More than Soap and Water:

Taking Handwashing With Soap to Scale

UNICEF Handwashing Training Module 2008

Notes for participants

About this Module

This module provides an overview of the public health benefits of handwashing with soap, the shift towards new approaches to bringing about handwashing behavior change and the key elements of these approaches. This guide is intended for UNICEF staff; however, decision makers in ministries, funding agencies and other development organizations will also find assistance in this module for designing policies and programs to improve public health through the promotion of handwashing behavior change.

The *UNICEF Handwashing Module* outlines how handwashing behavior can be changed on a large or national scale by providing lessons from industrial marketing approaches as well as from public health thinking. The module is based on the collective experiences of the Public Private Partnership for Handwashing with Soap (PPPHW), the Global Scaling Up Handwashing Behavior Change Project[1], Project Champion[2] and other experiences as relevant. The module is presented as an introduction to state of the art programming in handwashing with soap with five components: 1. Handwashing and Public Health, 2. Handwashing and Sanitation, 3. Approaches to Handwashing Promotion, 4. Taking Handwashing to Scale: Key Elements and 5. Handwashing Program Development Exercise.

As an outcome of this training, participants will:

1) Understand the public health benefits of handwashing with soap;
2) Understand and appreciate the shift in approach to handwashing behavior change, which has taken place over the past decade (both the rationale and nature of the shift);
3) Be familiar with the underlying principles and key components of new approaches (i.e. single-behavior focus, large scale, consumer focused etc.);
4) Understand the first steps towards design and implementation of a handwashing with soap program, including formative research, strategy development, and preparation of communication messages and materials.
5) Be acquainted with monitoring indicators, methods for handwashing programs.
6) Be familiar with best practice examples from implementation of various components of handwashing programs in different countries and contexts.
7) Understand how partnership may add to the sustainability of handwashing programs.
8) Appreciate the links between handwashing and sanitation programs; and
9) Know where to go to get more information or help to develop a program.

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[1] *The Scaling up Handwashing Behavior Change project began in December 2006, funded by the Gates Foundation and implemented by WSP, with an anticipated outcome of increasing handwashing (HW) behavior with soap at critical times among poor mothers and school age children through the implementation of a national scale communication program in partnership with the public and private sector. The project is currently active in Peru, Senegal, Vietnam and Tanzania.*
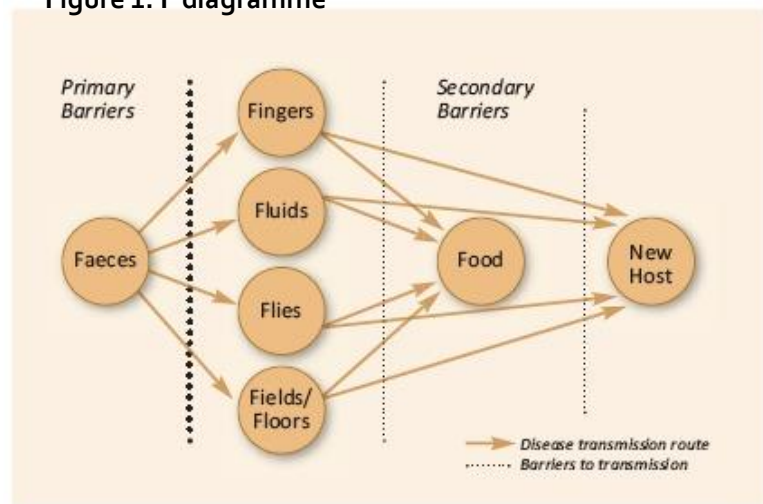
[2] *Project Champion is a partnership project between UNICEF and Unilever focused on making HWWS at critical times a habit among primary caregivers of the under-fives in poor rural and urban communities in developing countries.*

Handwashing and Public Health

Human feces are the main source of diarrheal pathogens. They are also the source of shigellosis, typhoid, cholera, all other common endemic gastro-enteric infections, and some respiratory infections: just one gram of human feces can contain 10 million viruses and one million bacteria. These pathogens are passed from an infected host to a new one via various routes, as shown in Figure 1. While the routes are numerous, they all emanate from one source: feces. While secondary measures (food handling, water purification, and fly control) may have an impact, far more important are the primary barriers – sanitation and handwashing– after fecal contact. These barriers prevent fecal pathogens from reaching the domestic environment in the first place.

Figure 1. F diagramme

In many developing countries children suffer frequent bouts of diarrheal disease, owing primarily to inadequate sanitation and hygiene. Repeated diarrheal episodes have been identified as a significant underlying cause for malnutrition, in turn leading to weakened immune systems and impaired growth and development.[3] While mortality owing to diarrhea has been reduced by the use of oral rehydration salts (ORS), billions of annual diarrhea episodes continue to exact a heavy toll on the well-being and future potential of the children of the world's poor.

Diarrheal diseases and acute respiratory infections (ARIs) continue to kill more children under the age of five than any other causes[4]. There are two possible links between handwashing and ARIs:
1. Respiratory pathogens have been identified on hands and environmental surfaces by microbiological studies.
2. Pathogens, especially enteric viruses, which cause diarrhea, can also cause respiratory symptoms.

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[3] 'Hand washing for preventing diarrhea (Review)' Ejemot RI, Ehiri JE, Meremikwu MM, Critchley JA (Cochrane Review).
[4] Every year 9.7million children do not reach their fifth birthday. Pneumonia and Diarrhea account for 19% and 18% of the worldwide under 5 mortality respectively, together adding up to almost 3.5million child deaths annually (UNICEF State of the world's Children (SOWC) 2008).

Handwashing interrupts the transmission of disease agents and so can significantly reduce diarrhea and respiratory infections, as well as skin infections and trachoma. A recent review (Curtis and Cairncross 2003) suggests that handwashing with soap (HWWS), particularly after contact with feces (post-defecation and after handling a child's stool), can reduce diarrheal incidence by 42-47 percent, while another review by Rabie and Curtis suggests a 16% percent reduction in respiratory infections is possible through handwashing. An update to the latter review includes two more recent studies by Luby and Sandora and provides an updated estimate of 23% reduction in ARIs through HWWS.[5] The Luby study, the only study which was conducted in a developing country, found that children under 15 years old, living in households that received handwashing promotion and soap had half the diarrheal rates of children living in control neighborhoods[6].

The magnitude of HWWS reaches further by its demonstrated potential to considerably reduce neonatal mortality rates. A new study in Nepal brings to light that HWWS in preparation for delivery significantly reduced the risk of death for infants within the first month of life. Newborns whose mother washed her hands before handling their infants had a 44% lower risk of death compared to those whose did not (Rhee et al 2008).

Because handwashing can prevent the transmission of a variety of pathogens, it may be more effective than any single vaccine. Promoted on a wide-enough scale and with a sound participatory methodology, handwashing with soap could be thought of as a 'do-it-yourself' vaccine.[7]

Table 1. Handwashing and diarrheal risk reduction - the evidence.

Source		Number of studies reviewed	Reduction in diarrhea risk
Esrey et al., 1985	Hygiene	6	33%
Huttley et. Al. 1997	Handwashing	5	35%
Curtis & Cairncross, 2003	HWWS	19	44%
Curtis & Cairncross, 2003	HWWS*	7	47%
Fewtrell et al, 2005	HWWS	5	44%
	Sanitation		32%
	Water Quality (point of use)		39%
	Water Quality (at the source)		11%
	Water Supply (wells, pipes)		25%
	Hygiene (without hand washing)		28%

*only intervention studies/good quality studies

The sharp decline in deaths from infectious diseases observed in wealthy countries last century could not have been achieved without vastly improved public hygiene. Raising living standards allowed people to become more hygienic once clean water was piped into their homes, and soap became cheap enough to put at every sink. Eventually, the collective efforts of both the public health movement and private industry ensured that clean hands, clean homes, and clean lives, became a social norm.

Unfortunately, the story in poor countries could not be more different. By the end of the 20th century, two billion people still had inadequate access to sanitation, and one billion were without enough clean water to drink. Efforts at promoting effective hygiene have been piecemeal and ineffective. Though

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[5] Esink, Jeroen, Quality Control : Val Curtis. Well Factsheet: Health Impact of handwashing with soap
[6] Luby et al., Effect of handwashing on child health: a randomized controlled trial, The Lancet, July 16, 2005.
[7] Handwashing Handbook, A guide for developing a hygiene promotion program to increase handwashing with soap.

industry has succeeded in getting soap into almost every home, it has not consistently promoted good hygiene or handwashing to accompany their products. This is a missed opportunity for public health.

If developing countries are to achieve their 2015 millennium development targets for reductions in child mortality, this unfinished agenda of the 20th century must be completed. Not only must water and sanitation become universal, but so must the habit of handwashing with soap. This requires Ministries of Health, Education, and Water, in addition to non-governmental organizations (NGOs) and community-based groups, to exploit every opportunity to promote handwashing with soap[8].

Handwashing and Sanitation

Globally, hands are washed with soap on less than 20% of the occasions when they should be. And only 60% of the world's households have proper sanitation. Not enough is being done to satisfy these needs. International development aid for water and sanitation has largely forgotten sanitation in favor of water supply. Programs to promote handwashing are few and far between.

Yet almost all of the toilets ever built were provided by private small enterprise and paid for by households with no external assistance. Soap industry has put soap into the vast majority of the world's households.

Improving coverage with toilets and increasing handwashing with soap are similar and linked problems. They require both a product and a behavior change. Handwashing with soap can be increased both by expanding the soap market (i.e. finding new customers) and by encouraging more hand washing. The latrine market can be expanded by attracting new customers and encouraging open defecation free communities. Both require an in-depth understanding of the target consumer's practices and motivations, in order to provide and market appropriate products and behaviors effectively[9].

> **Box 1. Supporting facts**
>
> - 88% of diarrheal disease is attributed to unsafe water supply, inadequate sanitation and hygiene.
>
> - Improved water supply reduces diarrheal morbidity by between 6% to 25%, if severe outcomes are included.
>
> - Improved sanitation reduces diarrhea morbidity by 32%.
>
> - Promotion of hand washing can lead to a reduction of diarrheal cases by up to 47%.

It is possible to sustain hygienic practices. However, in water and sanitation programs, continued access to water and sanitation services alone is not enough to sustain hygienic behaviors. It is the "software" aspects of the program that are more important. Thus hygiene promotion and education should not be low-visibility "add-ons" or extra luxuries in to water and sanitation programming. Sustained behaviors result from giving high priority to hygiene promotion and education.

This priority should begin when the program is being planned and designed. One element of this includes ensuring a long enough duration for the hygiene intervention with intensity to build accepted and widely-practiced behaviors during the life of the program. In other words, small "demonstration projects" will usually not lead to sustained behavior. This is why designing a strategy should be undertaken not only with water and sanitation specialists but also with specialists in communication for

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[8] Handwashing Handbook, A guide for developing a hygiene promotion program to increase handwashing with soap.

[9] Concept note prepared by LSHTM http://www.globalhandwashing.org/Publications/hand_concept.pdf

development; that is, individuals and institutions who are familiar with change theory and practice. Other elements that contribute to sustaining behaviors include using careful preparatory research, focusing on a limited number of behaviors and ensuring personal contacts. Another important element is differentiating the strategies for different target groups, different behaviors and localities. One uniform approach or "recipe" will probably not work[10].

The health impact of inadequate sanitation leads to a number of financial and economic costs including direct medical costs associated with treating sanitation-related illnesses and lost income through reduced or lost productivity and the government costs of providing health services.

Similarly, there is mounting international evidence that hygiene, sanitation, and health investment focused on handwashing and other health promotion programs are among the most cost-beneficial and cost-effective investments that can be made with public and private resources. In terms of cost/benefits, it is estimated that for every dollar spent on sanitation, that there is a 9.1$ return on the investment (WHO 2007). Promoting hand-washing with soap is particularly cost-effective. The intervention is both very affordable approximately at $1 per capita or $3.35 per DALY gained)[11] and can generate excellent results – between a 42-47% reduction in cases of diarrhea. Oral-rehydration therapy, the principal other measure to prevent diarrhea mortality, costs an estimated US$23 per DALY gained. The intervention is most effective when it is the sole behavior change promoted – combining with other interventions can dilute the message and make recipients less compliant.[12]

Key points on sanitation and hygiene include:

- For both sanitation and hygiene promotion, a strong tradition exists among government agencies, donors, and NGOs for using public health arguments to try to convince families that they should use a latrine or wash their hands with soap. Decision makers and program managers worked with the assumption that consumers will choose products and behaviors, which are good for their health. As in many other areas, however, consumers of hygiene and sanitation have – with time – told us that health is seldom among the most important reasons for their behavioral and purchasing decisions.
- We must be mindful that the construction of a latrine represents an opportunity for the construction/set up of a facility for hand washing.

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[10] Sustaining Hygiene Behaviours, http://www.lboro.ac.uk/well/resources/fact-sheets/fact-sheets-htm/shb.htm

[11] DALY (disability-adjusted life year) is a composite measure that combines the number of years lived with a disability and the number of years lost to premature death.

[12] Water, Sanitation, and Hygiene: Simple, Effective Solutions Save Lives, May 2007 , Disease Control Priority Project.

- A hardware intervention is always more cost-effective when combined with a software intervention.

Handwashing Promotion: A Shift in Approach

Traditionally, many water supply and sanitation projects in developing countries included a hygiene education component that focused on providing information and increasing knowledge. Yet, it is broadly agreed among sector practitioners that this approach had very limited success in changes practices. The key issues with this approach included:

- The pedagogical method focused more on increasing knowledge than changing behaviors;
- Messages were often didactic, one-directional (top-down) , negative and focused strictly on the avoidance of illness as a motivator;
- Messages tended to be standardized and not based on any in-depth knowledge of the local situation;
- Messages "educated" the the participant groups on a very wide range of health related subjects;
- Health messages tended to be targeted solely at poor women with little segmentation of the message to other audiences;
- Health education efforts tended to be one shot efforts and were often carried out very early in a project phase;
- Programs were implemented largely at the community and household level (not at scale).[13]

As a result of the failure of the traditional hygiene education approach, the water supply and sanitation sector along with the public health community, began developing and trying out new ideas and approaches to explicitly change hygiene behaviors. These approaches were designed to be highly participatory and adaptable in order to reflect various cultural and physical characteristics of countries and target communities. While some of these efforts succeeded in maintaining awareness, they did not have the intended behavior change impact on a larger scale. Assessments have pointed to a number of explanations, such as the inclusion of several behaviors and a resulting lack of clarity, high cost of preparation and implementation, difficulty in scaling up and a high dependence on extension workers' capacity.

In general, although many of the issues noted for the traditional hygiene education approach were still evident in many of the newer more focused hygiene behavior change approaches, it is fair to say that over the years the evolution of the various programs have resulted in better knowledge about more effective approaches to changing hygiene behaviors. The key lessons from the hygiene promotion projects showing the best results are based on a careful assessment of: the environmental health conditions, existing high health risk behaviors, and the factors that do or could influence handwashing behaviors. The key principles that have grown out of these efforts for which there is reasonable consensus among the sector practitioners are:

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[13] From concept note submitted to Gates (sent by LJ)

- **Target a small number of risk practices**.
- **Target specific audience segments**.
- **Identify the factors that may lead to or prevent changed behavior**.
- **Hygiene messages need to be positive**.
- **Identify appropriate channels of communication.**
- **Use an integrated communication program, i.e. a mix of channels**.
- **Like other behavior change interventions, hygiene promotion should be carefully planned, executed, monitored and evaluated**. [14]

In the late 1990s the USAID-sponsored Central American Handwashing for Diarrheal Disease Prevention Program piloted an approach to changing handwashing behaviors and demonstrated that mass media programs with public and private sector involvement could be successful in promoting handwashing among the poor. An innovative feature of the program was to tap into the behavior change and marketing knowledge of private soap manufacturers. The main lessons that came out of this effort suggested that *the keys to changing hygiene behaviors at large scale is to work with a broad partnership of public and private sector stakeholders who have a mutual interest in increasing handwashing with soap, to focus on the one behavior with largest potential health impact (handwashing with soap) and to promote it with a cost-effective, consumer-centered marketing approach.*

In the years since the original Central American experience, USAID, the World Bank, WSP, UNICEF, the CDC, the London School and Hygiene and Tropical Medicine and various private sector soap companies and others, have worked together to continue field testing and learning about this approach. The original idea has evolved into an adaptable approach which can be adapted to the local conditions of each country. This adaptation, or tailoring, occurs at several different levels. Each country forms a national partnership which is different and has a different makeup and set of goals. Each country context is different with different cultures, health profile, different demographics (urban vs. rural, etc), unique history of experience with past behavior change programs, unique mix of ongoing interventions in the health, water, and other sectors. Each national country partnership adapts the approach to the country according to both the evolving global knowledge of handwashing change and the results of the formative research conducted in country.

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[14] Well Fact sheet: fallacies and key principles of hygiene promotion

Box 2: Global Communication Insights

Unilever's knowledge that outdoor play is an essential part of a child's health and development coupled with the company's exploration of stains - where they come from, what they're made of, and why they can be so stubborn to remove - has resulted in the universally relevant 'Dirt is good!' campaign. Like many other campaigns, grounded in successful insight, this is an apparent paradox but when translated to local cultural context through laundry brands (e.g. Persil in the UK, Skip in Europe, Omo in South Africa and Australia) it can convince parents of the importance of letting their children get dirty, safe in the knowledge that awkward stains can be removed, allowing them to relax and get on with their lives. Through this thought the company has been able to maximize campaign development and product technology worldwide, with broad based intended audiences; proof that what works in Greece, works in South Africa, Australia and beyond[1]

Taking Handwashing Promotion to Scale: Key Elements

Large-scale, integrated communication programs have frequently been used within public health with the objective of changing or bringing about specific behavioral practices, such as ceasing to smoke or sleeping under insecticide treated bed nets. Integrated communication programs employ a range of communication channels – such as radio, TV, community networks, and brochures – to reach their intended audiences with their key messages, preferably multiple times. Successful programs also put considerable effort into identifying both intended audiences and the factors that can potentially influence whether they adopt a specific behavior or not.

In contrast to fields such as HIV/AIDS prevention and reproductive health, this type of approach is relatively new in the area of handwashing/hygiene promotion, where the focus has been on interpersonal, community-based interventions (and the assumption has been that intended audiences will adopt the behavior if only they are aware of the health benefits). While interpersonal communication can be highly effective in bringing about behavior change, programs that rely exclusively on this communication channel will always remain limited in scale due to the high cost per person reached. Experiences from other fields have shown that programs that use a combination of communication channels – such as mass media, interpersonal communication, community events, and print materials – have far greater potential to result in large-scale behavior change.

To be successful, handwashing behavior change programs must be carefully planned, designed, implemented, and monitored. In this section, we describe the key elements of this process.

Formative research

Formative research refers to quantitative and qualitative research undertaken at the outset of a handwashing behavior change program with the purpose of informing program design (i.e. intended audience opportunity, ability and motivation to hand wash with soap, communication channel use/preference and trusted sources and soap market studies). The process combines the insight of experts in consumer behavior, health, and handwashing with the intelligence provided by consumers.

The only way to change long-held habits related to behaviors such as handwashing is to have a firm understanding of the factors that drive and facilitate handwashing in target consumers. Consumer needs are many and varied and are affected by socio-cultural beliefs and norms. They may include the desire to be respected, to be clean, to feel comfortable and fresh, and to provide the best for their families. While health may seem an obvious need from the point of view of the health professional, it may not be the overriding or constant concern of the consumer. In the context of large-scale hand washing, the following four questions about consumers must be answered:

- What are the primary factors that prevent or promote (influence) handwashing behavior among intended audience segments? (also called handwashing *determinants*)
- What are current rates of handwashing in the intended audience segments? (baseline)
- Which are the best channels for reaching intended audience segments? When?

Research methods include techniques such as the following:

- *Behavior trials/in depth interviews* involve providing participants with soap and asking them to use it regularly for handwashing. After a period of time, the target group is visited for in depth interviews of their experience using soap: what they liked/disliked, what was easy, what was hard, and what solutions they found to any problems. In depth probing is essential to reach the ultimate cause of a behavior.
- *Focus group interviews* involve asking small numbers of people to discuss a range of topics relating to the behavior of interest. Best used to carry out ranking exercises (i.e. most important things in life, soap use, soap types for handwashing, most effective communication channels, etc) to allow consensus to form on issues likely to affect handwashing behaviors and to determine the proportion of people taking particular views.
- *Survey interviews/questionnaires* are standard quantitative surveys and are useful in profiling intended audiences and their environment. All questions are structured and employ precoded responses.
- *Structured observations* are direct observations of the behavior of interest by field workers recording what they see in a standard format. This method can be difficult, expensive and intrusive but provides more valid measures of behavior than any other method.

The formative research studies, which have been carried out in a number of countries, have yielded interesting and useful insights that reflect social norms, cultural beliefs and values around hygiene, handwashing, use of cleaning agents and the role of gender vis-avis these issues. Most importantly, the research studies have consistently found that *the desire to prevent the transmission of germs (health)* is not among the primary reasons why intended audiences wash their hands with soap. Table 2 below sets out the main findings about motivations and the implications for whether they are likely to be worth using in behavior change programs based on the experiences of the PPPHW to date. It suggests that the most likely motivations for HWWS are disgust and affiliation. Beyond this, comfort and nurture may also motivate handwashing.[15]

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[15] [15] Valerie Curtis, Danquah L, Aunger R., WHAT DO WE KNOW ABOUT HAND WASHING PRACTICES?A review of the results of the formative research studies from the Global Public-Private Partnership for Hand washing with Soap and other sources, February 2007 (DRAFT)

Table 2 Findings about motivations[16]

Motivation	What we have leant	Good candidate
Disgust	Being aware of contaminating matter on hands does motivate an immediate need to HWWS. The limitation here is that hands may not feel contaminated after fecal contact, and the sense of disgust may not last as long as the time it takes to find soap and water. The communications task should be to make hand contamination feel real.	Yes
Fear	Child diarrhea is not perceived as a threat, it is benign and inevitable and so not particularly feared by mothers. The belief link between HWWS and child diarrhea is tenuous, being in the realm of book learning, it is not something that has been directly experienced. The threat to oneself of a severe or epidemic disease such as cholera may motivate HWWS temporarily, but HWWS stops when the danger is past.	No
Comfort	Mothers will HWWS when there is visible or smellable dirt and detectable contaminants on hands. They enjoy the feeling of clean, fresh-smelling hands from which dirt has been removed. Clean hands cannot then go on to contaminate other surfaces or people. However, dirt is not always perceived at key times, after toilet and before food handling. The comfort motive may thus provide an additional benefit to mothers from HWWS, but perhaps not provide a central motive.	Maybe
Nurture	This is a strong motivator for maternal behavior; however, it does not seem to get mothers to HWWS before feeding their child. The nurture motivation rather works against HWWS, when there is an immediate need to care for a hungry child. On the other hand, mothers are strongly motivated to educate their children in good manners, for example, so getting them to teach HW to their children may be promising avenue to explore.	Maybe
Affiliation	Doing what everyone else is perceived to do is a strong motivator of current (lack of) HWWS. The affiliation motive could be employed through highlighting that most people believe that HWWS is the right thing to do. A good strategy to try would be to have communications that make HW seem common and to exploit injunctive norms about what people feel *ought* to be done.	Yes
Status	People care deeply about their social status and being perceived as dirty is to be avoided at all costs. Cholera, for example, can bring great shame to a family. However, HWWS is often a private affair, hence nobody can tell if hands have been washed or not, so status may not operate as a motive, except when being watched, for example, outside a public toilet. High status people tend to be copied, whatever they do, and so using role models in HW campaigns can be helpful.	No
Attraction	Though mothers differ in their desire to discuss it, many do want to look attractive to their husbands or others. However, as with status, it may be difficult to tell if hands have been washed with soap or not, hence the motivation link is probably too indirect. In some countries there is an additional motivation to avoid being ill in that it can spoil female beauty.	No

The FR approach used in most of the countries to date was designed to use academic research and marketing approaches, drawing on both anthropological and consumer research techniques to understand the psychological, cultural, social and environmental factors that are related to HW behavior. The FR studies were also used to characterize and segment intended audiences and their

actual practices. Finally the FR process also aimed to fill lacunae in commercially available audience research in mapping and understanding the potential value of existing channels of communication used by the intended audiences, both modern and traditional.

Objective Setting

For countries going through the process of designing a national HW program, the FR process serves an important role in consensus building, and advocacy. Commissioning, designing, executing, working on, reporting and interpreting the results provide a key means by which country partnership can come to agreement about the shape of the HW problem and what needs to be done about it.[16] Objective setting is something needs to be done collaboratively at the onset of an initiative so that a programme has well defined and feasible programme goals, clear behavioural objectives and distinct communication objectives.

Box 3: A Note on the Role of Children and Schools

Because they provide a relatively easy and sustainable route to long-term behavior change, schools are a good focus of hand washing programs. Schools are a key environment, not just for learning about hand washing, but for introducing the habit in practice, so it lasts. Children are often enthusiastic proponents of behavior change, and research questions apply to school-age children, teachers, and administrators as well as they do to other intended audiences.

In most countries, schools are the second places of socialization after households. Children can spend up to eight hours a day for more than eight months a year in schools and a substantial amount of time with their peers. Consumer behavior literature shows that children do not react to brands and brand communication in the same way as adults, so a separate communications strategy is needed for schools.

Recognizing the potential role of children, Champion set out to answer the question of whether children could be 'agents of change' in a global HWWS campaign. Results of Phase 1 research showed that while promising, the challenges of this approach included the following:
- Household and cultural variations in adult willingness to listen to children
- Easiest to engage and enthuse younger children although older children likely have more voice at home
- The innate difficulties of school as a place to brief and prime children and the hazards of relying on children to deliver messages received at school into the home as intended
- Whether children have the power to help influence longer term behavior change.

Given these considerations, and the aim to work at scale, Champion recommends that the best role for children is that of 'active messengers' vs the more loaded role of change agents and that schools be seen primarily as a distribution point. That is, count on children to disseminate the handwashing message within their spheres of influence but limit expectations as to whether they will bring about behavior change..

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[16] Valerie Curtis, Danquah L, Aunger R., WHAT DO WE KNOW ABOUT HAND WASHING PRACTICES? A review of the results of the formative research studies from the Global Public-Private Partnership for Hand washing with Soap and other sources, February 2007 (DRAFT)

Turning consumer insights into an effective handwashing behavior change program

Identifying intended audience segments

Handwashing programs target those groups whose handwashing behavior can have the largest impact on disease reduction: this is usually the caretaker who provides the child's 'hygiene environment'. In most settings, the primary caretaker is the mother of the young child; however, it is important to document who else participates – grandmothers, sisters, fathers in some societies, aunts, etc. School age children may also form an intended audience as the caretakers of the future and more susceptible to the uptake of new healthy habits and may act as enthusiastic advocates of the behavior.

Segmentation refers to the process of dividing the intended audiences into groups with similar behaviors and needs. Segmentation is done so that promoters can address the needs of each segment of the intended audience. Each segment will require different marketing strategies. Segments may include handwashers/non-handwashers or rural/urban intended audiences.

Secondary target segments are audiences that can be expected to support and influence behavior change among the primary group. These might include: a. fathers of children under five years; b. mothers-in-law c. teachers and d. healthcare workers.

A third segment may be the target of an advocacy/public relations campaign in support of the program. This includes stakeholders who can assist in garnering political commitment.

Box 4. Champion Project's Intended audience Segmentation

Champion's selection of target group had much to do with zeroing in on important similarities to speak to and influence the many not the few, and about understanding the differences that matter versus those that do not. The selected target group was women who care for infants and young children under five in developing countries in poor communities. While there were differences globally in this audience, there were some key similarities, including:
- the nature of poverty itself – the endless struggle, living life day to day, aspirations, limitations, etc.
- the roles played by women – responsibilities, power (or lack of), the hopes and fears associated with being a mother.

The target group was then further segmented according to three interrelated groups of women, who all have significant contact with under-fives and younger children:
- *Primary behavior change audience: Older Girls* based on the rationale that acute hygiene sensitivity surfaces around childbirth, as they are laying down parenting habits that will then not only last a lifetime but be what she hands down to her children.
- *Secondary behavior change intended audience: Mothers* defined as having at least one child and likely to be caring for other children and responsible for teaching her own children and those within her extended family.
- *Tertiary behavior change intended audience: 'Old Hands'* defined as elderly women in the household/community with responsibility for 'handing down' advice and practices for younger women.

Designing the creative strategy

The starting point for the design of an integrated communications strategy is the formative research (FR) results. The strategy consists of adapting messages and activities to intended audience segments and is designed to maximize exposure through credible communication channels. Development of

messages is geared toward enhancing the "talkability" of the issue i.e., spread of the message through social networks (see Figure 3below). The main segments of a communications strategy include: mass media, interpersonal communication, integration and advocacy (see Figure 4 below).

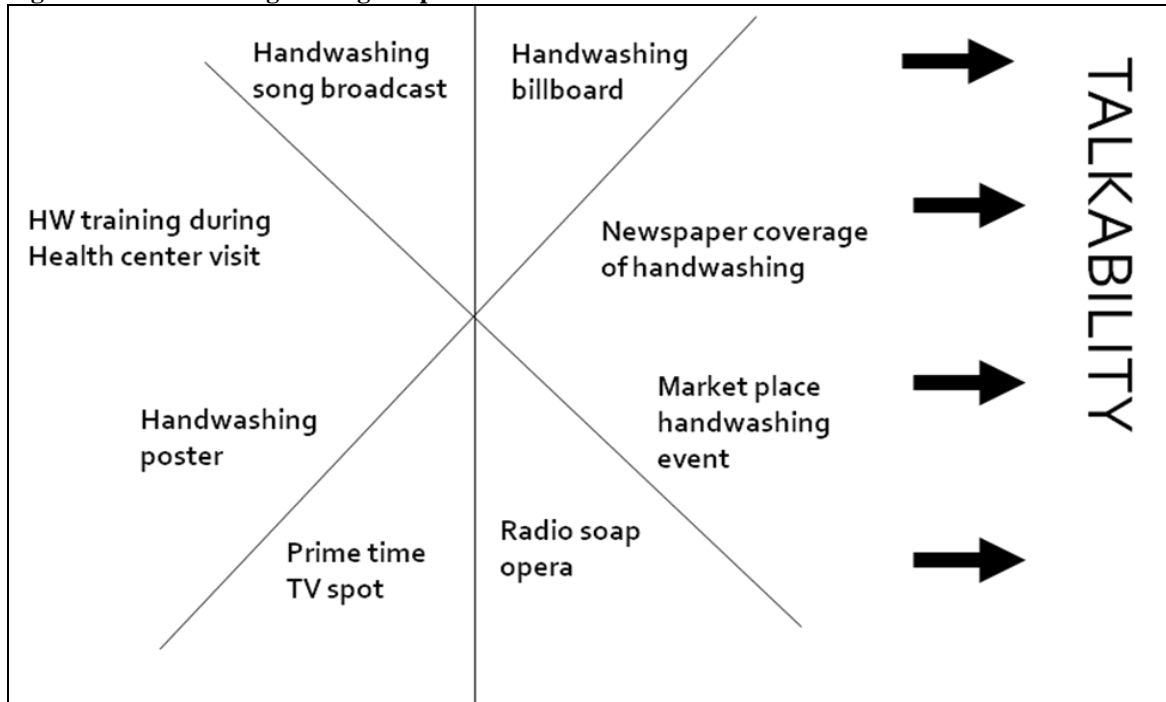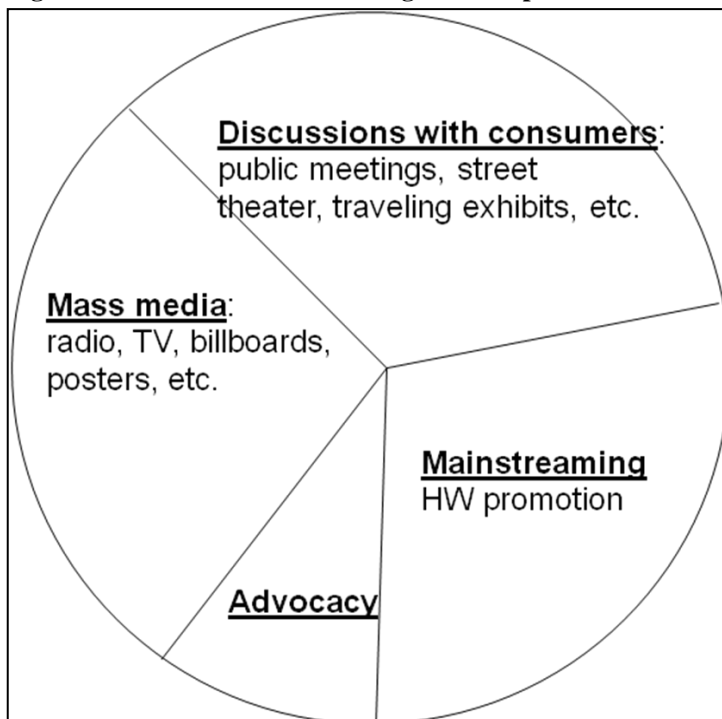**Figure 3. Handwashing Message Exposure**

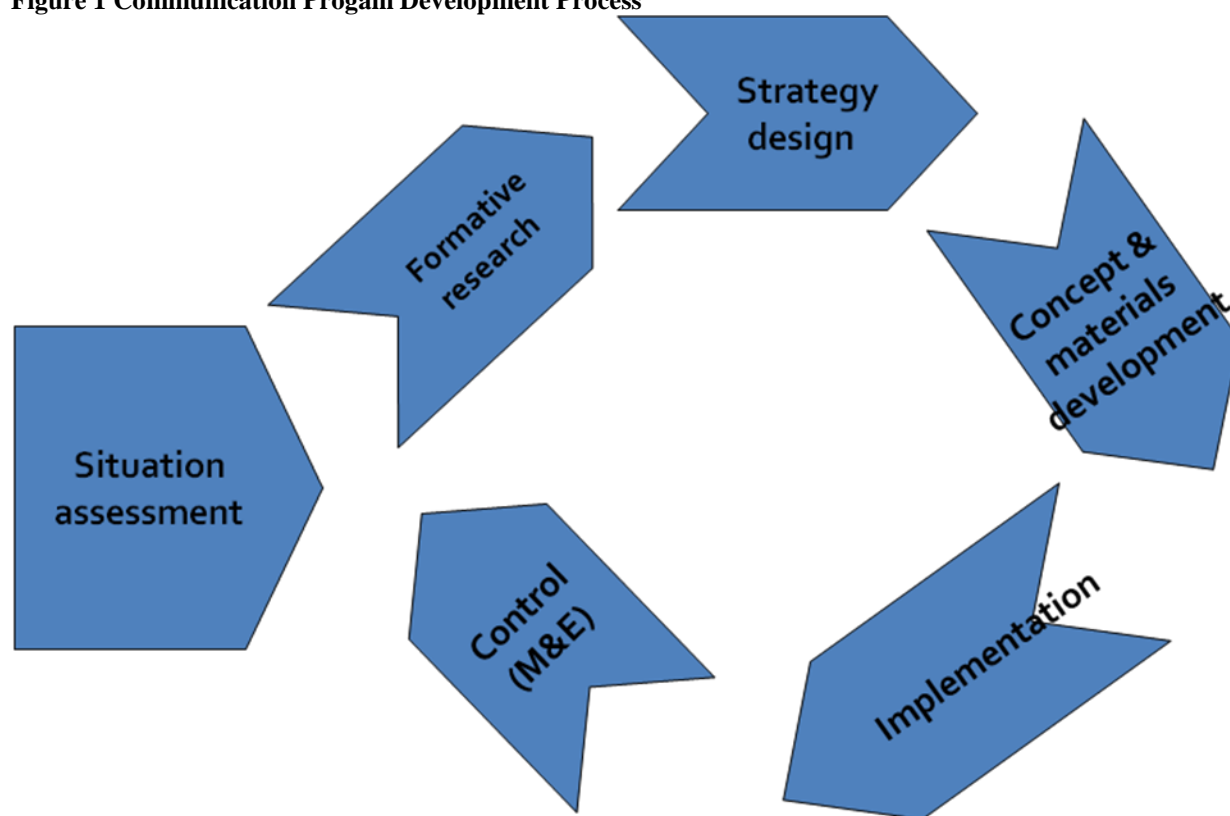**Figure 4. HW Communication Program Components**

The purpose of FR is to provide the background and insight needed for program design. Once the motivations and cognitive rationales underlying the practice of (or lack of) handwashing have been are identified qualitatively, the results are fed into a process whereby the most promising motivations and rationales are tested quantitatively. Closely following a commercial marketing model, the best are selected, turned into concepts, tested again, and eventually the best scoring combinations of ideas is turned into a single unifying concept for the campaign. This is given to a creative agency to work on turning into a single powerful and motivating campaign working across different channels. These may include but not be limited to mass media, national and local government, NGOs, citizen networks,

new media such as mobile telephony, in an effective and cost-effective mix. It should be noted that in commercial practice executions are copy tested and retested until they perform well against a benchmark of previous work that has had known success.

It is worth noting that while different private or public sector agencies may use different approaches and models (i.e. COMBI (WHO), SCOPE (JHU CCP), Integrated Marketing (private sector), ACADA (UNICEF)), in essence they all posit the same core set of steps for communication planning: assessment of the situation, formative research, strategy design, concept and materials testing and development, and monitoring (see figure 3 below). The steps across all models urge practitioners to develop evidence based strategies that take into account audience views, insights, ideas and opinions. So it does not matter which model a country initiative follows as long as it follows any one systematically.

Figure 1 Communication Progam Development Process

Agencies, Concepts and Testing

Methodical and thorough planning is key to a successful campaign and the use of a professional communications agency is essential. Good agencies are skilled at turning consumer insights into effective behavior change programs. This process begins with a 'creative brief' which outlines the following: the objectives, intended audience, what they do/think now, what we want them to do/think, the selling point/benefit that needs to be communicated (see Box 5).

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Table 3 Advantages and Disadvantages of Different Communication Channels

Approach	Description	Advantage	Disadvantage
Mass media	Messages crafted to be transmitted through an optimized mix of radio TV, billboard, and other channels.	Low cost per capita, can be highly memorable, can raise the political profile of handwashing, easy to monitor.	Needs high saturation (6+contacts) to affect behavior change. Difficult to fund Audience cannot interact.
Discussions with consumers	Events organized by professional event management agencies held in schools, public places, community groups.	Good audience event interaction, high impact, memorable.	High cost per capita. Uncertainty about impact and optimal size of audience.
Public Channels	Using the ability of government agencies to deliver handwashing messages through schools and health centers.	Potentially highly sustainable, if promotion becomes part of curriculum, job description of health agent, promoted at ante- and post-natal contact.	Hard to control Contact with target audiences may be infrequent, resulting in low coverage Low ability to monitor activities.

Box 5: The Perfect Brief

During preparation of the Ghana Handwashing Initiative, the advertising agency Lintas was selected to design the campaign materials. It soon became clear that the successful development of the materials was due to the well-designed creative brief and process. Lintas-Ghana shared its guidelines for designing *The Perfect Brief* during a global handwashing technical workshop in 2003. These guidelines included the following key elements*:

1. **The Purpose of a Brief**: To create good advertising, create/communicate a common understanding of the task, develop a tool for measuring the results.
2. **Client/Agency Relationship:** Preparing the brief is a team process that includes collaborating with the agency, receiving a draft document early on, then reworking it, getting sign-off from all stakeholders, an effective team (small, consistent), defining roles and empowering a leader, creating a shared vision, effective, enjoyable meetings with clear, commonly understood objectives
3. **Planning and Research:** Quantify (how many, by when), pinpoint, then know the target – demographic and psychographic – relevant, insight, golden nuggets, drivers, barriers, how they find information they trust, development of a communications strategy.
4. **Team Leader** should be the most experienced marketer on the team, empowered to make decisions on behalf of the rest of the team, in from the start, there at every milestone, and there to make the final decision, not a gatekeeper but an initiator.
5. **Content:** simple: one page; no jargon, objective, intended audience, what do they think now? What is their need? What do we want them to think? A single-minded proposition that is important to the target's life, Why should they believe us? Executional guidelines/requirements.

More details on the 'Perfect Brief' are in the Handwashing Handbook, www.globalhandwashing.org.

The results of the research are used to develop a number of platforms or concepts. These are developed and tested by an independent research agency in order to determine which message direction is most likely to drive behavior change. The most promising concepts are then further developed into miniature stories for TV and radio ads and into outline poster designs. Handwashing programs rely on a variety of communication channels such as mass media and interactive consumer activities. The more

appropriate the mix of communications channels to the local situation, the more effective the campaign will be (see Table 3 for an overview of the pros and cons of different communication channels).

Box 6. FOAM

In 2007, a handwashing behavior change framework – titled FOAM – was developed by the Scaling up Handwashing Behavior Change project. FOAM is a holistic behavior change framework, which can help guide formative research design, explain the many factors that may potentially influence handwashing, and analyze the various 'determinants' of behavior change. The acronym FOAM is short for:

- ❖ F for Focus
  - ➢ desired behavior
  - ➢ target populations
- ❖ O for Opportunity: institutional or structural factors that influence an individual's chance to perform a behavior *(external)*
- ❖ A for Ability: individual's skills and proficiency to perform a behavior *(internal)*
- ❖ M for Motivation: drives, wishes, urges, or desires that influence an individual to perform a behavior *(internal)*

Some advantages of FOAM:
- ❖ Provides a common language
- ❖ Helps identify critical linkages
- ❖ Informs monitoring and evaluation
- ❖ Enables evidence-based programming
- ❖ Can be adapted across populations
- ❖ Can be integrated into existing tools and frameworks (i.e. Trigger workshops);
- ❖ Can be applied to: Analysis of research, Formulation of *communication objectives* for mass media and IPC, Monitoring & Evaluation, FOAM Operational Matrix (FOM) for program planning.

Measuring results

While handwashing promotion has figured into public health efforts around the world for many years, handwashing rates remain very low and there is a growing realization that this issue deserves more focused attention and investment. [17] Programs such as the PPPHW, Champion and the Scaling Up Project seek to increase these rates, particularly by children and their caregivers. Yet HW programs have great difficulty in measuring the impact they have had on the targeted behavior. There is no simple, easily employed and reliable indicator of whether hands have been washed with soap at critical times or not. Self-reports of handwashing practices in response to verbal questioning produce rates that are inflated. Microbiological indicators of fecal contamination on hands are expensive and difficult to assess in field settings and the results are hard to interpret. Direct observation of hygiene practices (structured observation) is thought to be the most valid and reliable method currently in use for measuring hygiene behavior. However structured observation is extremely labor intensive and tiring for the observer and for the observed and it requires well trained, supervised and motivated fieldworkers. [18]

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[17] Biran et al. Comparing the performance of indicators of handwashing practices in rural Indian households, Tropical Medicine & International Health 13 (2) , 278-285, Feb 2008.
[18] Biran et al. Comparing the performance of indicators of handwashing practices in rural Indian households, Tropical Medicine & International Health 13 (2) , 278-285, Feb 2008.

The objective of ongoing monitoring in HW programming is to ascertain the extent and effectiveness of the program. Monitoring serves to diagnose and help fix problems during program execution. Evaluation is the process of measuring outcomes both during and after the intervention, to determine how successful the program is, or was. Monitoring and evaluation involves three broad steps: a baseline survey, ongoing monitoring of program activities, and a post-intervention survey.

For handwashing, much work is now ongoing to assess the most efficient, reliable sources of data for monitoring HW programs. Sample indicators used in the current Scaling Up Handwashing with Soap Project include the following:

- % of mothers of children age 0-59 months who report washing their hands with soap at least 2 of the appropriate times during a 24 hour recall period
- % of mothers of children age 0-59 months who report washing their hands with soap after using toilet, after defecation, or after cleaning baby's bottom / changing baby's nappy
- % of mothers of children age 0-59 months who report washing their hands with soap after feeding children.
- % of mothers of children age 0-59 months who report washing their hands with soap before eating
- % of mothers of children age 0-59 months who live in households with soap at the place of hand washing
- % of mothers of children age 0-59 months who live in households with both soap and water at the place of hand washing
- % of mothers of children age 0-59 months who live in households with soap in the home, apart from at a specific place for hand washing[19]

Due to the ongoing discussions on the most appropriate mechanisms for monitoring of handwashing, large scale monitoring systems such as MICS did not include HW indicators. Handwashing specialists from various agencies addressed this issue recently, recognizing the importance of recording this data to ongoing child survival information systems by proposing the inclusion of three indicators into the MICS survey. These are:

1) % of mothers of children aged 0-59 months who <u>know</u> all critical times for handwashing.
2) % of mothers of children aged 0-59 months who live in households <u>with</u> soap and water at the specific place for handwashing.
3) % of mothers of children aged 0-59 months who live in households <u>with</u> soap anywhere in the home.

The corresponding questions and methods for data collection of these indicators involve both observed and self-reported data.

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[19] *Pavani Ram. Proposed Handwashing Behavior Questions for MICS Surveys (version April 28, 2008).Draft for comment.*

Areas of ongoing discussion and research on the issue of monitoring of handwashing include the following:

- Data collection - Data on handwashing may be observed, inferred or reported. Observed data may be considered the most objective type of data available for measuring HW behavior. Yet, structured observation is often the most time intensive and subject to reactivity of subjects being observed.
- Use of Smart Soap technology – the use of a new technology whereby sensors are placed within soap bars allows for a measurement of reactivity of structured observation (by comparing soap usage with observer present and without observer present). [20]
- Use of proxy indicators – at this stage, data obtained using proxy indicators have not been shown to have a strong correlation to observed data. Examples of proxy indicators are: observed soap in house, observed water near latrine, demonstrated hands washed with soap, etc.

Ensuring Sustainability

The road towards sustainable change is long and complex. Achieving sustainable HWWS behavior change demands a multidisciplinary effort of committed people working at different levels with the common objective of reaching one or more groups of people over an extended period of timeThe process implies conducting formative research to provide in-depth knowledge of motivation; designing a well targeted strategy and implementing an effective communication program; creative communication strategies delivered through multiple channels; training an army of agents of change to deliver similar messages directly to the audiences; constant repetition of messages through mass media, mouth to mouth, door to door, interpersonal communication methodologies and training; political endorsement at all levels; public policy endorsement; fund raising; monitoring and evaluation, are among the activities involved in the process.

Through the experience of the global handwashing initiative, it is understood that sustainable change is achieved if the following processes take place:

- **Public policy endorsement:** this implies that one or more Ministries understand the importance of handwashing promotion; lead or participate in the process; design policy so that it is then transferred to their national structures through specific programs; include indicators in their performance monitoring and evaluation tools and assign budget to finance specific projects and activities.

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[20] Ram et al. Improving measures of handwashing behavior, Bangladesh 2007. Draft circulated for comments.

- **Private firms' commitment:** they will become interested if the objectives of handwashing promotion match their strategic lines of community relations/social responsibility programs. Health and education are common lines of private involvement and funding, so it is a matter of offering an opportunity that will add value to their ongoing operations. Once commitment is sealed, these partners will provide knowledge, channels of communication with targeted audiences, managers' time, monitoring activities and funding. They also provide their established networks with community agents and authorities and facilitate local public policy endorsement.
- **NGO participation:** due to their specialization in the field of communication for behavioral change, they may become implementation agencies. But many of them work in related fields like waste management, water and sanitation, environmental protection, and share indicators of success, namely the adoption of handwashing behavior and the reduction of diarrhea on children younger than five. They work with agents in the field, agents who train other agents to reach mothers, caretakers and teachers in the effort to create awareness, train on new methodologies and achieve behavioral change. When these agents are provided with methodologies and tools to promote handwashing with soap, they become natural handwashing agents of change.
- **Local governments' endorsement:** in decentralized countries, the local authority endorsement is a key issue for sustainability as well. If they see the opportunity to improve the quality of life of the local population and the political retribution, they may become powerful sources of influence and assign resources as well. Building policy at local level is also necessary.
- **International Organizations:** they are the precise partners to influence national authorities and trigger public policy development. Their funding becomes essential because the process that leads to institutionalization in the public sector is long. Results must be proven and achieving behavioral change and health outcomes take several years. [21]

Box 8: Sustainability of Hand Washing Behaviors

There have been relatively few studies of the sustainability of hand-washing behaviors. However, a recent investigation explicitly directed at investigating the sustainability of a range of hygiene interventions (hand-washing, latrine use, water storage container coverage) revisited sites of intervention in six developing countries various numbers of years after intervention.

Results suggested little change in the frequency of behaviors year-on-year in the two countries where there had been repeat visits post-intervention, and no effect of the number of years since intervention overall, suggesting that levels of changed behavior could persist up to 9 years after intervention. (Bolt and Cairncross, 2004) The authors note that hygiene promotion is usually carried out through either mass activities (drama, videos, rallies), group activities such as meetings and formation of women's groups, formal training classes, or through personal communication.

All of these categories were found in one setting or another to have an impact upon hygiene. However, data also pointed strongly to the importance of small group meetings with field staff in stimulating and sustaining new behaviors. One country study, which allowed particularly detailed analysis, showed that single group meetings were sufficient to encourage people to keep their courtyards swept, but that the more intense contact provided by a series of up to ten home visits was required to bring about more demanding changes in practice, such as regular hand washing and consistent use of a latrine. The authors concluded that intensive hygiene promotion interventions, including small groups and personal contact, will probably have a tangible and sustained impact.

Robert Augner 2008, London School of Hygiene and Tropical Medicine,
The Behavior Change Technical Workgroup, PPPHW (unpublished)

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[21]Extracted from a presentation of the PPPHW in Peru (Rocio Saenz).

Box 9. Marketing and Formative Research for Communications Program Design: Vietnam

Baseline surveys were conducted as initial activities in the Vietnamese national hand-washing initiative. The surveys provided national representative baseline data on rates of hand washing and provide insight on hand-washing behaviors among mothers of children under five years old. The findings have helped to understand motivating factors and barriers in promotion of hand washing and give advice and recommendations on how to design an effective hand-washing communication campaign.

Results of the first study of handwashing habits in Vietnam recorded current rates of handwashing (both observed and reported), explored barriers and motivations to handwashing, and examined channels of communication among mothers of children under five. Results of the study revealed:

- Ninety two percent of mothers are handwashing at critical times, though 60 percent of those who wash their hands do not feel soap is necessary.
- Barriers to handwashing with soap include:
    - The perception that soap is only necessary when hands are visibly dirty or smell bad.
    - Handwashing with soap is time consuming and inconvenient.
    - The real and perceived affordability of soap.
- The number one perceived benefit of using soap is to get rid of unpleasant odors.
- More than 80 percent of mothers watch TV while only 15-20 percent listen to radio or read newspapers.

A second study, examined whether lack of access to soap was a barrier to handwashing and whether the poor could participate in the distribution system. Results of the study concluded:

- Eighty-seven percent of the sampled population currently use bar soap.
- Access to soap products is *not* an issue - most people surveyed (users and nonusers) agree that "it is easy to find bar soap in the market."
- The two most important factors influencing bar soap purchase are: 1) a pleasant fragrance; and 2) anti-bacterial properties.

Subsequently, a creative agency was hired to develop a communications program based on this research which would define the imaging used for communications materials. This included a first round of testing various communications concepts to see which resonated more with the intended audience (mothers of kids under five, caretakers of kids under five). Testing was conducted in northern and southern regions of the country in focus group discussions. Based on the feedback of this round, a second round of designs, including appropriate logos, posters, slogans, TV adverts, etc. was developed and again tested with focus groups. In the end, visuals were chosen that emphasized washing hands with not just water (which is widely accepted but with soap as well.), that portray 'aspirational' families (one boy, one girl) and that conveyed a sense of protection of women and children. Additionally, clear simple story lines were seen to be important for targeting rural populations. Small adjustments were made to choice of foods portrayed (i.e. bananas instead of sweet potatoes, right outfit for mom vs. traditional outfits only worn in Mekong Delta, etc). The Vietnam campaign will launch in late 2008.

Lessons

- An effort must be made to assess the sustainability potential of each region, province or district where implementation is to take place. This implies identifying opportunities to build partnerships with: local Governments, firms, NGOs, CBOs, and other institutions or groups with which a win/win relationship can be built.
- It is important to gain the commitment of the public sector in the process, but essential to insert HWWS promotion and indicators into current health promotion, education and water and sanitation national programs. Only if this happens will HWWS be sustainable.
- Trained "agents of change" need motivation to spread behavioral change promotion. Certification can be highly motivating for health and education professionals, as it improves their rating and opportunities to access future positions.
- A well targeted advocacy strategy will open doors if it is aware of the cultural diversity of the audience.
- Well designed and implemented formative research is essential to understand how to communicate. It is the source of in-depth knowledge of your audience's motivation and attitudes towards change. It provides opportunities to improve and better target your communication for behavioral change. It offers windows of opportunity for partnership building. Results must be shared with current or potential partners, as they may trigger additional concerns and may open new doors for action.
- A PPP dealing with multiple industrial partners cannot support individual brands.
- The possible negative and positive spin-offs from the PPP should be constantly reviewed. Does the PPP help large international companies at the expense of local producers?
- If PPPs create a demand for products, then supply must keep pace. Efforts to stimulate demand must be coupled with action to help local manufacturers adapt their production processes.
- Calling too many potential partners at the beginning of the process may not be a good idea. Better wait for the right time: when you have something concrete to tell them.
- It is good to know more about potential partners i.e. their background, interests, etc. before inviting them to join. Get a good idea of the synergies with them.
- Investing in an 'inventory of opportunities' at national and local levels should be a starting point. There are many institutions already involved in similar processes – it would be a good idea to join them rather than start from zero.[22]

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[22] Extracted from a presentation of the PPPHW in Peru (Rocio Saenz).

Handwashing Program Development Exercise

A formative research study in three villages, combined with existing data on the population and behavioral practices in Country X has offered the following insights:

Total Population 2007 – 25 million
Total urban population – 10 million
GDP per capita in 2005 – 2000$
Under 5 mortality/1000 in 2005 – 85
2 week prevalence of childhood diarrhea (from DHS) – 15%
% water supply coverage – 90%
% sanitation coverage – 30%
Primary religion: Buddhism
95% of households claimed that they had access to soap
Based on observation in 3 villages, there was a higher incidence of handwashing with soap after defecation (35%), but less before cleaning children's' stools (25%) and even less before preparing foods (5%).
In focus group discussions and interviews, mothers widely hold the perception that children's' feces are harmless. Motivation for washing hands included the desire to remove bad smells and dirt from hands.
90% knew that dirty hands could cause disease.
Purchase of soap is a female affair and usually is in the form of large unwrapped laundry soaps used primarily for washing clothes, dishes and bathing (primarily on special occasions).
No one cited lack of water as an obstacle to hand washing.
A small medical clinic serves the healthcare needs of all three villages but is located a one hour walk from each of the villages.
90% of children attend primary school (ages 4-12).
80% of the villagers owned a radio or television.
The Ministry of Health has just announced that small grants will be made to villages interested in upgrading sanitation facilities.
Although there seemed relatively little evidence of low access to soap, those in higher socio-economic brackets washed their hands more frequently.
Quotes from children (age 5-10): - 'If I do not wash my hands after the toilet, my hands will smell and my friends will tease me.' - 'When I'm clean I'm comfortable'
Quotes from mothers: • 'If I don't show my kids how to wash their hands, no one will.' • 'Even if you are not polite and well mannered, your neighbors will respect you if you are clean.'

Questions:
- What limitations exist in this information?
- What follow up might be required? Additional data sources?
- Based on above data, what are the key motivating factors for behavior change?
- What would be the advantage of certain communication approaches/interventions?
- What options/opportunities exist for developing a handwashing program?
- What roles/value added do different partners bring to the table?
- What types of indicators might be used to evaluate the effectiveness of a handwashing intervention?

Suggested Reading

- Handwashing with soap – a new way to prevent ARIs? S. Cairncross, Tropical Medicine and International Health, 2003.

- Effect of washing hands with soap on diarrhea risk in the community: a systematic review. V. Curtis and S.Cairncross, Lancet's Journal of Infectious Diseases, 2003.

- "Structured Observations of hygiene behaviors in Burkina Faso: validity, variability and utility" V., S. Cousens, T. Mertens, E. Traore, B. Kanki, I. Diallo. Bulletin of the WHO, 71(1):23-32, 1993.

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Luby et al., Effect of handwashing on child health: a randomized controlled trial, The Lancet, July 16, 2005.
Handwashing Handbook, A guide for developing a hygiene promotion program to increase handwashing with soap.

LSHTM http://www.globalhandwashing.org/Publications/hand_concept.pdf

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For more information on developing a handwashing with soap program:

- Consult the Background Notes for this Module which contain further reading and details, examples and information on program design
- Visit www.globalhandwashing.org
- Visit www.globalhandwashingday.org
- Contact anthomas@unicef.org

•Thank you!

'More than Soap and Water'

Taking Handwashing with Soap to Scale:
An Introductory Training Module

unite for
children

unicef

Learning Objectives:

1. Understand the public health benefits of hand washing with soap;

2. Appreciate the links between hand washing and sanitation behaviour change programs;

3. Understand the shift in approach in hand washing behavior change programming;

4. Be familiar with the underlying principles and key components towards design and implementation of a hand washing with soap program;

5. Be acquainted with the pros and cons of various tools and monitoring approaches for hand washing programs;

6. Be familiar with best practice examples of implementation of these concepts from ongoing campaigns and studies; and

7. Know where to go to get more information or help to develop a program.

Overview of this Session

1. Background: The Evidence

2. Handwashing Promotion: Evolving Approaches

    Break

3. Taking Handwashing to Scale: Key Elements
    *   Formative research
    *   Identifying target audiences
    *   Design of communications program
    *   Communication channels
    *   Monitoring

1. Background

Health benefits of hand washing with soap

- HWWS can reduce diarrheal rates by almost 40% (3IE, 2009)

- HWWS can reduce ARIs by up to 23%

- HWWS by mothers and birth attendants can reduce neonatal mortality rates by 44%

- HWWS is found to reduce the incidence of impetigo by 34%

- Finally, there is some evidence that suggests that HWWS potentially reduces intestinal nematode and eye infections (conjunctivitis)

Cost-effectiveness of water, sanitation & hygiene *as health interventions* (US $ / DALY)

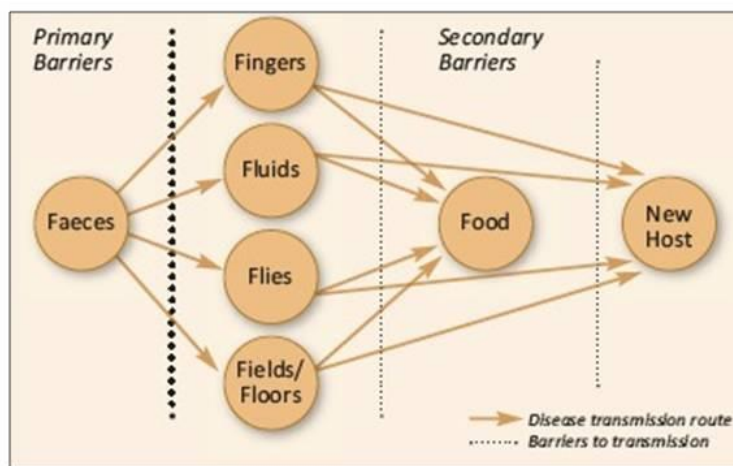| Intervention	Cost-effectiveness
Water supply	
Hand pump or standpost	94.00
House connection	223.00
Water sector regulation & advocacy	47.00
Basic sanitation	
Construction & promotion	≤270.00
Promotion only	11.15
Hygiene promotion	3.35

Source: Disease Control Priorities in Developing Countries, 2nd edition 2006 (www.dcp2.org) – Chapter 41

DALY = Disability-Adjusted Life Year - a time-based measure that combines years of life lost due to premature mortality and years of life lost due to time lived in states of less than full health
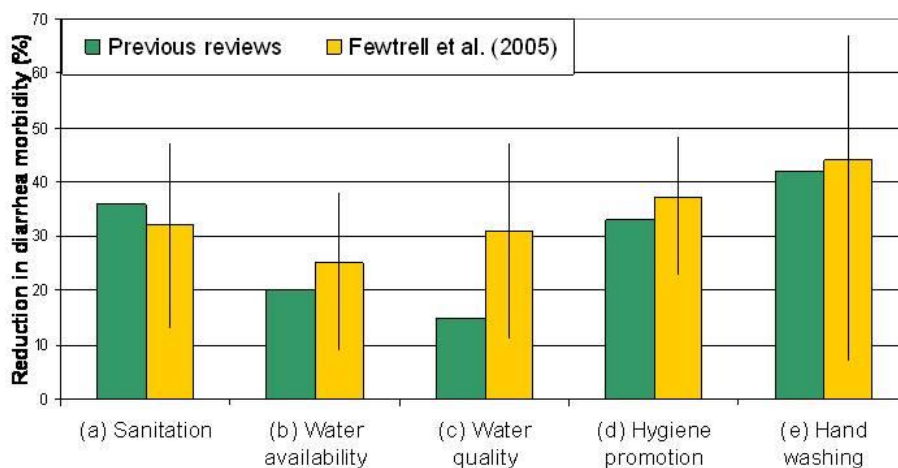
The Case for HWWS AND Sanitation

• HWWS and improved sanitation are primary barriers in fecal-oral disease transmission.

• When combined with improved sanitation, HWWS could reduce the incidence of diarrhea by 66% (PFC 2005).

HOWEVER… 2.5 billion without adequate sanitation (WHO/UNICEF, 2008); Prevalence of HWWS is low – averaging approximately 17% (Curtis, 2009); 1-2% in schools (IRC, 2008).

Effectiveness of various interventions to reduce diarrhea

Previous reviews:

a – d   Esrey SA et al. (1991) Bull WHO 69 (5): 609-621

e   Curtis V, Cairncross S (2003) Lancet Inf Dis 3: 275-281.

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Prevalence of HWWS

Table III. *HWWS and water by mother or caregiver on key occasions*

Country	n	HWWS after toilet (%)	HWWS after cleaning child (%)	HWWS after cleaning up child stools (%)	HWWS before feeding index child (%)	HWWS before handling food (%)	HW with water only after toilet (%)
Ghana	500	3	2	—	1	—	39
Kerala, India	350	42	—	25	—	—	—
Madagascar	40	4	—	—	12	—	10
Kyrgyzstan	65	18	0	—	—	—	49
Senegal	450	23	18	—	—	18	—
Peru	500	14	—	—	6	—	—
Sichuan, China	78	13	—	16	6	—	87
Shaanxi, China	64	12	—	—	16	—	14
Tanzania	30	13	13[a]	13[a]	4	—	33
Uganda	500	14	19	11	6	8	44
Vietnam	720	—	14	23	5	—	51
Kenya[b]	802	29	35	38	13	15	57
Average		17	13	19	5	13	45

Source: Curtis V, Danquah L, Aunger R. (2009)

HWWS in Schools (Study IRC 2008 Kenya) **Only 5 out of 100 schools had soap available for children. Less than 2% (only 21 out of 951 of the children) were observed to wash their hands with soap.**

What about ash?

- Ash has shown to be as effective as soap
- "it is the effectiveness of the scrubbing action rather than a specific agent which removes the bacteria from the Hands". (see Hoque et al 1995)
- When using ashes to wash hands is already a custom, it may be easier to just focus on Good Ash Handwashing Practices (the scrubbing action and the critical moments)
- To "sell" the use of ashes to new users can be hard, or even appear to be counter-intuitive (*this stuff makes my hands dirty!*). It's easier to find motivators for the adoption of soap products
- http://www.ifh-homehygiene.org/

2. Hand Washing Promotion:

A Shift in Approach

Traditionally (from)…

- Messages that "educated" the audience on a very wide range of health related subjects rather than changing behavior
- Messages often didactic, negative and focused strictly on the avoidance of illness as a motivator;
- Standardized messages, not based on any in-depth knowledge of the local situation;
- Health education efforts tended to be one shot efforts; sequenced and implemented ineffectively;
- Programs were implemented largely at the community and household level (not at scale).

To improved approaches…

- Highly participatory methods, adaptable to local context which had success in maintaining awareness.

- *But* ineffective at behavior change at scale due to high costs of preparation and implementation, high dependence on extension workers' capacity and inclusion of several behaviors and the resulting lack of clarity.

Key Principles

- Target a small number of risk practices.
- Target specific audiences.
- Identify the motives for changed behavior.
- Hygiene messages need to be positive.
- Identify appropriate channels of communication.
- Decide on a cost-effective mix of channels.
- Hygiene promotion needs to be carefully planned, executed, monitored and evaluated.

[1] Well Fact sheet: fallacies and key principles of hygiene promotion

Now…behavior change at scale

- *Broad partnerships of public and private sector stakeholders who have a mutual interest in increasing hand washing with soap*
- *Focus on the one behavior with largest potential health impact*
- *Consumer-centered marketing approach.*

*the main lessons from the Central America PPP in the 1990s, forming the basis of future work in the PPPHW

Partnerships…

- Combine the strengths of various stakeholders, i.e. ministries of health, private sector, NGOs, health centers, etc.

- Allows for leveraging various communication channels and greater knowledge of target audience motivations and aspirations.

- Facilitates working at scale toward sustained behavior change.

Example of win-win partnership in Central America

	Private Sector	Public Sector
Benefits	• Increased soap market/sales • Positive media attention • New alliances with public sector • Exposure to new methods of market research, advertising and engagement with communities for behavior change	• Increased reach/coverage to different target groups • Reduced incidence of diarrheal disease • Sustainable changes made in the private sector's advertising messages • Exposure and access to greater resources in social marketing techniques • Improved school hygiene programs
Contributions	•Marketing expertise in design and implementation of advertising strategy •Sustainability of supply – appropriate pricing (donor dependency reduced)	•Access to social networks, coverage of poorest populations •Assistance in the distribution of advertising messages/ materials (Saade et al., 2001)

Break/Discussion
(5 minutes)

Challenge question:
Why did diarrheal rates go down in Bolivia during
the H1N1 outbreak in 2009?
Hint: http://www.time.com/time/health/article/0,8599,1931223,00.html

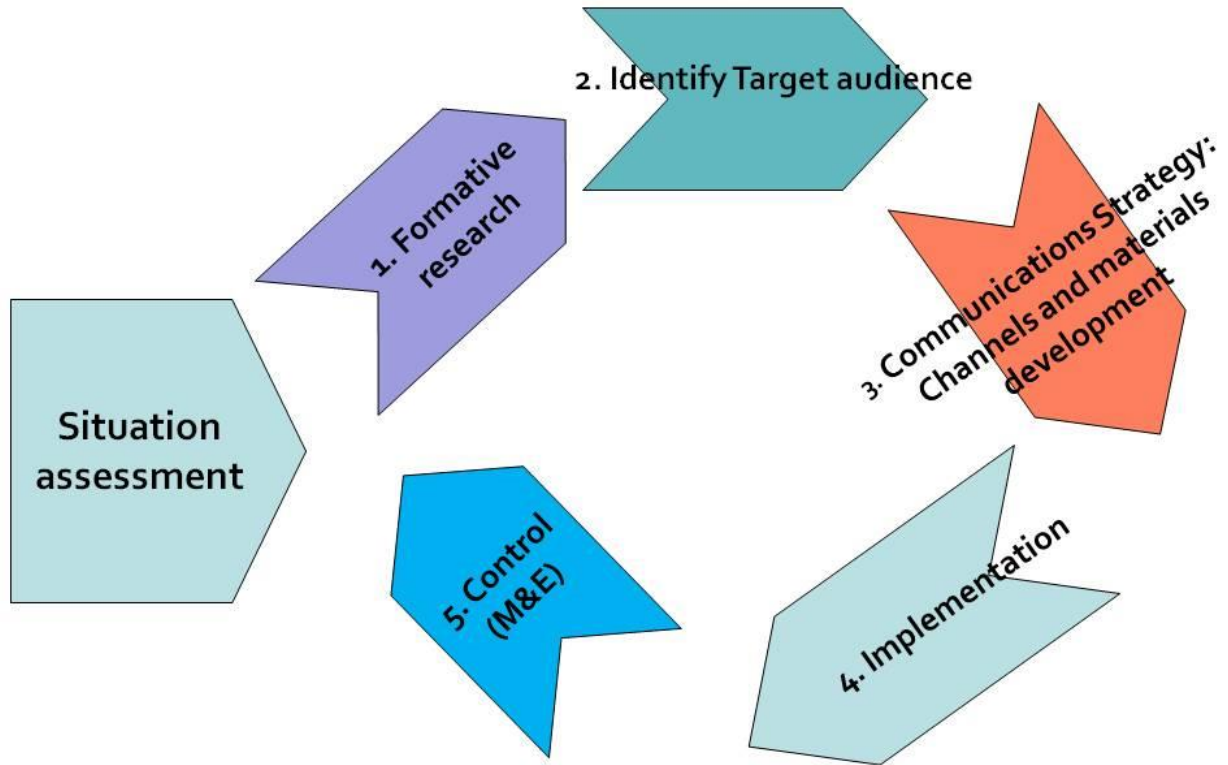# 3. Taking Hand Washing to Scale: Key Elements

HWWS Program Design: Key Elements

✓ Formative Research

✓ Identify intended audience(s)

✓ Communications Strategy

✓ Monitoring Mechanism

HWWS Program Development Process

I. Formative Research

– What are the risk practices?

– Who carries out risk practices?

– What drivers, habits, and/or environment can change behavior?

– How do people communicate?

- **Primary step** to identify motivations for HWWS behavior, identify communication channels, design messages, etc.

- Includes quantitative and qualitative research into consumer, health, and HWWS behaviors.

- **We're not starting from scratch!** FR available for: Ghana, India (Kerala), Madagascar, Kyrgyzstan, Senegal, Peru, China (Shaanxi and Sechuan), Tanzania, Vietnam, Uganda and growing...

- *Insights suggest that there are global commonalities in motivators of HWWS behavior*

Motivation	What we have leant
Disgust	Being aware of contaminating matter on hands does motivate an immediate need to HWWS. BUT hands may not feel contaminated after fecal contact.
Fear	Child diarrhea is not perceived as a threat. Link between HWWS and child diarrhea is tenuous. Epidemic disease such as cholera may motivate HWWS temporarily, but stops when danger is past.
Comfort	Mothers enjoy the feeling of clean, fresh-smelling hands from which dirt has been removed. The comfort motive may provide an additional benefit to mothers from HWWS, but perhaps not provide a central motive.
Nurture	A strong motivator for maternal behavior; however, it does not seem to get mothers to HWWS before feeding their child. But, mothers are strongly motivated to educate their children in good manners — HWWS as part of a set of good manners may be a possible avenue to explore.
Affiliation	Doing what everyone else is perceived to do is a strong motivator of current (lack of) HWWS. The affiliation motive could be employed through highlighting that most people believe that HWWS is the right thing to do.
Status	People care deeply about their social status and being perceived as dirty is to be avoided at all costs. However, HWWS is often a private affair, hence nobody can tell if hands have been washed or not.
Attraction	As with status, it may be difficult to tell if hands have been washed with soap or not, hence the motivation link is probably too indirect.

Motivation	What we have learnt	Good candidate? explain
Disgust	Being aware of contaminating matter on hands does motivate an immediate need to HWWS. BUT hands may not feel contaminated after fecal contact. **Make hand contamination feel real. (Glo-Germ)**	**Yes**
Affiliation	Doing what everyone else is perceived to do is a strong motivator of current (lack of) HWWS. The affiliation motive could be employed through highlighting that most people believe that HWWS is the right thing to do. **Make HW seem common, create a 'culture of handwashing'.**	**Yes**
Comfort	Mothers enjoy the feeling of clean, fresh-smelling hands from which dirt has been removed. The comfort motive may provide an additional benefit to mothers from HWWS, but perhaps not provide a central motive.	Maybe
Nurture	A strong motivator for maternal behavior; however, it does not seem to get mothers to HWWS before feeding their child. But, mothers are strongly motivated to educate their children in good manners — HWWS as part of a set of good manners may be a possible avenue to explore.	Maybe
Status	People care deeply about their social status and being perceived as dirty is to be avoided at all costs. However, HWWS is often a private affair, hence nobody can tell if hands have been washed or not.	No
Attraction	As with status, it may be difficult to tell if hands have been washed with soap or not, hence the motivation link is probably too indirect.	No
Fear	Child diarrhea is not perceived as a threat. Link between HWWS and child diarrhea is tenuous. Epidemic disease such as cholera may motivate HWWS temporarily, but stops when danger is past.	No

Formative research in action…

- *Disgust* – Ghana PSA, Glo-Germ (used in Lifebuoy Swasthya Chetna program in India),
- *Dirt is Good* Campaign of Unilever built upon universal motivators, being good parents, etc.
- *Social Norm/Affiliation* – UNICEF India campaign with Sacha Tendulkar
- Development of *GHD logo* – consumer feedback

II. Identifying Intended Audiences

- HW programs target those groups whose HW behavior can have the largest impact on disease reduction: usually the caretaker of under-fives.

- Primary caretaker is usually the mother of the young child; however, it is important to document who else participates – grandmothers, sisters, fathers in some societies, aunts, etc.

- School age children also form an intended audience as the caretakers of the future and more susceptible to the uptake of new healthy habits and as enthusiastic advocates/messengers of the behavior.

Intended Audience Segmentation

- Process of dividing the intended audiences into groups with similar behaviors and needs - each segment will require different marketing strategies.

- Secondary target segments support and influence behavior change among the primary group. i.e. fathers of children under five years, mothers-in-law, teachers and healthcare workers.

- A third segment may be stakeholders who can assist in garnering political commitment.

Example: Audience Segmentation

- *Target group:* women who care for infants and young children under five in developing countries in poor communities.

- *Secondary behavior change intended audience: Mothers* defined as having at least one child and likely to be caring for other children and responsible for teaching her own children and those within her extended family.

- *Tertiary behavior change intended audience: 'Old Hands'* defined as elderly women in the household/community with responsibility for 'handing down' advice and practices for younger women.

III. Developing a Communications Strategy

❖ Background/formative research/situation analysis

❖ Target audience

❖ Objectives of the communications program

❖ Key Messages

❖ Communication channels

❖ Monitoring/feedback system

Objectives of the communications plan

- Align program and communications objectives

- Set realistic expectations based on insights, resources, scope of campaign
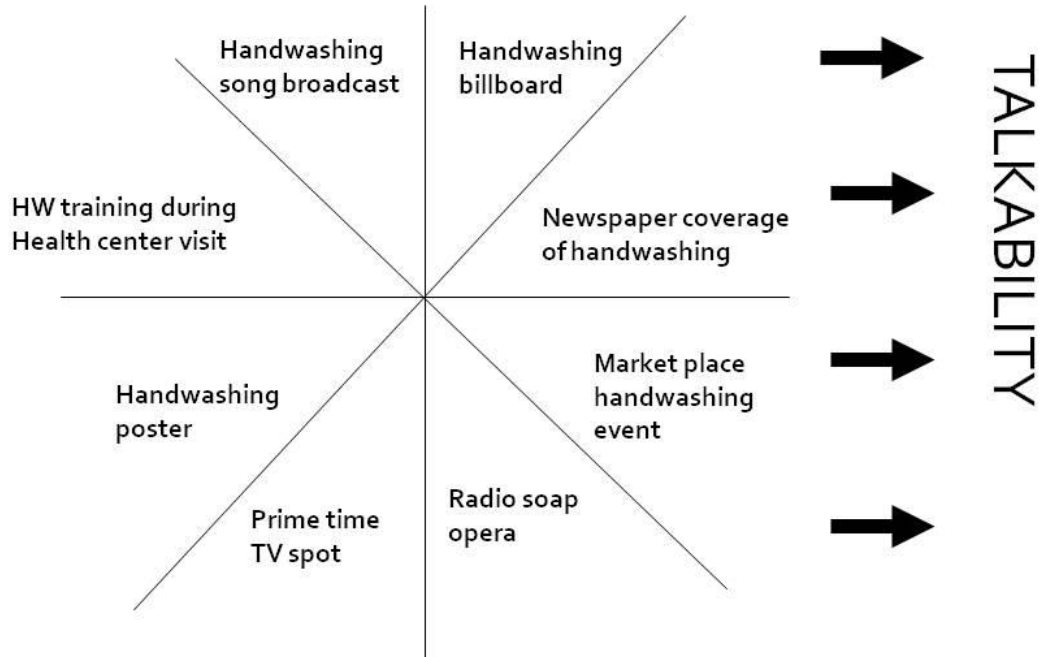
Messaging

- Develop messages based on insights from the FR, tailored to intended audiences

Communications Channels

Approach	Description	Advantage	Disadvantage
Mass media	Messages crafted to be transmitted through an optimized mix of radio TV, billboard, and other channels.	Low cost per capita, can be highly memorable, can raise the political profile of handwashing, easy to monitor.	Needs high saturation (6+contacts) to affect behavior change. Difficult to fund Audience cannot interact.
Discussions with consumers	Events organized by professional event management agencies held in schools, public places, community groups.	Good audience event interaction. high impact, memorable.	High cost per capita. Uncertainty about impact and optimal size of audience.
Public Channels	Using the ability of government agencies to deliver handwashing messages through schools and health centers.	Potentially highly sustainable, if promotion becomes part of curriculum, job description of health agent, promoted at ante- and post-natal contact.	Hard to control Contact with target audiences may be infrequent, resulting in low coverage Low ability to monitor activities.

Example of 360° Handwashing Message Exposure

Example: intended audience of mothers with young children

Handwashing song broadcast

Handwashing billboard

HW training during Health center visit

Newspaper coverage of handwashing

Handwashing poster

Market place handwashing event

Prime time TV spot

Radio soap opera

TALKABILITY

IV. Monitoring

- To ascertain the extent and effectiveness of the program.

- Serves to diagnose and help fix problems during program execution.

- Generally, involves three broad steps: a baseline survey, ongoing monitoring of program activities, and a post-intervention survey.

Monitoring and Research Tools

- Behavior trials/in depth interviews.

- Focus group interviews.

- Survey interviews/questionnaires.

- Structured observations.

Monitoring Challenges

- There is no simple, easily employed and reliable indicator of whether hands have been washed with soap at critical times or not. *Why not?...*

  - Self-reports of handwashing practices in response to verbal questioning produce rates that are inflated.

  - Direct observation of hygiene practices (structured observation) is thought to be the most valid and reliable method however labor intensive and tiring for the observer and for the observed.

  - Microbiological indicators of fecal contamination on hands are expensive and difficult to assess in field settings and the results are hard to interpret.

- Proxy indicators are currently the most promising tool for monitoring.

MICS HW Indicators

Two indicators selected which are currently being field-tested for MICS

1. Number of households with a designated place for hand washing where water and soap are present
2. Number of households with soap anywhere in the dwelling

"Soap" can be a range of products from a bar of handsoap, detergent, powder, to local cleansing material

"Present" doesn't demand for the product to be at the handwashing place - interviewees merely have to show it's somewhere in the household

Other HW Indicators*

- % of mothers of children age 0-59 months who report washing their hands with soap at least 2 of the appropriate times during a 24 hour recall period
- % of mothers of children age 0-59 months who report washing their hands with soap after using toilet, after defecation, or after cleaning baby's bottom / changing baby's nappy
- % of mothers of children age 0-59 months who report washing their hands with soap after feeding children.
- % of mothers of children age 0-59 months who report washing their hands with soap before eating
- % of mothers of children age 0-59 months who live in households with soap in the home, apart from at a specific place for hand washing

Developed by the Global Scaling Up Project

What we have learned

- *The Evidence*. HWWS at critical times is the most cost-effective way to reduce diarrheal disease. While knowledge of the practice is high, practice is low.

- *Behavior change.* Access to water and sanitation services alone is not enough to sustain hygienic behaviors.

- *Fewer, high impact messages.* Campaigns that focus on a single behavior are more successful. People are not motivated by health concerns.

- *Formative Research.* While FR is essential, it is also equally important to build on global insights and knowledge.

- *Scaling Up.* It is essential to mainstream HWWS promotion and indicators into current health promotion, education and water and sanitation national programs. Only if this happens will a 'culture of HWWS' develop and will HWWS behaviors be sustained.

- *Capacity Building and Awareness Creation.* The challenge is to increase awareness of the importance and effectiveness of HWWS as well as continue to grow our collective capacity to implement these approaches.