacy and communication and marketing strategy development among various local advertising agencies.

// DR. CECILIA MANUEL, CHSI › Program Manager at Center for Health Solutions and Innovations (CHSI); health specialist with more than 26 years of professional experience from health management, standards and policy development, program planning, monitoring and evaluation to the development, design and implementation of quality assurance programs and, health promotion and communication in the Philippines. Has extensive experience at the national, regional and local levels including Local Government Units (LGU) and government health agencies and other development partners in designing and conducting health programs.

BREAKOUT GROUP 3 // HIFIVE FOR HYGIENE AND SANITATION

// MS. LILIAN LEHMANN, IDINSIGHT › Southeast Asia Regional Director for the organization IDinsight. She has experience working on WASH projects in both Africa and Asia, and has overseen several large-scale evaluations in Africa and the Philippines, including IDinsight's 3-year partnership with UNICEF.

// MR. JON MICHAEL R. VILLASEÑOR, UNICEF › National Officer for the WASH in Schools Program of UNICEF Philippines—manages the WASH in Schools and WASH in ECCD programs, working with DepED, DSWD and ECCD Council, DOH, DILG and local government units in improving WASH service delivery in public schools and day care centers.

BREAKOUT GROUP 4 // HYGIENE PROMOTION IN HEALTH CARE FACILITIES: LEAN CAMPAIGN IN THE DELIVER LIFE PROJECT

// MS. LILIAN KAMOWA CHAGULUKA, WATERAID MALAWI › A public health and social and behavior change communication (SBCC) specialist with vast technical and management experience in health, nutrition, reproductive health, maternal and child health, maternal and infant young feeding in emergencies, adolescent programming and hygiene behavior change; currently serves as the Hygiene Behavior Change Specialist for WaterAid Malawi.

BREAKOUT GROUP 1 SUMMARY // CHILD-TO-CHILD APPROACH TO HYGIENE PROMOTION // MR. NAYCO YAP, ACTION AGAINST HUNGER

// Child to Child (C2C) is a child-centered hygiene approach that empowers school-age children to identify poor hygiene behavior, and plan and promote good hygiene practices by influencing other children and members of their family. It also supports other WASH activities like the community-led total sanitation (CLTS), WASH facility repairs, WASH governance work and capacity building for local leaders.

Action Against Hunger trained teachers as C2C advisers and selected school-age children to conduct hygiene promotion (HP) activities using the C2C Approach. Children who have been reached by C2C are able to influence their families and communities. Children trained in C2C are selected by teachers and are called the WASH Kids Patrol.

Voices of children should be valued. The changes they desire in school settings can also extend to changes in their home settings.

This program involved elementary school children in the pilot areas, and now there are plans to scale the program in other districts. The C2C methodology could also address other behavior change, for example, behaviors related to menstrual hygiene taboos and bullying.

The evaluation of the C2C approach should consider: clear indicators of success; the role of teachers, for example, the support and guide they provide to the students (including the management of students not practicing proper handwashing); and the effect of the approach on pupil's study focus and habits, for example, the extent to which children participating in the WASH Kids Patrol take time out of their studies.

BREAKOUT GROUP 2 SUMMARY // WASH AND LEARN: BEHAVIOR CHANGE FOR PRE-SCHOOL CHILDREN // MS. FAUSTINA MOLINA-VIRIÑA & DR. CECILIA MANUEL, CHSI

// Through this program, the Center for Health Solutions and Innovations (CHSI), Philippines sought to increase the use of soap in handwashing in geographically isolated and disadvantaged populations. In these areas, the local governments have low investment capacity, and there is limited direct access to clean water and high levels of open defecation.

The resulting solution included a themed children's storybook, a lesson guide for teachers to enable WASH integration into the curriculum, as well as a low-cost, do-it-yourself group handwashing facility. A recurring question from government deliberations is regarding program scalability in home and institution settings.

Recommendations include developing implementation standards as a key component to ensuring adoption at local government level and including advocacy to local governments. Joint policies between government agencies are key for hygiene, as hygiene programs are typically managed by multiple offices.

BREAKOUT GROUP 3 SUMMARY // HIFIVE FOR HYGIENE AND SANITATION // MS. LILIAN LEHMANN, IDINSIGHT & MR. JON MICHAEL VILLASENOR, UNICEF

// The Essential Health Care Program (EHCP), which includes daily supervised group handwashing with soap in public elementary schools, was a flagship program of the DepEd, implemented in 60 school divisions. The EHCP and existing investments of schools in handwashing facilities and hygiene supplies provided the knowledge, skills and opportunity for children to practice hand hygiene. However, there was no behavior change campaign, other than daily group handwashing.

Formative research identified motivators as:

- DISGUST – aversion to unclean hands
- AFFILIATION – the desire of children to be affiliated with their peers
- ATTRACTIVENESS – handwashing being considered welcoming and desirable

The HiFive for Hygiene and Sanitation campaign created communication materials and cues for independent handwashing behavior. The team designed an evaluation of 200 schools, with a first cohort of 100 schools receiving the intervention in the first year and the next cohort receiving the intervention the second year.

Observed handwashing with soap increased by a small margin and reported group handwashing with soap went up by 15 %. There was no significant change in the motivators for handwashing. There is a need to identify whether interventions did not successfully convey the motivators (because of insufficient exposure or an inadequately delivered intervention) or whether the motivators were inaccurate or insufficient.

Modifying the traditional 'rote' educational approach was a challenging task. The program included integrating motivators into curriculum guides; motivational activities in the daily lesson log; clear lesson plans for teachers; layout of competencies to be developed; and tools and activities.

BREAKOUT GROUP 4 SUMMARY // CLEAN CAMPAIGN: HYGIENE PROMOTION IN HEALTHCARE FACILITIES // MS. LILIAN KAMOWA CHAGULUKA, WATERAID MALAWI

// WaterAid in Malawi is implementing a hygiene behavior change campaign, 'Clean Campaign' to maximize the benefits of WASH infrastructure it provides in healthcare facilities and communities.

The campaign uses motive-based activities such as drama, folk songs, board games and sports in communities.

The campaign is focused on infection prevention with handwashing with soap as a prominent behavior amongst other behaviors. They work with channels and strategies that are familiar to the target populations.

This program was developed considering barriers to hand hygiene and infection prevention policies in the healthcare facilities. These include large caseloads, low soap availability in healthcare facilities and poor WASH practices in the healthcare facilities, especially latrines maintenance, waste management and safe water treatment.

Healthcare workers reported willingness to practice the desired behavior, but with a rising number of patients, they are unable to clean their hands between patients. It is important for practitioners to emphasize the critical moments for hand hygiene in this setting. Alcohol-based handrub, like many other infection prevention control supplies in Malawi, is not readily available.

Government officials, implementing partners and community volunteers comprise the group of master trainers at national and district levels. These trainings then cascade down to smaller groups, building on the Malawian government's infection prevention and control program. The key to sustainability after program completion is the conduct of monitoring and policy advocacy by the trainers.

A key lesson from the campaign is the need for greater innovations to find resources in financially constrained environments. For example, the campaign used political campaign times to solicit support and pledges.

KEY MESSAGES & RECOMMENDATIONS

The plenary discussion drew lessons across the programs presented. The key discussion insights and recommendations included:

// EMPOWERING CITIZENS

The programs highlighted the value of empowering citizens to expect more of government officials and become confident in demanding that service providers and duty bearers provide better WASH conditions and enforce better WASH practices in day care, schools, and health facilities.

// RESOURCE GENERATION FOR INFRASTRUCTURE AND SOAP SUPPLIES

The programs also tried to identify ways to generate resources for soap supplies and operations and maintenance of facilities. Examples include parental and community mobilization, and partnerships with other local stakeholders. However, it is not fully established that institutions without resource constraints have better hygiene practices.

// INTEGRATED PROGRAMS ACROSS SETTINGS

Programs that target specific institutional settings may be missing opportunities for integration to improve efficiency and institutionalization. For example, in remote communities, there could be greater efficiency in combining trainings on hygiene for day care workers, teachers, community health workers, and others.

3.3 BEHAVIOR CHANGE LESSONS IN CHALLENGING CONTEXTS

TOPICS & SPEAKERS

PRESENTATION 1 // SUPER TOWEL™ // MR. TORBEN HOLM LARSEN, REAL RELIEF

› Technical Director and co-founder of Real Relief, a private sector company behind products like Super Towel™, Safepad™ and Netprotect™; working with developing and supplying innovative products for the humanitarian and development sector since 2000. Products include Long-Lasting Insecticide-Treated Nets (LLIN) to fight malaria and sustainable water filters, shelters, reusable sanitary pads and lately Super Towel™.

PRESENTATION 2 // ARUP AND HANDWASHING STATION IN EMERGENCIES DESIGN // MR. MARTIN SHOULER, ARUP

› The London Water Leader at the international engineering consultancy Arup, he works on water and related projects across Building Engineering and Infrastructure; currently leads the Rockefeller Foundation work on the development of a City Water Resilience Framework to help prioritize interventions to enhance cities' resilience and means to reduce the disease cycle in in emergency relief situations with the British Red Cross and the LSHTM.

PRESENTATION 3 // Wash'Em: IMPROVING HYGIENE PROGRAMMING IN HUMANITARIAN CRISES // MS. SIAN WHITE, LSHTM

› Research Fellow in the Department of Disease Control at the London School of Hygiene and Tropical Medicine (LSHTM); management team member of the Health in Humanitarian Crisis Centre; Technical Working Group member for the Humanitarian Innovation Fund; and member of the Steering Committee for the Global Handwashing Partnership.

INTRODUCTION BY THE SESSION LEAD // MS. NGA KIM NGUYEN, USAID

// In acute phases of an emergency, 40 % of deaths are due to diarrheal diseases, and 80 % of deaths of children are attributable to diarrheal disease. [1] In emergency response, safe water supply is a primary consideration, then sanitation. Hygiene solutions are often neglected. Handwashing in situations of crisis is often inconvenient, unfamiliar and undesirable, resource intensive, and logistically difficult.

Most handwashing programs in emergencies involve distribution of hygiene products and education on handwashing benefits, which are insufficient for hygiene behavior change.

[1] Connolly MA, Gayer M, Ryan MJ, Salama P, Spiegel P, Heymann DL. Communicable diseases in complex emergencies: impact and challenges. Lancet. 2004; 364(9449): 1974–83.

PRESENTATION 1 SUMMARY
// SUPER TOWEL™
// MR. TORBEN LARSEN, REAL RELIEF

// Real Relief set out to develop a solution for handwashing that did not require soap and used very little water. They developed the Super Towel™, a microfiber towel that removes bacteria from the hand. There is an antimicrobial treatment permanently bonded to the fabric, so the towel will kill the bacteria it removes from the hand and does not have to be washed frequently. It also makes Super Towel™ safe to be shared from one person to another and it allows for the use of grey or non-drinking quality water.

The product had a two-step development process. The first step included proof-of-concept laboratory testing, which found that the Super Towel™ was as effective as soap in a laboratory setting. Then, the Super Towel™ was tested in a field setting in Ethiopia.

The intermediate conclusions from field testing were that users also found the towel acceptable and appropriate in a water-scarce environment with limited economic resources. Users also found the product improved the ease of hand-washing outside home or kitchen settings.

The next steps include product improvements to reduce malodor, and a future health impact study.

PRESENTATION 2 SUMMARY
// ARUP AND HANDWASHING STATION IN EMERGENCIES DESIGN
// MR. MARTIN SHOULER, ARUP

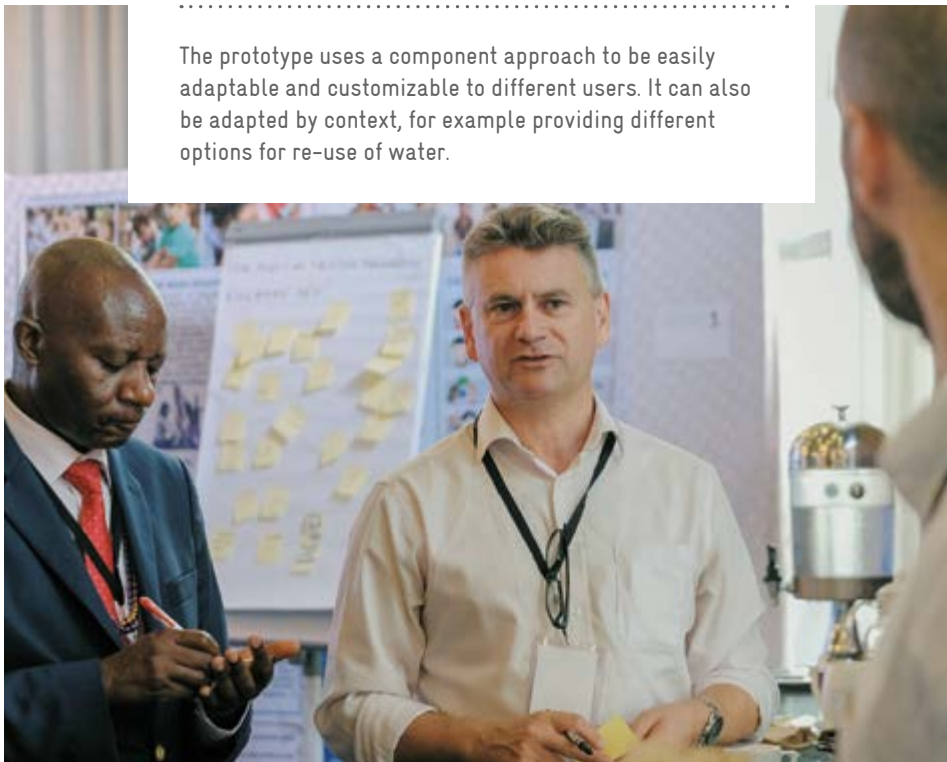
// In emergency settings, having a handwashing station increases the likelihood of handwashing by 67 %, both by making handwashing more convenient and by triggering the behavior. However, existing solutions are often difficult to maintain, unattractive or do not look like a handwashing facility, unsuitable for children or people with disabilities, or have other limitations.

Arup is co-developing a handwashing station suitable for displaced populations in or out of camps that could be deployed in a response but remain useful after the response. The design brief requires the handwashing unit to be appropriate in a wide range of situations and provide a cue for handwashing behavior.

The design process included literature review, a review of the current options, design, and stakeholder feedback. **This product design considered the following criteria:**

- SUITABILITY for displaced populations within or without camp settings
- ADAPTABILITY beyond acute emergency situations
- PRIORITIZATION of handwashing with soap after toilet use
- ATTRACTIVENESS and convenience
- FAMILIARITY of the station to users
- ABILITY to cue desired behavior
- USE of locally available and easy-to-assemble components

The prototype uses a component approach to be easily adaptable and customizable to different users. It can also be adapted by context, for example providing different options for re-use of water.



PRESENTATION 3 SUMMARY
// Wash'Em: IMPROVING HYGIENE PROGRAMMING IN HUMANITARIAN CRISES
// MS. SIAN WHITE, LSHTM

// Successful handwashing behavior change programs in stable settings are based on evidence, designed to address behavioral determinants, and adapted to the local context. Interviews with humanitarian actors found that emergency handwashing programs typically do not take behavioral drivers or evidence into account. Humanitarian actors reported that designing behavior change programs was too time-consuming or required a skillset their teams did not have.

When a crisis disrupts a person's social and physical world, their behavior also changes. Research in Iraq and the Democratic Republic of the Congo helped to identify five determinants of behavior that tend vary substantially by context and if understood can be used to shape handwashing intervention design.

Drawing on these results, the Wash'Em project has developed five rapid assessment tools to explore behavioral determinants in emergencies. The tools help practitioners to explore:

1. How the physical environment affects handwashing behavior
2. The underlying motivations driving people's behavior
3. Whether people perceive diarrhea to be a risk
4. How people's personal experiences of crisis, displacement and disease may affect an intervention
5. The most effective way to reach a population

These highly participatory tools take one day to learn, 1 to 5 days to conduct with 2 to 6 staff and 1 additional day to translate the findings into a hygiene intervention. Next year, the Wash'Em project will be launching a decision support software to complement the rapid assessment tools. Humanitarians will be able to enter the results from the tools into the software and it will generate context-specific hygiene program recommendations.

The Wash'Em team is looking for feedback on the tools, and more information is available at: **https://washem.info**

DISCUSSANT // PAUL DEL ROSARIO, UNICEF

// The Philippines is vulnerable to numerous natural disasters and hygiene is an important part of each response. The DOH-led WASH Cluster in partnership with UNICEF created the WASH in emergencies framework for hygiene supplies and hygiene promotion. Ideally, the bulk of behavior change programming should occur before the emergencies, to improve the outcome of hygiene interventions during emergencies.

KEY MESSAGES & RECOMMENDATIONS

// HANDWASHING BEHAVIOR CHANGE in emergencies requires programmers to consider different determinants, infrastructure considerations, and contexts than in general programs.

// HANDWASHING FACILITIES in emergencies should respond to the realities of the settings, and there are new innovations aiming to cue handwashing in emergencies. Facilities should cue handwashing and make it attractive and desirable.

// RESPONDERS must ensure the ease and dignity of handwashing with soap for crisis-affected populations, considering population needs and communal trauma from crisis.

3.4 HYGIENE AND NUTRITION INTEGRATION

TOPICS & SPEAKERS

PRESENTATION 1 // INTEGRATING HANDWASHING PROMOTION AND NUTRITION: INSIGHTS FROM THE WASH BENEFITS TRIAL // DR. STEVE LUBY, STANFORD UNIVERSITY

› A physician and epidemiologist who has lived in Karachi, Pakistan for 5 years and Dhaka, Bangladesh for 8 years working with local researchers to broaden understanding of exposure pathways and disease burden of infectious diseases and developing interventions to reduce that burden. In 2009 Dr. Luby was awarded the inaugural Oklahoma University International WaTER Prize in recognition of his contributions in the field of water supply and sanitation with a focus on the world's poorest. In 2012 Dr. Luby joined Stanford University as a Professor of Infectious Diseases and Director of Research for Stanford's Center for Innovation in Global Health.

PRESENTATION 2 // HYGIENIC ENVIRONMENTS FOR INFANTS AND YOUNG CHILDREN // MS. JULIA ROSENBAUM, FHI 360

› Behavior Change Specialist for the USAID-funded WASHPaLS Project, where she leads a task exploring Hygienic Play Spaces for Children, to build evidence-based programming guidance around the neglected pathways of the "F-Diagram"; played a key leadership role in integrating WASH into HIV, nutrition and education programming; serves on the GHP Steering Committee.

PRESENTATION 1 SUMMARY // INTEGRATING HANDWASHING PROMOTION AND NUTRITION: INSIGHTS FROM THE WASH BENEFITS TRIAL // DR. STEVE LUBY, STANFORD UNIVERSITY

// Undernutrition is a major contributor to child mortality and also contributes to cognitive impairment, less success in school and decreased wages. A potential contributor to poor child growth (height for age) is environmental enteropathy, also known as environmental enteric dysfunction (EED). This is a change in intestinal villa architecture and inflammatory cell inflammation that is believed to interrupt the body's ability to absorb nutrients. The causal hypothesis that underlay the WASH Benefits trial was that improvement in drinking water quality, sanitation and hygiene together with nutrition would lead to less occurrence of diarrhea, parasitic infections, and environmental enteropathy, and would then ultimately improve child growth and development.

In WASH Benefits Bangladesh children were enrolled before birth and followed for 2 years in geographically and temporally matched clusters. In Bangladesh 5,040 pregnant women and their child were targeted for enrollment with interventions that improved the drinking water quality (630 children), improved hygienic sanitation (630), improved handwashing (630), a combination of improved water, sanitation and handwashing (630), improved nutrition (630), and a combination of improved water, sanitation, handwashing and sanitation (630). A total of 1260 children were targeted for enrollment in the control group. Community promoters visited mothers in intervention households an average of 6 times per month (more than they were instructed to visit). The handwashing intervention included two handwashing stations (near the latrine and food preparation areas), and soap.

After one year of intervention, approximately 90 % of houses had a handwashing station near the latrine, and observation at Year 2 showed 70–75 % handwashing with soap after latrine use among households in the handwashing intervention.

The handwashing intervention group also had reduced contamination in food and water. The soil surrounding the household where the children commonly played remained contaminated, with an average 120,000 E. coli per dry gram.

The handwashing, sanitation and nutrition interventions significantly decreased prevalence of diarrhea. There was no impact on linear growth with the water, sanitation, or handwashing interventions, and a small improvement with the nutrition intervention. There was no evidence of additional impact on linear growth from combining WASH and nutrition. The researchers believe the most likely explanation of the lack of impact of WASH on growth was that standard WASH interventions did not reduce environmental fecal contamination enough to see an impact on linear growth.

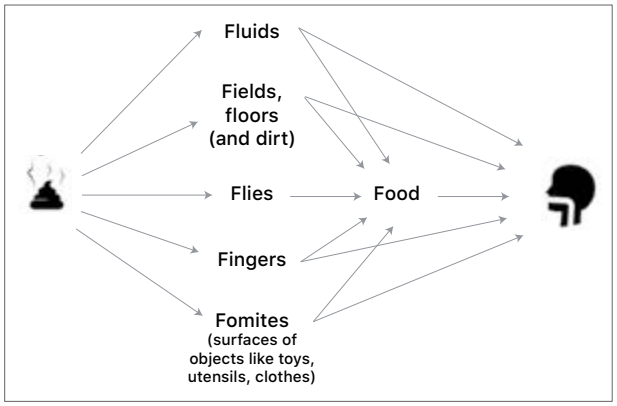
In contrast to physical growth, children who received WASH interventions had improved development in communication skills compared with controls.

Brain development is likely more sensitive to subtle insults and improvements than linear growth, however it is unclear how much the improved child development outcomes resulted from the interruption of enteropathogen transmission and how much resulted from increased social interaction with mothers.

WASH Benefits achieved high levels of handwashing and other WASH targeted behaviors. These high levels were achieved in the context of an intensive intervention that focused on habit adoption, creating an environment that made it easy to wash hands and using locally available goods. Soapy water was inexpensive and easy to provide. Promoters helped mothers address constraints to changing behavior and encouraged habit adoption.

PRESENTATION 2 SUMMARY
// HYGIENIC ENVIRONMENTS FOR INFANTS AND YOUNG CHILDREN
// MS. JULIA ROSENBAUM, FHI 360

// The traditional 'F-diagram' has been used for decades by the WASH sector to represent fecal pathogen transmission pathways, and to illustrate how traditional WASH interventions of fixed point defecation (improved sanitation), improved water quantity and quality, food and handwashing block transmission of pathogens found in feces. However, there is mounting evidence that the traditional F-diagram does not adequately represent risk pathways for infants and young children. It underestimates direct ingestion of animal excreta and fecally contaminated soil; as well as indirect exposure of human and animal feces through food hygiene and exploratory mouthing.



Adapted from Wagner & Lanoix, 1958. This diagram is a derivative of Figures 1 and 3 in Penakalapati et al, 2017 (DOI: 10.1021/acs.est.7b02811), under a Creative Commons CC-BY 4.0 Usage Agreement with the American Chemical Society.

// ANIMAL FECES are a major factor in many environments. They are abundant, and highly pathogenic, but much is unknown about their link to child health. Systematic reviews have found mixed results on the link between domestic animals and risk of infection, but high-quality studies document that the presence of animal and their feces is associated with increased infection, undernutrition and stunting. The risk is most pronounced when infants and young children share sleeping quarters with animals, particularly poultry.

// CHILD FECES is another underemphasized pathway. A comprehensive review of DHS/MICS data conducted by the Water & Sanitation Program of the World Bank found that more than half of households in 15 of 25 countries practiced unsafe disposal of child feces, and this was linked higher EED scores and great odds of wasting and increased stunting.[4]

// UNDERESTIMATED PATHWAYS include children directly ingesting contaminated soil, and indirectly through poor food hygiene, particularly during complementary feeding. Appropriate food hygiene practices have been shown to reduce the risk of diarrhea by 33 %.[5]

Interventions to reduce these pathways are being deployed, but their effectiveness is unknown. Plausibility of protective effects has not yet been established for many of these measures.

[4] Rand, E.C. et al., 2015. Management of Child Feces: Current Disposal Practices, Available at: www.wsp.org/sites/wsp.org/files/publications/WSP-CFD-Summary-Brief.pdf.
[5] Sheth, M. et al. 2006. "Food Safety Education as an Effective Strategy to Reduce Diarrhoeal Morbidities in Children Less Than Two Years of Age." Indian Journal of Nutrition and Dietetics. Vol. 43, No. 1, pp. 22–31.

KEY MESSAGES & RECOMMENDATIONS

// Achieving widespread reductions in child stunting in low- and middle-income countries remains elusive. Enteric disease and child growth faltering persist even with the provision of traditional nutrition and WASH interventions.

// Handwashing with soap remains a critical behavior to promote because of cognitive effects and diarrhea reduction, even without evidence of impact on stunting. Handwashing and WASH have many values beyond health- including dignity, well-being, and others.

// Hygiene and WASH in general remain a necessary component of health and nutrition interventions, but current implementation may not be sufficient to get the results we aspire to achieve.

// Handwashing with soap is not a single solution and will not have the desired impact desire on its own. Multiple messaging is effective in spurring improvements in hygiene practices. There needs to be a focus on neglected pathways and on getting feces out of the environment.

// There is a need for more comprehensive, transformational WASH. Ways to engage the wider government in these larger, comprehensive interventions must be considered. There remains a transformational quality of small, doable actions.

// The programmatic benefits of integration may still be important for service delivery and feasibility reasons.

3.5 HANDWASHING IN THE HEALTH SYSTEM

PRESENTATION 1 // HAND HYGIENE IN HEALTHCARE FACILITIES // DR. ROBERT DREIBELBIS, LSHTM

› Assistant Professor at the London School of Hygiene and and Tropical Medicine, whose research focuses on understanding the drivers and impacts of water, sanitation, and hygiene (WASH) behaviors and the design and development of theoretically-informed hygiene behavior change interventions.

PRESENTATION 2 // STRENGTHENING THE HEALTH SYSTEM FOR WASH IMPROVEMENTS // MS. ALISON MACINTYRE, WATERAID AUSTRALIA

› Health Advisor at WaterAid Australia and leads WaterAid Australia's work on the intersection of water, sanitation, and hygiene with human health; supports health-related research, programming and policy work in the South-East Asia and Pacific regions as well as supporting WaterAid's global policy and advocacy efforts.

TOPICS & SPEAKERS

PRESENTATION 1 SUMMARY
// HAND HYGIENE IN HEALTHCARE FACILITIES
// DR. ROBERT DREIBELBIS, LSHTM

// The Joint Monitoring Program indicators for WASH in healthcare facilities categorized service levels from none to limited, to basic and advanced, across water, sanitation, hand hygiene and healthcare waste. Hygiene indicators are categorized as basic (hand hygiene materials at points of care and toilets), limited (hand hygiene materials at either points of care or toilets), or no service.

Infection remains a leading cause of maternal and neonatal mortality. Approximately 30 % to 40 % of neonatal deaths and 10 % maternal deaths during the period around childbirth are caused by infection (Ganatara et al and Kassenbaum et al).

Infection can be prevented through adequate hand hygiene practices. WHO's integrated management of pregnancy and childbirth and the '6 Cleans' for childbirth and post-natal care provide guidance for hand hygiene in birth settings.

Evidence suggests that improved hygiene during labor, delivery and post-natal care can improve both maternal and neonatal health. Adherence to recommended hand hygiene varies worldwide, ranging from 5 % to 89 % of health workers following these recommended guidelines, but adherence typically reduces in situations that require a more complex protocol.

Hand hygiene behavior change is typically integrated within quality improvement initiatives but is a difficult behavior to change. Significant emphasis is placed on knowledge and access to resources, with little attention on other drivers of behavior. Intervention studies focus mostly on education and training.

Behavioral science tells us that knowledge is a very poor predictor of behavior, and drivers of behaviors are very specific. Education is the least effective way to improve handwashing behaviors. The current intervention models are insufficient to trigger and sustain hand hygiene environments among HCF workers. Further, these models are highly medicalized and largely ignore key findings from behavioral science.

Most data and approaches are based on high-income country settings. Thus, there is limited information to inform the development and evaluation of hand hygiene interventions for areas with greatest need.

PRESENTATION 2 SUMMARY // STRENGTHENING THE HEALTH SYSTEM FOR WASH IMPROVEMENTS // MS. ALISON MACINTYRE, WATERAID AUSTRALIA

// WASH in healthcare facilities contributes to a range of health systems benefits, including: improved response to health emergencies, improved patient satisfaction; improved working conditions for health professionals; reduced risk of neonatal and maternal mortality, reducing anti-microbial resistance, and healthcare-associated infections.

A systems approach considers the multiple factors driving poor WASH in health facilities across the health system building blocks, and works to strengthen those systems, not as stand-alone activities at the facility level. It should also consider actors across different elements of the health system, not only health workers. Without a systems approach, change is not likely to be sustainable or taken to scale.

A systems approach requires coordination between WASH and health systems stakeholders, for example through the development of integrated national packages for WASH in HCF. It also requires coordination of roles and responsibilities in government.

IPC and WASH are often neglected or deprioritized for leadership at health facilities. This aligns with a preference for medical staff to focus on treatment rather than prevention and broader public health measures. Conversations around WASH reforms systems strengthening in HCF focus on anti-microbial resistance and infection prevention and control and not traditional WASH and health issues such as diarrhea, nutrition and pneumonia. Hygiene has critical role to play but still requires basic WASH infrastructure.

WaterAid has identified six urgent areas from their experience:

1. LEADERSHIP AND POLITICAL WILL
2. GOVERNANCE AND REGULATION
3. FINANCING
4. MONITORING AND TARGETS
5. RESEARCH AND LEARNING
6. TECHNICAL SOLUTIONS

COMMENTARY // DEPARTMENT OF HEALTH EXPERIENCE IN HANDWASHING PROMOTION IN THE PHILIPPINES // MS. EDNA NITO, HEALTH PROMOTION AND COMMUNICATION SERVICE (HPCS)

// The DoH addresses handwashing across a number of health areas. The Disease Control Bureau focuses on infection prevention and control in healthcare facilities, and the Health Promotion and Communication Service focuses on education and literacy programs in different groups, for example, community members, schoolchildren, and healthcare providers.

// The DoH provides technical assistance, develops guidelines and standards, and the implementers are the local governments. They work in partnership with other actors, for example the Philippine Hospitals Association, which implements an annual award for hospitals which implement high standards of handwashing in health systems.

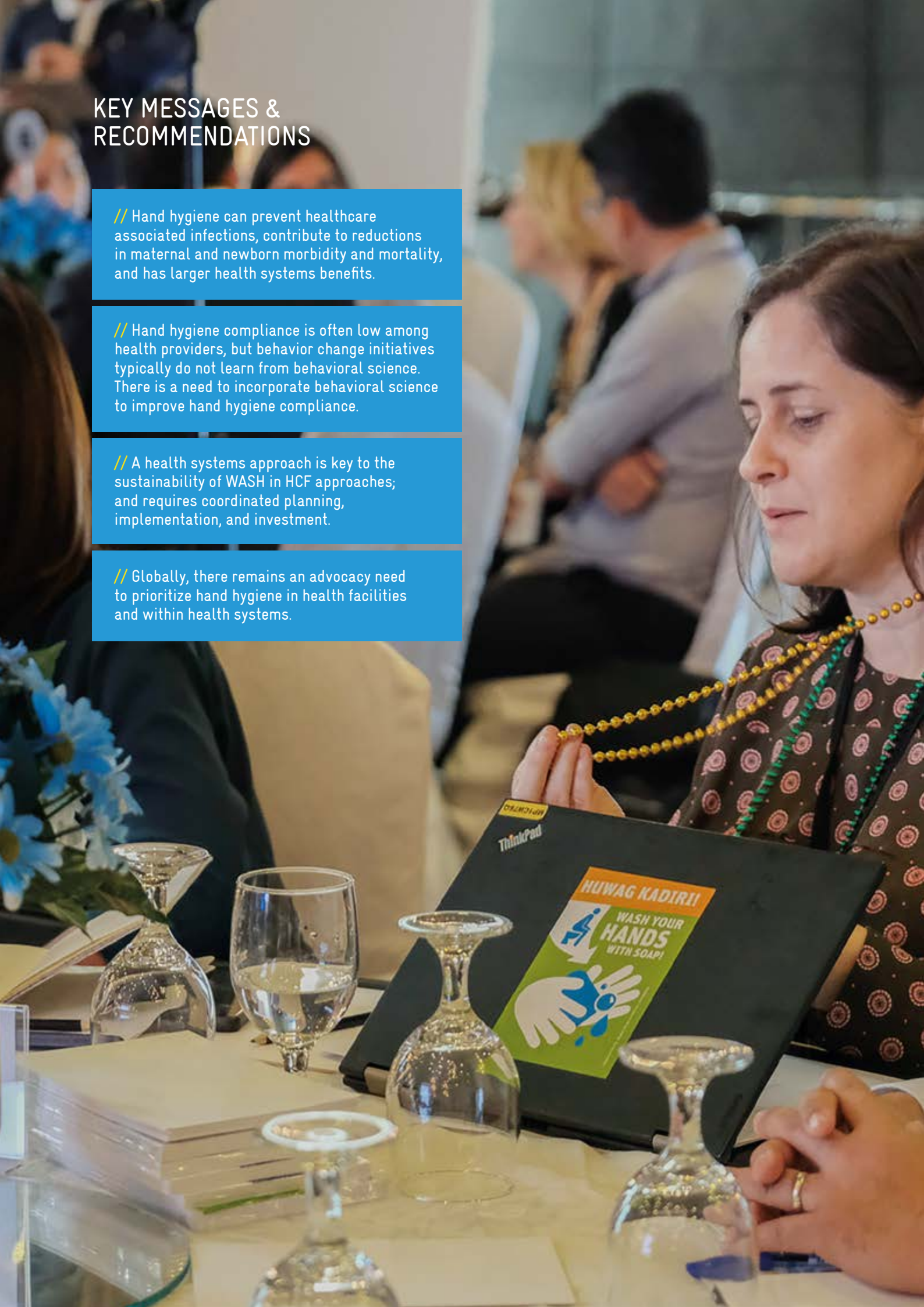
KEY MESSAGES & RECOMMENDATIONS

// Hand hygiene can prevent healthcare associated infections, contribute to reductions in maternal and newborn morbidity and mortality, and has larger health systems benefits.

// Hand hygiene compliance is often low among health providers, but behavior change initiatives typically do not learn from behavioral science. There is a need to incorporate behavioral science to improve hand hygiene compliance.

// A health systems approach is key to the sustainability of WASH in HCF approaches; and requires coordinated planning, implementation, and investment.

// Globally, there remains an advocacy need to prioritize hand hygiene in health facilities and within health systems.



3.6 INSTITUTIONALIZING HANDWASHING IN THE EDUCATION SYSTEM

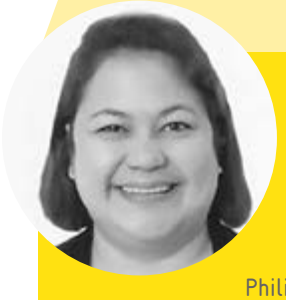
TOPICS & SPEAKERS

PRESENTATION 1 // HANDWASHING WITH SOAP IN SCHOOLS: REVIEWING THE EVIDENCE BASE // DR. ROBERT DREIBELBIS, LSHTM

› Assistant Professor at the London School of Hygiene and and Tropical Medicine, whose research focuses on understanding the drivers and impacts of water, sanitation, and hygiene (WASH) behaviors and the design and development of theoretically-informed hygiene behavior change interventions.

PRESENTATION 2 // WHAT GETS MEASURED GETS DONE: HANDWASHING WITH SOAP IN THE SDGs FOR WASH IN SCHOOLS // DR. BELLA MONSE, GIZ

› Bella is a dentist by training, specialized in school health promotion, health and WASH in Schools(WinS) policy and research. She worked for 7 years as integrated expert for the Department of Education in the Philippines. Her role was to facilitate the development, implementation and research of effective school-based health programs with focus on scalability. Since 2011 she works on the GIZ Fit for School Program to support Ministries of Education to develop, implement and scale up effective school health and WASH in Schools (WinS) programs in South East Asia. During the last years she has been much involved in the global advocacy to harmonize strategies targeting the SDGs for Wash in Schools. // Since 2016 Bella works with part of her time at the GIZ Sector program Sustainable Sanitation and co-leads the working group on 'WASH in Institutions' at the SUSANA network. Bella holds a PHD degree in Global Oral Health from Radboud University of Nijmegen, the Netherlands.



PRESENTATION 3 // WASH IN SCHOOLS IN THE PHILIPPINES: POLICY AND IMPLEMENTATION // DR. ELLA NALIPONGUIT, DEPARTMENT OF EDUCATION

› Dr. Naliponguit is a physician by profession. She is the Director III of the Bureau of Learner Support Services (BLSS) of the Department of Education, Philippines. Concurrently, she also serves as a Governing Board Member of the Philippine Indigenous and Traditional and Alternative Health Care; the South East Asian Ministry of Education Organization, Regional Center for Food and Nutrition (SEAMEO RECFON) and is a Research Fellow for Southeast Asia Ministry of Education Innovations in Teaching (SEAMEO INNOTECH). // A highlight in her development work is the development and organization of the Wash In Schools (WINS) Program as a scale up of the 'Fit for School—Essential Health Care Program for Filipino Children', where she, in behalf of the Department, collaborated with International NGO's, the local government unit, and experts for Water, Sanitation, Hygiene and Oral Health for a healthy school environment that influences health promoting habits and behaviors among learners.

PRESENTATION 1 SUMMARY // HANDWASHING WITH SOAP IN SCHOOLS: REVIEWING THE EVIDENCE BASE // DR. ROBERT DREIBELBIS, LSHTM

// WASH in Schools encompasses a range of interventions which seek to change the environment and behaviors to improve practices for better health, attendance, and learning outcomes.

A 2017 systematic review (Watson, et.al.) looked at hygiene promotion targeting children. Only eight studies met the inclusion criteria: randomized controlled trial, non-randomized controlled trial and controlled before and after, not targeting multiple behaviors. From the studies reviewed, two of the key findings were that: multiple activities/outcomes have proven effective in changing behaviors; and larger effects were seen with high intensity interventions and the incorporation of alternative hardware and supplies.

Nudges have shown promise in improving handwashing rates in schools. A 2015 study in Bangladesh showed that nudges led to an increased in handwashing in the short term of 6 weeks (Dreibelbis et al. 2015), and had similar results to a health education program after 5 months.

Daily group handwashing in schools was shown to increase handwashing practice, but evidence from Laos showed a change only after the full implementation was completed, and change may not be sustained over time (Chard et al.).

PRESENTATION 2 SUMMARY // WHAT GETS MEASURED GETS DONE: HANDWASHING WITH SOAP IN THE SDGs FOR WASH IN SCHOOLS // DR. BELLA MONSE, GIZ

// WASH in Schools (WinS) strategies and programs aim to improve water, sanitation and hygiene in schools. The SDGs have one specific goal for WinS, three related targets, and specific indicators to measure progress on WinS in countries and regions. By the year 2030 all schools around the globe should provide access basic drinking water; single-sex and usable sanitation facilities; and handwashing facilities with water and soap. The Joint Monitoring Program (UNICEF and WHO) measures the progress annually and categorizes the status of WinS into basic, limited and no service related to the three target areas.

Each country is expected to set national policies for WinS, including standards, targets and related indicators to measure status and progress. Most countries have not reached the basic service level set by the SDGs and many countries still need to define their own national standards. The Three Star approach is one strategy to support countries in taking a stepwise approach to reach national standards, by defining national priorities, setting benchmarks and rewarding achievements.

The Philippines provides an example of a country which has set extremely high national standards for WASH in Schools. The introduction of a voluntary incentive-based WinS M&E system has resulted in high participation (65 % of all schools participated) and very active response of schools to improve their WinS status. The M&E system serves as an appropriate tool to orient schools and trigger action within the education sector.

The WinS monitoring intends to serve six functions:

1. CAPACITY BUILDING: developing a culture of self-assessment & learning and strengthening implementation quality.
2. RECOGNIZING PERFORMANCE: rewarding performance and addressing needs as well as measuring compliance with national standards.
3. CREATING DEMAND FOR WINS: strengthening leadership and priority for WinS within the education sector.
4. PLANNING AND RESOURCE ALLOCATION: WinS monitoring prioritizes resource allocation and facilitates alignment of development partners.
5. FOSTERING ACCOUNTABILITY AND TRANSPARENCY: availability of information builds trust, ownership and responsibility.
6. STRENGTHENING POLICY IMPLEMENTATION: mapping the gap between policy and implementation and global reporting (SDGs).

PRESENTATION 3 SUMMARY
// WASH IN SCHOOLS IN THE PHILIPPINES: POLICY AND IMPLEMENTATION
// DR. ELLA NALIPONGUIT, DEPARTMENT OF EDUCATION

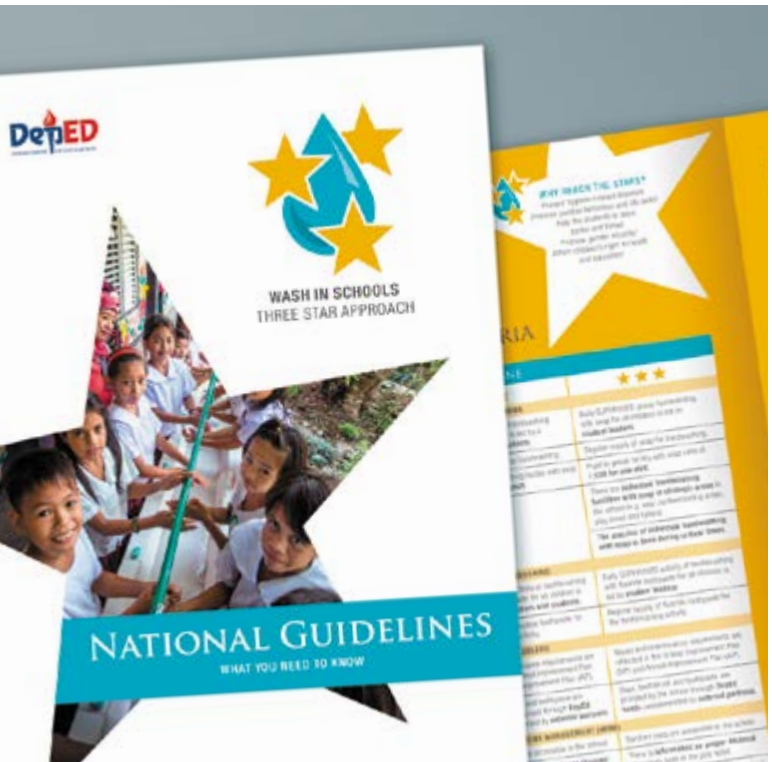
// School health promotion presents multiple opportunities. It allows children to be reached at a young age, when they are receptive to behavior change and are developing habits around school routines. School-based hygiene can improve the school environment and behaviors and has lasting effects on health and education indicators (such as school performance, school attendance, and retention rates).

In the Philippines, the WinS program covers water, sanitation, hygiene (handwashing and tooth brushing), deworming, health education, and menstrual hygiene management. Daily group handwashing is one of the WinS indicators.

The Department of Education oversees technical guidance, budgeting, capacity development, and monitoring. The regional offices and school division offices cover program management, quality assurance, and recognition, with implementation, community involvement, and continuous improvement at the school levels. WinS partners include the Technical Working Group, Local Government Units, NGOs, and others.

The WinS baseline data in the Philippines shows that approximately 9 % of schools have attained a star level. Approximately 30 % of elementary schools and 11 % of other schools had group handwashing. Ratings are also disaggregated at district levels.

A national online WinS monitoring system that provides real-time feedback to the schools and the division/provincial/regional offices, provides a roadmap for schools and their decision makers (school and district supervisors) on the next steps to improve WinS. For example, the Philippines uses a school self-assessment tool that is uploaded into the online WinS monitoring system. Feedback from the monitoring system can be used for recognizing performance, building capacity, creating demand, informing planning and budgeting, and creating transparency and accountability.



KEY MESSAGES & RECOMMENDATIONS

// The evidence base on handwashing in schools is limited, but multiple activities have proven effective in changing behaviors. Larger effects are typically seen with high intensity interventions and incorporation of alternative hardware and supplies.

// The Sustainable Development Goals in Health and Education provide a global goal to improve WASH in schools, including the JMP hygiene ladder. A national WinS policy shall be the basis for crafting national standards. Each country designs their own advance service level questions, with a clear set of indicators and core questions which schools will answer.

// The Three-Star Approach is another system used to trigger implementation through a step-wise realization of the national standards. It recognizes success at incremental points towards full implementation and can be adapted to national standards.

4. LIGHTNING TALKS, 5-MINUTE TALKS & BRAINSTORMING SESSIONS

4.1 LIGHTNING TALKS

TOPICS & SPEAKERS

LIGHTNING TALK 1 // WHAT DID WE EXPECT? FACING FACTS AND PLANNING TOWARD THE FUTURE

// MS. KRISTIE URICH, WVI › Currently the Knowledge Management and Capabilities Manager for the water, sanitation and hygiene (WASH) team with World Vision International, she has been serving with the WASH team for more than five years and has worked with World Vision for more than 12 years. She helps lead World Vision's efforts in scaling up its work in menstrual hygiene, and she is a trainer in the Designing for Behavior Change method.

LIGHTNING TALK 2 // NEW MEDIA EXPERIMENTS IN HW PROMOTION

// MS. CARISSA LIMCAOCO, PROCTER & GAMBLE › Safeguard and Olay Philippines Communications Manager, she leads the brand's influencer engagements, social media campaigns and communications plans, and launches new and exciting ads and assets via earned, owned and paid media.

LIGHTNING TALK 3 // INSTITUTIONAL BEHAVIOR CHANGE

// MR. ELIJAH ADERA , WATERAID SOUTHERN AFRICA

› Regional Programme Manager at WaterAid based in Pretoria supporting the development and implementation of country and regional Water, Sanitation and Hygiene programmes in Southern Africa. He has more than 18 years' extensive work experience in programme development and management in various fields: economic empowerment/sustainable livelihoods, education, health, human rights, environment and water, sanitation and hygiene in developing countries.

LIGHTNING TALK 1 SUMMARY // WHAT DID WE EXPECT? FACING FACTS AND PLANNING TOWARD THE FUTURE // MS. KRISTIE URICH, WVI

// Ms. Kristie Urich of World Vision International (WVI) shared the initial results related to hygiene access from World Vision International's 2017 WASH program evaluation and its larger implications for the WASH sector. This was one of the largest evaluations of its kind, with more than 35,000 participating households, nearly 11,000 microbial water samples and over 2,600 schools across 14 countries in WVI and other comparison implementer areas. The evaluation focused on WASH according to the SDG metrics in three contexts: households, schools and health facilities. It explored water quality at sources and point of use, sanitation access and hygiene access (primarily handwashing with soap).

The 14 country averages for hygiene access were sobering in all three contexts: 86 % of households had no handwashing facilities with soap; 37 % of health facilities had no functional hand hygiene facilities available at either point of care or toilets, while 47 % had limited functional facilities at point of care or toilets, or both; and 74 % of schools had no handwashing facilities or had handwashing facilities but no water. There were no significant differences between the areas where WVI had conducted implementation, and those covered by other programs. This shows that handwashing programming faces challenges of sustainability across implementers. Reflecting on the implications of these findings, Ms. Urich shared some possible implications and context.

LIGHTNING TALK 2 SUMMARY // NEW MEDIA EXPERIMENTS IN HW PROMOTION // MS. CARISSA LIMCAOCO, PROCTER & GAMBLE

// Ms. Carissa Limcaoco of Procter & Gamble showed how the Safeguard team worked to improve their understanding of their consumer and use new media to encourage handwashing.

She opened with a personal story of finding inspiration in her work through P&G's collaboration with the Synergeia Foundation handwashing programs in schools and charged participants to remember the ultimate impact of their work. She then shared some results of the Philippines Hygiene Index, conducted by Safeguard:

While 7 out of 10 Filipinos report handwashing with soap, only 2 out of 10 were observed to practice this behavior.

Filipinos were found to only rinse with water: 50 % before cooking, 40 % after urinating, 40 % after using their mobile phones, and 40 % after traveling on public transportation.

To increase handwashing with soap in the Philippines, the P&G team set two team goals in their media experiments: starting with life by looking and listening to the target audience and keeping a do-learn-do mindset. They looked at consumer behavior: while TV viewership is down overall, social media is a growing source of information and influence. They also worked to develop a very specific understanding of their audience's biggest challenges and motivations.

They focused on sharing the emotional benefits of handwashing with soap, steering away from traditional messaging focused on the benefits of their product. This resulted in a video from the 'Safeguard: Pabaon sa Buhay / Protection for Life' campaign which has generated 19 million views. It shares the story of Warlita King and her son Norman, the first Aeta (member of an indigenous ethnic group) to graduate from the Philippines' premier state university. The film does not directly tell the audience the importance of handwashing; instead it shows handwashing as one of many 'provisions' that Norman takes with him from his mother.

The Safeguard team developed another video based on current social media trends: autonomous sensory meridian response (ASMR) which gives a heightened sensorial experience, 'Mukbang' showing food prep, and Dr. Pimple Popper, where people find satisfaction watching a dirty object being cleaned. The result was a video called "The Wash" that entices audience to wash their hands. The video generated social media comments to indicate that viewers were encouraged to wash their hands with soap, such as – "This makes me want to wash my hands", and, "This is nice because it teaches you the correct way to wash your hands." This immediate feedback loop allows Safeguard to continue learning what their audiences respond to.

LIGHTNING TALK 3 SUMMARY // INSTITUTIONAL BEHAVIOR CHANGE // MR. ELIJAH ADERA , WATERAID SOUTHERN AFRICA

In his lightning talk, Mr. Elijah Adera presented the results of WaterAid's study on the institutional arrangements and enabling environment for hygiene in Southern Africa. The study was conducted through desk review, key informant interviews, and policy analysis. It covered Botswana, Lesotho, Madagascar, Malawi, Swaziland, South Africa, Zambia, and Zimbabwe.

- GOVERNMENT LEADERSHIP: presence or absence of a clearly defined lead ministry or department that covers all hygiene components.
- INCLUSION IN POLICY AND STRATEGY ALL HYGIENE COMPONENT: inclusion of hygiene components in targets and objectives of policies and strategies.
- HYGIENE COORDINATION: existence and function of hygiene coordination structures.
- INTEGRATION OF HYGIENE INTO OTHER SECTORS: the extent to which other sectors' strategies have hygiene targets and activities, whether there is a joint planning or reporting.
- FINANCIAL ALLOCATIONS FOR HYGIENE: presence or absence of specific budget for hygiene; whether there is a specific line for hygiene activities in a secured WASH budget.
- MONITORING AND REVIEW MECHANISM: whether hygiene data is included in national monitoring information systems and sector review processes.
- APPROACHES: presence or absence of clear guidance on long-term approaches based on evidence.

The key bottlenecks identified for countries in Southern Africa were:

1. Having a government-led sector coordination platform that specifically focuses on hygiene.
2. Having adequate financial allocation for hygiene.
3. Collecting and using hygiene data (on all components) for decision making.

Weak monitoring and limited available data means that hygiene is not effectively included in reviews and planning and hygiene can get lost under the broader heading of WASH in coordination mechanisms.

4.2 5-MINUTE TALKS // 5 UPDATES FROM A RANGE OF HANDWASHING PRACTITIONERS

5-MINUTE TALK 1 // MANILA WATER FOUNDATION

// Manila Water Foundation provides water to poor communities that are not served by water providers. Manila Water Foundation identifies water-less and toilet-less communities, identifies a nearby subsidiary, and matches them with employees to design water systems to respond to the community's challenges. Manila Water Foundation also provides handwashing facilities and drinking fountains in schools, as well as rehabilitating school toilets. Manila Water Foundation also provides health education materials, organizes Global Handwashing Day events, and uses social media to promote handwashing.

5-MINUTE TALK 2 // HAPPYTAP

// HappyTap is a social enterprise that produces a low-cost handwashing station designed for behavior change. HappyTap focuses on facilities and how we can use a product as a platform to change behavioral settings. HappyTap works in Vietnam, Cambodia, and Bangladesh where handwashing practice is low and many households lack handwashing facilities. They believe that asking families to invest in handwashing facilities is more sustainable than providing them directly or having the families develop their own. Their marketing approach is now shifting from interpersonal to mass marketing to reduce the cost of acquisition. However, it takes time and investment to build a base of customers who will buy a handwashing facility.

5-MINUTE TALK 3 // WORLD VISION'S ASIA P3 HUB

// World Vision's Asia P3 Hub is a multi-sector partnership incubator aimed at combining resources and building partnerships to innovate. They incubate partnerships by:

1. matching needs with solutions,
2. understanding the needs of field offices,
3. believing in co-creation of solutions;
4. focusing on shared world view of mutual benefit; and
5. fostering partnerships.

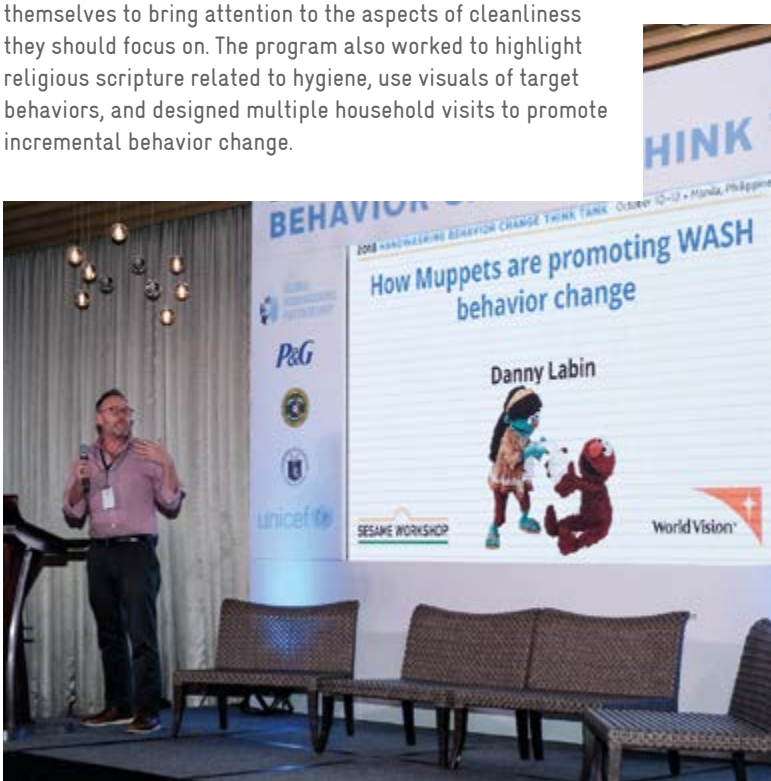
The Asia P3 Hub is working towards 'combinatorial innovation' by creating opportunities for all sectors to contribute to WASH challenges.

5-MINUTE TALK 4 // SESAME WORKSHOP

// Sesame Workshop uses Muppets to promote WASH behavior change. The new character of Raya promotes behavior change in sanitation and hygiene by empowering children with knowledge and skills they can pass on to their communities. She teaches children to wash hands before meals and after the toilet; along with other WASH behaviors. Raya reaches children in schools, through mass media, and Learning Centers equipped with projectors run on batteries and can be used by pointing screen on a white wall to share clips promoting handwashing. Sesame Workshop also collaborates with World Vision International on the Wash Up! Program, which works in 11 countries and includes games and activities to promote handwashing.

5-MINUTE TALK 5 // WATERAID BANGLADESH

// WaterAid Bangladesh presented on the use of the ABCDE framework in the South Asia WASH Result Project II. The ABCDE approach stands for Assess, Build, Create, Deliver, Evaluate; and is used in identifying motivational areas and touchpoints to reach target populations. The program aims to increase handwashing with soap and the use of clean latrines. Using the ABCDE framework has helped the program plan to become more innovative and people-oriented, with more focus on behavior. Interactive theater was used for hygiene promotion to create interest and engage the target audience. Monitoring was conducted by the beneficiaries themselves to bring attention to the aspects of cleanliness they should focus on. The program also worked to highlight religious scripture related to hygiene, use visuals of target behaviors, and designed multiple household visits to promote incremental behavior change.



4.3 BRAINSTORMING SESSIONS

TOPICS & SPEAKERS

BRAINSTORMING SESSION 1

// HACKING HANDWASHING MEASUREMENT

//MS. JULIA ROSENBAUM FHI 360 › Senior Behavior Change Specialist for the USAID-funded WASHPaLS Project, where she leads a task exploring Hygienic Play Spaces for Children, to build evidence-based programming guidance around the neglected pathways of the 'F-Diagram'; played a key leadership role in integrating WASH into HIV, nutrition and education programming; serves on the GHP Steering Committee.

// MR. DAVID KHOO, PROCTER & GAMBLE ›Principal Scientist for Olay, he leads collaborative research programs for global skincare out of the state-of-the-art P&G Singapore Innovation Center; fosters research partnerships with technologists, dermatologists and academic institutes around the world to develop and test next-generation skincare products.

BRAINSTOMRING SESSION 2

// DESIGNING A BETTER HANDWASHING STATION

// MS. LESLIE LLADO, SPLASH › Program Sustainability Manager Splash; responsible for ensuring that Splash's global projects last long-term; has eight years of experience working on sustainable water resource initiatives, with the last five focused on projects in rural Ethiopia with A Glimmer of Hope Foundation.

// MR. JAMES BOURNE, KOHLER › Design Engineer for Kohler, based in the UK, where he designs high-end bathroom products and applies his design skills to work on tough problems outlined in the UN Sustainable Development Goals; recently partnered with Wahana Visi (WV Indonesia) and local government and communities to co-create school handwashing station solutions using Human-centered Design approaches.

BRAINSTORMING SESSION 1 SUMMARY
// HACKING HANDWASHING MEASUREMENT
// MS. JULIA ROSENBAUM, FHI 360 &
MR. DAVID KHOO, PROCTER & GAMBLE

// THE CHALLENGE

// Measuring handwashing behavior is critical to help us understand the current situation to target interventions, evaluate behavior change approaches, learn about what motivates people to wash their hands, and measure progress towards the SDGs. Reliable and valid measurement of handwashing is also essential for basic science, to better understand linkages between handwashing, health and growth. Existing measures have a range of limitations, including cost at scale, potential for bias, and specificity to the desired behavior. There is no universal standard for measuring handwashing behavior, and this can make it difficult to compare lessons across interventions.

Julia reviewed the range of available measurement tools, both how each works and the pros, cons and approximate costs of using: direct observation, proxy observations (presence of handwashing station, soap and water), microbiological hand contaminator sensors, liquid soap dispenser sensors and soap sensors. She also highlighted the use of picture diaries. Specifically, measures were rated and compared across four criteria: objectivity, reliability, efficiency and scalability.

Julia and David challenged the Think Tank participants to join them to brainstorm a handwashing measurement that gets us closer to the truth and can be used at a large scale.

The facilitators provided two scenarios to guide the brainstorm:

- How might we measure to what extent group handwashing spurs individual handwashing after defecation and before eating in schools?
- How might we test if nudges increase handwashing at the household level?

// RESULTS OF BRAINSTORM

- Ink or dye that changes color when hands are washed
- Put a joke or novel image in handwashing stations and test recall
- Sensor to test for water refill of a tippy tap
- Stickers given as a reward
- Measuring HW soap consumption; single-use soaps
- Camera observation for 6 months
- Community monitoring through children, neighbors, and other familiar people. Class monitors in classrooms.
- Baseline and endline photos of handwashing facilities; checking if towels are wet
- Gathering information anonymously (with a tablet, for instance) to reduce bias
- Phone monitoring survey or self-reporting mobile app
- High five sensor that records contact

// KEY MESSAGES

A perfect measure for all purposes does not exist. All methods should be assessed for cost, reliability, efficiency and scale.

Measures should be selected or developed with the purpose in mind; not all monitoring and evaluation is alike. Existing measures can be adapted or approached with a different purpose. Consider the level of precision needed for the context.

Some methods may incentivize handwashing, such as rewards or visible measurement. This can be beneficial for behavior change but reduces objectivity.

There is potential for new ways of observation by looking at places people have not looked before, changing the role of observers, or incorporating technology.

BRAINSTORMING SESSION 2 SUMMARY
// DESIGNING A BETTER HANDWASHING STATION
// MS. LESLIE LLADO, SPLASH &
MR. JAMES BOURNE, KOHLER

// THE CHALLENGE

// UNICEF reports that up to 50 % of WASH projects fail within five years. Handwashing stations are a key component of this failure, in part due to unsustainable infrastructure that suffers from breakage, is hard to clean and maintain, or is difficult for the target population to use. There is a clear need for more sustainable and user-friendly handwashing station products.

Leslie Llado of Splash and James Bourne of Kohler facilitated a human-centered design session where participants worked together to design a better handwashing station for use in the home. They also presented lessons from their own work using community-led, human-centered design processes to improve handwashing station designs and experiences testing their designs in institutional settings and communities.

// RESULTS OF BRAINSTORM

What are the requirements for a handwashing station?

- Increases proper handwashing
- Cost efficient
- Durable and vandal proof
- Waste water disposable incorporated into the design
- Soap is available
- Convenient and near toilet, eating area, etc.
- Easy to maintain
- Water efficient
- Safe and culturally sensitive

// SAMPLE DESIGNS

Two groups of participants developed their handwashing station designs:

1 HAPPY COMMUNITY, HAPPY FAMILY

A complete community-operated system where a reminder bell is rung to mobilize the community to wash hands. The station is made from recycled materials and bamboo, and wastewater is diverted to flush their toilets. The location of the station is to be decided upon by the community.

2 CLEAN FAIMILY, HAPPY FAMILY

A family handwashing station with UV light detecting germs. A mirror erected at the station has a built-in container for toothbrush and toothpaste. Soap comes with water and the station has a 20-second song activated during handwashing to indicate washing should take a full 20 seconds. Wastewater is diverted with LED light to the garden.

// KEY MESSAGES

Handwashing station design should consider behavior change, including how the station design itself can serve as a visual reminder to wash hands. Designing for behavior change can increase the impact of handwashing facilities.

Designs for handwashing facilities in low-resource settings must be sustainable over time: easy to maintain, possible to repair with locally available materials, and an easily-maintained clean and attractive appearance.

Engaging community members and users in the design process can lead to more effective, user-friendly, and practical handwashing station designs.

5. END-OF-DAY REFLECTIONS AND CLOSING

5.1 DAY 1 // REFLECTION

DR. CECILIA MANUEL //

Program Manager at Center for Health Solutions and Innovations (CHSI); health specialist with more than 26 years of professional experience from health management, standards and policy development, program planning, monitoring and evaluation to the development, design and implementation of quality assurance programs and, health promotion and communication in the Philippines. Has extensive experience at the national, regional and local levels including Local Government Units (LGU) and government health agencies and other development partners in designing and conducting health programs.

// Dr. Cecilia Manuel from CSHI provided an overview of the input and discussion of the first day, noted the opportunities to improve handwashing in the Philippines in communities and in emergency response. She noted the need for policies covering hygiene to help align programs, and additional research to strengthen effectiveness of interventions.

Her main reflections from the day's sessions were:

- If you want to change the world, make your bed first (practice handwashing yourself).
- Reflect more about the target groups who receive these hygiene interventions and our own approach to working with them.
- Government agencies should support handwashing interventions.
- Practitioners should seek out existing materials that can be used for their interventions.
- Donors should recognize the need for innovation in –this field and understand that partnership takes time.

5.2 DAY 2 // REFLECTION

MR. RONALDO PUNO //

Served as the National President of the Philippine Association of Medical Technologists (PAMET) in 2015 and was re-elected in 2016 for the same position for the term 2017-2018; currently the First Member of the Continuing Professional Development Council of Professional Regulation Commission (PRC) and an active member of the Technical Committee for Medical Technology Education (TCMTE) of the Commission on Higher Education (CHED); a Council Member of ASEAN Association on Medical Laboratory Sciences (AAMLS); and a Corresponding Member of the International Federation of Clinical Chemistry (IFCC) for Laboratory Management Committee.

// Mr. Ronaldo Puno of PAMET closed the second day, emphasizing that handwashing is the single most effective way to prevent diseases.

His key reflections from day 2 included:

- The implications of gender in handwashing behavior change, and the issues of stereotypes, and findings from the Philippines Hygiene Index—particularly the finding that more men washed their hands than women.
- The need to develop new campaigns, with the trends of increasing social media users and decreasing TV viewers.
- The discussion stressed that behavior change interventions should not end at individuals but should also include attention to hygienic environment, otherwise poor health outcomes will persist.

Puno also noted that the issue of poor hygiene also effects healthcare professionals. Infection is the leading cause of maternal and child morbidity and mortality, and the goal of PAMET and other health sector actors is to improve hygiene during antenatal care to improve health outcomes. Puno noted that there is a need to have larger and institutionalized initiatives to solve the hygiene problem and overcome resistance to change and gaps in evidence.

5.3 CLOSING

// The Think Tank co-organizers and planning committee thanked all participants, and reflected on the diversity of expertise, energy and engagement reflected in the room, which showed strong commitment and passion for the work. Organizers and participants agreed on the importance of reaching out to collaborate with people outside one's usual network to engage with people from other sectors, groups, backgrounds, and perspectives. For example, there was a clear case to bring together WASH and the nutrition sector in future discussions.

They also reflected on the range of approaches, innovations and interventions being used. While it is well-known that behavior change is hard to achieve, it was enlightening to know that there are many opportunities to look at what is, and is not, working so well. There is a need to team up and move in one direction, which can be achieved by working closely together, mainstreaming effective approaches and recognizing a need to let go of ineffective approaches.

The event also presented a range of approaches to understand and work with program participants. One major message was the importance of developing an empathetic and detailed understanding of what motivates our audiences and reflect that reality. For example, one of the facilitation team members reflected on a personal experience learning good handwashing practices from her mother and remarked that the Think Tank sparked her curiosity on how her mother had learned those practices.

Concluding the event, the organizers encouraged all participants to continue to connect with each other, to share what they learned at the Think Tank with others, and to use their experience to improve handwashing behavior change through their own work.

6. ANNEX

ANNEX 1 // AGENDA FOR THE 2018 HANDWASHING BEHAVIOR CHANGE THINK TANK

DAY 1 // 2018 OCTOBER 10

SESSION TITLE	TIME	SPEAKER
REGISTRATION	9:00 am – 9:15 am	
Welcome and opening remarks	9:15 am – 10:00 am	**Ms. Carolyn Moore,** Gobal Handwashing Partnership **Mr. David Khoo,** Procter & Gamble **Dr. Kezia Lorraine Rosario,** Technical Staff, Health Promotion & Communicaiton Service, Department of Health **Director Rizalino Jose T. Rosales,** Director IV, Bureau of Learner Support Services, Department of Education
Event objectives and introductions	9:15 am – 10:45 am	**Dr. Amy Weissman,** FHI 360 **Ms. Katherine Pizzacalla,** GIZ Ms. Carmela Ariza, Facilitator
BREAK	10:45 am – 11:15 am	
BEHAVIOR CHANGE ACROSS CONTEXTS New findings in behavior change	11:15 am – 12:15 pm	**Ms. Nga Kim Nguyen,** USAID **Dr. Om Prasad Gautam,** WaterAid UK Dr. Munirul Alam, icddr,b
LUNCH	12:15 pm – 1:30 pm	
BEHAVIOR CHANGE ACROSS CONTEXTS Handwashing behavior change lessons across contexts	1:30 pm – 2:30 pm	**Ms. Louise Maule,** UNICEF Mr. Nayco Yap, Action Against Hunger Dr. Cecilia Manuel, Center for Health Solutions and Innovations Ms. Faustina Molina-Viriña, Center for Health Solutions and Innovations Mr. Jon Michael Villaseñor, UNICEF Ms. Lilian Lehmann, IDinsight Ms. Lilian Kamowa Chaguluka, WaterAid
BEHAVIOR CHANGE ACROSS CONTEXTS // LIGHTNING TALK What did we expect? Facing facts and planning toward the future	2:30 pm – 2:45 pm	Ms. Kirstie Urich, World Vision International
BREAK	2:45 pm – 3:15 pm	
BEHAVIOR CHANGE ACROSS CONTEXTS Behavior change lessons in challenging contexts	3:15 pm – 4:15 pm	**Ms. Nga Kim Nguyen,** USAID **Ms. Sian White,** London School of Hygiene and Tropical Medicine Mr. Torben Holm Larsen, RealRelief Mr. Martin Shouler, Arup Mr. Paul del Rosario, UNICEF
5-minute talks	4:15 pm – 5:00 pm	Ms. Aarti Daryanani, Unilever Ms. Janie Ilustre Alfonso, Manila Water Foundation Ms. Fadia Sultana, WaterAid Mr. Geoff Revell, HappyTap Mr. Phearak Svay, World Vision Asia P3 Hub Mr. Danny Labin, Sesame Workshop
Reflections on the day	5:00 pm – 5:15 pm	Dr. Cecilia Manuel, Center for Health Solutions and Innovations
Logistics and tomorrow's agenda	5:15 pm – 5:30 pm	Ms Carolyn Moore, Global Handwashing Partnership Ms. Carmela Ariza, Facilitator

DAY 2 // 2018 OCTOBER 11

SESSION TITLE	TIME	SPEAKER
Opening and review of the day	9:00 am – 9:05 am	Ms. Carolyn Moore, Global Handwashing Partnership
LIGHTNING TALK New media: Experiments in handwashing promotion	9:05 am – 9:20 am	Ms. Carissa Limcaoco, Procter & Gamble Mr. David Khoo, Procter & Gamble
HYGIENE SYSTEMS AND INTEGRATION Hygiene and nutrition integration	9:20 am – 10:20 am	**Dr. Michael Gnilo,** UNICEF Ms. Julia Rosenbaum, FHI 360 Dr. Stephen Luby, Stanford University Representative, National Nutrition Council
BREAK	10:20 am – 10:45 am	
HYGIENE SYSTEMS AND INTEGRATION Handwashing in the health system	10:45 am – 11:45 am	**Dr. Robert Dreibelbis,** London School of Hygiene and Tropical Medicine Ms. Alison Macintyre, WaterAid AU Representative, Department of Health, the Philippines
HYGIENE SYSTEMS AND INTEGRATION Institutionalizing handwashing in the education system	11:45 am – 12:45 pm	**Dr. Bella Monse,** GIZ Dr. Robert Dreibelbis, London School of Hygiene and Tropical Medicine Dr. Ella Naliponguit, Department of Education, the Philippines
LUNCH	12:55 pm – 2:15 pm	
LIGHTNING TALK Hacking handwashing measurement	2:15 pm – 2:25 pm	**Mr. David Khoo,** Procter & Gamble **Ms. Julia Rosenbaum,** FHI 360
LIGHTNING TALK Designing a better handwashing station	2:25 pm – 2:35 pm	**Mr. James Bourne,** Kohler **Ms. Leslie Llado,** Splash **Ms. Nike Frans,** World Vision Indonesia
DESIGN AND INNOVATION Innovative approaches to measuring handwashing behavior change	2:35 pm – 5:00 pm	CONCURRENT SESSIONS WITH BREAK AT 3:30 PM
DESIGN AND INNOVATION Designing a better handwashing station	2:35 pm – 5:00 pm	
Reflections on the day	5:00 pm – 5:15 pm	Dr. Ronaldo Puno, Philippines Association of Medical Technologists
Logistics and tomorrow's agenda	5:15 pm – 5:30 pm	Ms Carolyn Moore, Global Handwashing Partnership Ms. Carmela Ariza, Facilitator

Session leads are in bold text. // Session leads not presenting: Ms. Lizette Burgers, UNICEF, Hygiene and nutrition integration; Ms. Katherine Pizzacalla, GIZ, Handwashing in the education system; Ms. Claire Chase, World Bank, Innovative approaches to measuring handwashing behavior change; Ms. Megan Williams, Splash, Designing a better handwashing station; Ms. Julia Rosenbaum, FHI 360, Event objectives and introductions

ANNEX 2 // LIST OF PARTICIPANTS

ALPHABETICALLY ARRANGED BY ORGANIZATION'S NAME

NO.	FIRST NAME	LAST NAME	ORGANIZATION	DESIGNATION
Action Against Hunger (ACF)				
1	Nayco	Yap	ACF	WASH Coordinator
Arup				
2	Martin	Shouler	Arup	Associate Director
Asia P3Hub				
3	Christy	Davis	WV Asia P3 Hub	Director
4	Phearak	Svay	Asia P3 Hub	Senior WASH and Partnership Advisor
Center for Health Solutions and Innovations (CHSI)				
5	Faustina	Molina-Viriña	CHSI	Consultant
6	Phoebe	Maata	CHSI	MCHN Consultant
7	Cecilia	Manuel	CHSI	Program Manager
Department of Education (DepEd Philippines)				
8	Ella Cecilia	Gamolo-Naliponguit	DepEd	
Department of Health (DOH Philippines)				
9	Edna	Nito	DOH	
10	Kezia	Rosario	DOH	
11	Brian	Aviguetero	DOH	
EpiMetrics Inc				
12	Abigail	Tan	EpiMetrics Inc.	Qualitative Specialist
13	Erika	Modina	EpiMetrics Inc.	Innovation Officer
FHI 360				
14	Amy	Weissman	FHI 360	Director Technical, Health, Population and Nutrition
15	Julia	Rosenbaum	FHI 360	Technical Advisor
Global Handwashing Partnership (GHP)				
16	Carolyn	Moore	GHP	Secretariat Director
17	Ebuwa	Evbuoma	GHP	Knowledge Management Technical Officer
Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ)				
18	Katherine	Pizzacalla	GIZ	Senior Advisor, Fit for School
19	Bella	Monse	GIZ	Senior Advisor, Fit for School
20	Nicole	Siegmund	GIZ	Program Director, Regional Fit for School Program
21	Jed	Dimaisip-Nabuab	GIZ	Research Coordinator, Regional Fit for School Program
22	Frederick	Madrid	GIZ	Project Officer, Regional Fit for School Program

HappyTap				
23	Geoff	Revell	HappyTap/ WaterShed Asia	Program Director
24	Rumat	Ashraf	HappyTap Bangladesh	Director
Health Care Without Harm (HCWH)				
25	Ramon	San Pascual	HCWH	Executive Director
IDinsight				
26	Lilian	Lehmann	IDinsight	Regional Director, SouthEast Asia
27	Meghan	Battle	IDinsight	Manager
Kohler				
28	James	Bourne	Kohler	Product Engineer
London School of Hygiene and Tropical Medicine (LSHTM)				
29	Robert	Dreibelbis	LSHTM	Assistant Professor
30	Sian	White	LSHTM	Research Fellow
Manila Water Company (MWC)				
31	Edgar	Magturo	MWC	
Manila Water Foundation (MWF)				
32	Janie Rose	Alfonso	MWF	Program Manager
33	Samantha	Coronado	MWF	Resource Mobilization Manager
National Nutrition Council (NNC Philippines)				
34	Maria Cecilia	Rosario V. Sta. Anna	NNC	Nutrition Officer 2, Nutrition Information and Education Division
Philippine Association of Medical Technologists, Inc. (PAMET)				
35	Ronaldo	Puno	PAMET	National President
Procter and Gamble (P&G)				
36	Carissa	Limcaoco	P&G	Safeguard PH Communications Manager
37	David	Khoo	P&G	Global Scientific Communications Leader
38	Anna	Legarda	P&G	
39	Toshiyuki	Okada	P&G	Senior Product Technologist
Real Relief				
40	Torben	Holm Larsen	Real Relief	Technical Director
Save the Children				
41	Anjelia	San Buenaventura	Save the Children, Philippines	Program Officer – School Health and Nutrition
42	Jonathan	Valdez	Save the Children, Philippines	Water, Sanitation and Hygiene Advisor
International Centre for Diarrhoeal Disease Research, Bangladesh (iccdr,b)				
43	Munirul	Alam	iccdr,b	Head, Molecular Ecology and Metagenomic Laboratory
Sesame Workshop				
44	Danny	Labin	Sesame Workshop	Vice President, International Projects

Splash				
45	Leslie	Llado	Splash	Program Sustainability Manager
Synergeia				
46	Annie	de Leon	Synergeia	Operations Officer
United Nations International Children's Fund (UNICEF)				
47	Jon	Michael Villasenor	UNICEF PH	WASH Officer
48	Katrina Arianne	Ebora	UNICEF PH	WASH Research and Advocacy Consultant
49	Louise	Maule	UNICEF PH	WASH Chief
50	Paul	del Rosario	UNICEF PH	WASH Coordination for Emergencies
51	Michael	Emerson Gnilo	UNICEF HQ	Sanitation and Hygiene Specialist
United States Agency for International Development (USAID)				
52	Nga	Nguyen	USAID	Sr. WASH and SBC Specialist
53	Lucy	Jubeki Mungoni	USAID | MALAWI	WASH Specialist, Health Population and Nutrition
University of the Philippines (UP)				
54	Victorio	Molina	UP	Associate Professor
WaterAid				
55	Akter	Jahan Fadia Sultana	WaterAid Bangladesh	Project Manager, South Asia Wash Result Programme
56	Alison	Macintyre	WaterAid Australia	WASH in HCF GAP at WHO, Health Advisor at WaterAid
57	Lilian	Kamowa Chaguluka	WaterAid Malawi	Hygiene Specialist
58	Om	Prasad Gautam	WaterAid UK	Senior WASH Manager – Hygiene
59	Elijah	Adera	WaterAid Southern Africa Region	Regional Programme Manager
World Health Organization (WHO)				
60	Eduardo	Genciagan, Jr.	WHO Philippines/SSA	Technical Assistant
World Vision				
61	Kristie	Urich	WV – International	WASH Capabilities Manager
62	Nike	Frans	WV – Indonesia	Health Specialist Zone NTT
63	Carleneth	San Valentin	WV – Philippines	Health and Nutrition Technical Manager
Others				
64	Carmela	Ariza		Facilitator

GLOBAL HANDWASHING PARTNERSHIP

P&G

german cooperation
DEUTSCHE ZUSAMMENARBEIT

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