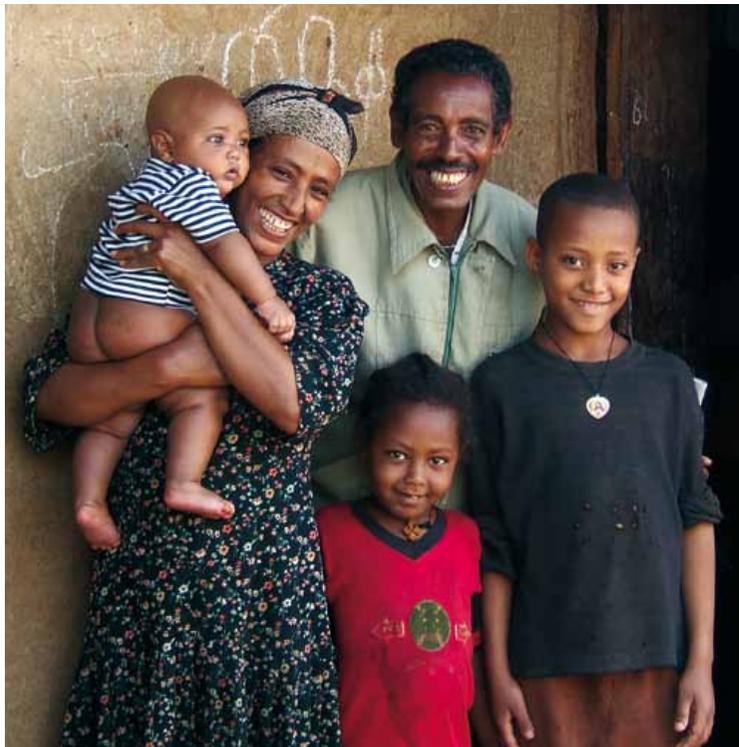




Sharing experiences:

Effective hygiene promotion in South-East Asia and the Pacific



 **WaterAid**

INTERNATIONAL
WATERCENTRE

 **IRC** International Water and Sanitation Centre

October 2010
ISBN 978-1-921499-03-6

A joint publication:



WaterAid – water for life

The international NGO dedicated exclusively to the provision of safe domestic water, sanitation and hygiene education to the world's poorest people.

www.wateraid.org.au



International WaterCentre – water leadership for the future

The International WaterCentre (IWC) is dedicated to providing the most advanced education and training, applied research and expert services to develop capacity and promote whole-of-water cycle approaches to integrated water management around the world.

www.watercentre.org



IRC International Water and Sanitation Centre – bridging the knowledge gap and joint learning with partners for improved, low-cost water supply, sanitation and hygiene in developing countries

Since its foundation in 1968, the IRC International Water and Sanitation Centre has facilitated the sharing, promotion and use of knowledge so that governments, professionals and organisations can better support poor men, women and children in developing countries to obtain water and sanitation services they will use and maintain.

www.irc.nl

Acknowledgements

This collection was drawn together and edited by Jan Parry, Kathy Shordt, Diane Cousineau (International WaterCentre) and James Wicken (WaterAid Australia). Christine Sijbesma (IRC International Water and Sanitation Centre) provided guidance and support.

A special acknowledgement to all contributing authors, who generously gave their time to prepare, edit and improve the case studies, and whose insights and experiences have contributed to the body of knowledge on hygiene promotion.

WaterAid Australia gratefully acknowledges the funding support of the Australian Agency for International Development (AusAID) for its support in developing this material and in printing and disseminating this publication through the Australian NGO Cooperation Program Innovations Fund.



Australian Government Aid Program

The research and views contained in this publication are the sole responsibility of the authors and can under no circumstances be regarded as reflecting the position of WaterAid Australia, the International WaterCentre, the IRC International Water and Sanitation Centre, the Australian Government, AusAID or any organisation referred to in the case studies.

Sanitation and water coverage data on the front page of each case study is taken from Joint Monitoring Program. (2010). *Progress on sanitation and drinking water 2010 update*. Geneva: World Health Organization and UNICEF.

Sanitation and water coverage for Solomon Islands and Fiji is taken from UNICEF & WHO. (2008). *A Snapshot of Drinking Water and Sanitation in South-eastern Asia and the Pacific*. Published for Sanitation and Water, 2008, A World Vision/AusAID Conference. Geneva: World Health Organization and UNICEF.

Images

Front cover: (Right to left) WaterAid/Jon Spaul, WaterAid/Layton Thompson, Academy for Educational Development/Hygiene Improvement Project, Academy for Educational Development/Hygiene Improvement Project.

Back cover: (Right to left) UNICEF, Live and Learn Environmental Education, Christine Sijbesma, WaterAid/Marco Betti.

Case study divider: (Right to left) WaterAid/Marco Betti, WaterAid/Jon Spaul, WaterAid/Martin Argles, Australian Red Cross/Mel Tolnay.

Recommended citation

WaterAid Australia, International WaterCentre, IRC International Water and Sanitation Centre. (2010). *Sharing experiences: Effective hygiene promotion in South-East Asia and the Pacific*.

Contents

Sharing experiences: Effective hygiene promotion in South-East Asia and the Pacific

Foreword	2
Synthesis	3
A snapshot of the case studies	4
Key lessons	6

Keynote papers

From Semmelweis to Global Handwashing Day: What's the latest on hygiene promotion?	8
--	---

Dr Valerie Curtis, The Hygiene Centre, London School of Hygiene and Tropical Medicine

A presentation of the latest information and data from epidemiologists and behaviour change scientists about hygiene behaviour change.

Coming into its own: Hygiene promotion for development	13
--	----

Dr Christine Sijbesma, IRC International Water and Sanitation Centre

An overview of the benefits of improved hygiene for development and analysis of approaches taken in hygiene promotion programs to answer the question: what can or should NGOs do?

The case studies

Community-based approaches

1 Volunteering for water, sanitation and hygiene behaviour improvements	25
<i>Heather Moran, BESIK (Bee Saneamentu no Ijene iha Komunidade)</i>	
2 Stories from rural hygiene promoters in Vanuatu: PHAST, tippy taps and working with men and women	29
<i>Gabrielle Halcrow and Joanne Crawford, International Women's Development Agency; Jocelyn Loughman, World Vision Vanuatu</i>	
3 Hygiene Improvement Project: Why WASH matters	33
<i>Renuka Bery, Julia Rosenbaum, and Eleonore Seumo, Hygiene Improvement Project/Academy for Educational Development</i>	
<i>Elizabeth Younger, Hygiene Improvement Project/The Manoff Group</i>	
4 Jakarta's impoverished kids lesson series: 10 take-home hygiene messages	39
<i>Mindy Weimer, Yayasan Tirta Lestari and Mita Sirait, WatSan Action</i>	
5 Tugeda Uime Waka for Helti Komuniti (together we work for healthy communities)	43
<i>Sarah Davies and Donna Webb, Australian Red Cross</i>	
6 Real involvement, real participation	47
<i>Miriam Layton and Steve Layton, ATprojects</i>	

Campaign approaches

7 Public-Private Partnership for Handwashing with Soap in Indonesia	51
<i>Ida Rafiqah and Isabel Blackett, Water and Sanitation Program (WSP), World Bank</i>	
8 The development of an entertainment education program to promote handwashing with soap among primary school children in Vietnam	55
<i>Nga Kim Nguyen, The Vietnam Handwashing Initiative, Water and Sanitation Program (WSP), World Bank</i>	
9 Global Handwashing Day and beyond	59
<i>Ann Thomas, UNICEF</i>	

School focus

10 A strong foundation: Revising Cambodia's National School Health Curriculum to prevent and control intestinal worms	65
<i>Leng Wannak and Aminuzzaman Talukder, Helen Keller International – Cambodia</i>	
<i>Pen Saroeun, Ministry of Education, Youth and Sport (School Health Department)</i>	
<i>Kim Koporc, Children Without Worms</i>	
11 Student-led hygiene promotion and empowerment in rural schools in the Western Pacific (a photo story).....	71
<i>Christian Nielsen, Live and Learn Environmental Education</i>	



WATERAID / MARCO BETTI

Foreword

Diarrhoea is the leading cause of child deaths in Sub-Saharan Africa and the second largest cause of child deaths globally. The latest available data indicate that in 2008 1.3 million children under the age of five died from diarrhoea, an entirely preventable disease.

Hygiene promotion, including handwashing with soap, has been shown to be one of the most effective ways of reducing diarrhoeal incidence. There is no Millennium Development Goal target for hygiene promotion; however there are targets for the other aspects of WASH (water, sanitation and hygiene). 2.7 billion people, almost two-fifths of the world's population still live without access to improved sanitation and around 900 million people, roughly one in eight of the world's population, live without access to safe drinking water.

The AusAID sponsored Sanitation and Water 08 Conference in Melbourne in October 2008 identified hygiene promotion and behaviour change as keys to improving WASH outcomes in the region. At this conference delegates pledged to increase the focus on hygiene promotion and strengthen capacity in this area to address the WASH crisis in the region.

This publication and its widespread dissemination are a step towards turning this conference pledge into action through raising the profile of hygiene promotion and strengthening the capacity of practitioners to design and implement effective hygiene promotion programs.

I recommend this publication as an excellent tool to improve the effectiveness of hygiene promotion programs.

[Adam Laidlaw](#)

Chief Executive, WaterAid Australia

Hygiene promotion has been proven to be one of the most cost-effective public health interventions.

Synthesis

Sharing experiences on hygiene promotion

The Australian WASH Reference Group, led by WaterAid Australia, received funding from the AusAID NGO Cooperation Program (ANCP) Innovations Fund to achieve the objective of strengthening the capacity of organisations in Australia, South-East Asia and the Pacific to design and deliver effective hygiene promotion programs leading to the improved health of communities. This publication represents a key output of this AusAID funding, and it is being disseminated in conjunction with learning workshops both in Australia and the two target regions, so that the key findings can be shared widely among WASH and public health practitioners.

This publication searches for answers to the question: *What makes hygiene promotion work?* The search is guided in the following pages by two keynote papers and 11 project case studies. Each of the case studies examines hygiene promotion from its own perspective, ranging from large national campaigns to remote island communities. The case studies are written by authors from a wide variety of organisations: governments, local and international NGOs, and small and large donor programs. The majority of case studies describe experiences in the Pacific and South-East Asia, while a few highlight different approaches and issues from other regions.

The keynote papers and case studies in this publication are intended to provide a wide range of information, in some depth, about hygiene promotion. All case studies offer practical learnings and tools so that we can reflect upon these experiences, and also consider applying some of the techniques in our own work. Many of the case studies describe projects that are currently being implemented in the region. This publication does not take a position on which approach is the most effective for achieving hygiene behaviour change; rather, it illustrates what has been done, what has worked and what has not, and what we have learnt.

The following summary tables provide an overview of the main contents and key findings in the publication. To assist you in deciding what to read, **Table 1** provides a brief description of each paper. In this table, the case studies have been assembled and colour-coded according to the three main approaches to hygiene promotion: community-based approaches, campaign approaches and a school focus. **Table 2** highlights some of the key learnings emerging from this collection of case studies and is presented using an adaptation of the FOAM model (Coombes & Devine, 2009). The FOAM model describes four core elements of hygiene promotion programs that all need to

be analysed in order to achieve behaviour change. An 'S' has been added to the model here in order to draw attention to the importance of sustaining behaviour change. The key elements of 'FOAMS' are as follows:

F: Focus practices and focus groups;

O: Opportunities existing in the external environment to practice the behaviour, e.g. soap and water available, gender relations allow the practice;

A: Ability to practice, e.g. whether an individual possesses the skills, equipment and time;

M: Motivation to practice, e.g. a cleaner environment, to be modern, to be like others, a better life for children, a readiness to try new things, health benefits;

S: Sustained behaviour change; to determine if the behaviour has been sustained to the point of it being habitual.

References

Coombes, Y. & Devine, J. (2009). *Introducing FOAM: A Framework to Analyze Handwashing Behavior and Design Effective Handwashing Promotion Programs*. World Bank Water and Sanitation Program.



AUSTRALIAN RED CROSS/MEL TOLINAY

The publication searches for answers to the question: What makes hygiene promotion work?



AUSTRALIAN RED CROSS/MEL TOLINAY

A snapshot of the case studies

Table 1. A brief description of each case study

	Case study	Location(s)	Main topics
Community-based approaches			
1	Volunteering for water, sanitation and hygiene behaviour improvements	Timor-Leste , national community health program	<ul style="list-style-type: none"> • The government policy on health promotion – utilising volunteer Family Health Promoters to extend the reach of behaviour change initiatives • Family Health Promoters as hygiene role models • Making and marketing local herbal soap to increase demand for soap • How to support a cadre of volunteer health promoters
2	Stories from rural hygiene promoters in Vanuatu: PHAST, tippy taps and working with men and women	Vanuatu , lessons learned from the islands of Tanna and Santo	<ul style="list-style-type: none"> • A local adaptation of PHAST (Participatory Hygiene and Sanitation Transformation), and the development of community action plans • Climbing the ‘Handwashing Ladder’ and the use of tippy taps • Working with women and men to promote hygiene
3	Hygiene Improvement Project: Why WASH matters	Ethiopia, Kenya, Uganda, Tanzania	<ul style="list-style-type: none"> • Hygiene for people living with HIV or AIDS and their families • Why WASH needs to be fully integrated in existing HIV/AIDS programs • Trials of improved practice: negotiating with families to improve hygiene behaviour • Small do-able actions: easy steps for behavioural change
4	Jakarta’s impoverished kids lesson series: 10 take-home hygiene messages	Indonesia , urban slums of Jakarta	<ul style="list-style-type: none"> • Non-formal education for very poor children 8-12 years • A series of 10 lessons on personal and household hygiene, with questions and activities
5	Tugeda Uime Waka for Helti Komuniti (together we work for healthy communities)	Solomon Islands , remote rural communities	<ul style="list-style-type: none"> • Use of PHAST, particularly community action planning • Success and challenges in the implementation of PHAST – participation of women, providing incentives for and training volunteers • Impact of hygiene promotion on local-level conflicts
6	Real involvement, real participation	Papua New Guinea , rural schools	<ul style="list-style-type: none"> • Breaking down the stigma surrounding girls’ monthly menstruation • Use of Knowledge Sharing Workshops to enable end-users (girl students) to develop products to meet their needs • Development of a simple low-cost washing facility to enable girls to practice menstrual hygiene in rural schools

Case study	Location(s)	Main topics
Campaign approaches		
7	Public-Private Partnership for Handwashing with Soap in Indonesia	Indonesia , national level program
		<ul style="list-style-type: none"> • The role of the private sector in the partnership • The key ingredients to the partnerships • Campaign materials for partners to use to promote handwashing
8	The development of an entertainment education program to promote handwashing with soap among primary school children in Vietnam	Vietnam , national campaign and 512 schools
		<ul style="list-style-type: none"> • Development of a national handwashing campaign using mass media and interpersonal communication channels • Conducting formative research with the target audience • School-based interpersonal communication activities to complement a national campaign
9	Global Handwashing Day and beyond	International , with examples from individual countries
		<ul style="list-style-type: none"> • What helped to make the Global Handwashing Day (GHD) a success • How to improve public-private partnerships • Establishing the differences between advocacy, education and behaviour change • Harnessing the momentum of GHD to achieve longer-term success
School focus		
10	A strong foundation: Revising Cambodia's National School Health Curriculum to prevent and control intestinal worms	Cambodia , national school curriculum development
		<ul style="list-style-type: none"> • The process and findings from a curriculum review and situation analysis • Survey findings revealing levels of knowledge about preventing worms among school children and teachers
11	Student-led hygiene promotion and empowerment in rural schools in the Western Pacific (a photo story)	Fiji, Vanuatu and the Solomon Islands , rural schools
		<ul style="list-style-type: none"> • Photos illustrating participatory techniques to facilitate active learning on topics relating to good hygiene behaviour

Key lessons

Table 2. Key learnings from the 11 case studies presented using the FOAMS model (adapted from Coombes & Devine, 2009).

Focus	Opportunity	Ability
<p>Know your Focus groups</p> <ul style="list-style-type: none"> • Understand the environment in which practices occur: Who can influence and support behaviour change? What would motivate behaviour change? What drivers motivate change other than health? What are the key barriers to overcome, such as gender relations and workload for women? • Research and pilot test behaviour change materials before going to scale. 	<p>Ensure that there is Opportunity to change behaviour at the community level</p> <ul style="list-style-type: none"> • When households have a convenient and logical place where all handwashing materials are available, then actual handwashing practice is better. Building low-cost (or no cost) handwashing stations can help individuals take the step from simply understanding the importance of handwashing, to actually practicing handwashing with soap. • Hygiene promotion that is focused on men has resulted in more support for hygiene in the household and more recognition of the hygiene-related work undertaken by women in the home. 	<p>Enable adults and children to acquire the Ability to practice good hygiene behaviour</p> <ul style="list-style-type: none"> • Community role models can ignite interest among households to build their own handwashing stations. Community facilitators can show how to build a simple tippy tap, or a plastic storage bucket with lid and tap, or make and market soap. Increasing knowledge, combined with visible practical solutions, helps to overcome concerns about the time or cost associated with practicing good hygiene behaviour. • Participatory methods help community people to understand good and risky local hygiene practices, and to plan, implement and monitor local action plans.
<p>Prioritise Focus practices and avoid message overload</p> <ul style="list-style-type: none"> • Focus on a single or a few behaviours at a time. • A campaign or social-marketing approach is suitable for promoting one specific hygiene practice such as washing hands with soap. A campaign needn't always be organised at a national level; it can be delivered to a smaller target population such as at the district level. • To stimulate improvements in several hygiene practices, use participatory methods with your target groups. Discuss, negotiate, and jointly identify problems and solutions for adoption of priority hygiene behaviours. For behaviour change, focus not on messages but an active understanding of high risk behaviours and good practices. • Behaviour change techniques such as PHAST can, and should, be adapted to the local environment and context. PHAST does not have to rely on health messages alone, but should instead focus upon target behaviours that will resonate strongly with the local audience. • When working in schools, address the issue of menstrual hygiene management. As with other behaviours, invest time in finding out about current practices and identify and agree on what can be changed and how. 	<p>Ensure that there is Opportunity to change behaviour at the institutional level</p> <ul style="list-style-type: none"> • For hygiene behaviour change to be successful in integrated WASH programs, there must be a specific hygiene promotion strategy, a dedicated budget for hygiene, a monitoring and evaluation (M&E) component for behaviour change and adequate skilled staff. • Effective hygiene promotion requires well-trained and supported promoters who help bring about change through community action-planning and follow-up. This crucial role needs to be valued and people need to be provided incentives to take on this role, for example through encouraging a career structure for volunteers to gradually enter paid positions. • Consider the value of partnerships with the private sector, for example food companies, banks and mobile phone companies and soap manufacturers. Private companies are not usually natural partners for governments and NGOs, but there is huge potential to raise awareness about hygiene through partnerships with private companies at the national and local level. Companies can market and mobilise their customer base at a rate and speed which is hard for an NGO to achieve. Specific events such as Global Handwashing Day can represent an opportunity for partnership. Partnerships need to be built in a way that protects negative developmental effects, for example, by not crowding out small, local soap producers. 	<ul style="list-style-type: none"> • Focus on small, easy, sequential steps, and 'do-able' actions. Gradual change is easier to achieve. Move from the least desirable to the ideal practice, for example, by moving up the hygiene ladder. • Be careful about funding the development of new Behaviour Change Communication (BCC) materials. These materials are usually in plentiful supply but are often not used. Find out what exists before re-inventing the wheel. Learning tools can be self-made or photocopied and should be owned by the local people themselves so that they can be re-used within the community. • Use child-centred, participatory learning approaches, including activities that are fun for children, to promote hygiene behaviours.

Motivation

Motivate new behaviours drawing upon the specific drivers of change, not just health

- Disgust, the need to protect children (nurture), the need to fit in (affiliation), comfort, and the need to attract others (attraction) are the most powerful drivers of behaviour change. The fear of disease, or improved health, is not the only or strongest driver for practicing good hygiene behaviours. It is important to take time to understand the local “drivers of change” before designing hygiene promotion programs.
- Health motivation comes from participatory assessments of good and risky local conditions and practices, through a process of learning from peers, rather than from top-down education. Outsiders can facilitate learning, not enforce it.

Sustained

Determine if the behaviour has been Sustained

- Monitoring and evaluation (M&E) needs to be done much better. There was very limited data and information in the case studies about whether or not behaviours had been sustained over time. More commonly, anecdotes from community members were supplied to suggest that change had occurred.
- Hygiene promotion programs should better assess existing conditions and practices at the start, during, and at the end of a hygiene promotion program, and again some time afterwards. It is better to measure a few indicators over time, than a lot only at the start and finish.
- In the planning of hygiene promotion programs, sufficient budget, training and staff time needs to be allocated to M&E so that the project can determine if practices have been sustained to the point of becoming habitual.
- Good M&E further requires good investigation methods. Answers to questions that relate directly to promoted practices result in inflated statistics, because people know what the answer should be. Typical examples are questions on whether toilets are used, hands are always washed with soap, and what the critical times for handwashing are. Combining multiple, simple techniques e.g. inspections, observations, discussions and pocket voting, can serve to increase the accuracy of M&E findings.
- M&E should be participatory and directly involve the community. This recommendation stems from the lesson that participatory learning gives better results. It also stems from the development principle that communities and schools have a right to know about their own conditions and practices at the start, and then be inspired to plan for improvements and monitor progress towards change over time. Project staff can facilitate the gathering of M&E information by the community members themselves.
- We need much better information on the cost of hygiene promotion programs – only one case study included some information on cost. Without better information on cost it will be difficult to advocate for greater priority for hygiene promotion.

References

Coombes, Y. & Devine, J. (2009). *Introducing FOAM: A Framework to Analyze Handwashing Behavior and Design Effective Handwashing Promotion Programs*. World Bank Water and Sanitation Program.



A mother with her baby washes her hands using a tippy tap

Disgust, the need to protect children (nurture), the need to fit in (affiliation), comfort, and the need to attract others (attraction) are the most powerful drivers of behaviour change.

Keynote paper

From Semmelweis to Global Handwashing Day: What's the latest on hygiene promotion?

Dr Valerie Curtis, The Hygiene Centre, London School of Hygiene and Tropical Medicine

The study of hygiene has an important place in the history of epidemiology. One of the first ever statistical investigations of death and disease was carried out on rates of death in childbirth in the Vienna General Hospital around 1847. Ignaz Semmelweis noticed that patients attended by student doctors who had recently carried out autopsies died at a much higher rate than those attended by midwives. He correctly surmised that something was being transferred on the hands of the doctors. He solved the problem by instituting a handwashing regime in the hospital (Semmelweis, 1861). Just a few years later John Snow conducted his famous investigation into the causes of cholera in London. His investigations incriminated not just contaminated water supplies but the poor hygiene practices of the people living around the Broad Street pump (Snow, 1855). Today modern living conditions including sewerage, piped water supplies and, above all, the widespread adoption of commercially promoted soap have gone a long way towards eliminating infectious disease in rich countries, helping to reduce mortality rates from infection to 5% of all deaths. However, in Africa a full 65% of deaths are due to infections, while the figure is 35% in Asia (WHO, 2002). Today new generations of epidemiological studies help us to understand these disparities, and continue to point to the importance of good hygiene in preventing infectious disease.

In this chapter we will look at the epidemiological evidence, not all of which has moved on from the days of Semmelweis and Snow, for the importance of good hygiene practices. However, if we want to improve the situation, it is not enough to understand the links between hygiene and disease; we also need to understand why people behave the way they do. Hygiene is deeply embedded in local culture, in habits learnt since childhood and in the settings in which such behaviour is practiced. To change it we need to learn from behavioural scientists, in particular psychologists and anthropologists. As well as looking at the epidemiological evidence concerning hygiene and health, this chapter also provides a short introduction to what is known about how to change hygiene behaviour, and points to where to go to find out more.

The epidemiology of hygiene

One of the biggest causes of child death is diarrhoeal disease. Indeed it is rarely appreciated that these infections still kill more children than malaria, HIV and measles combined (UNICEF & WHO, 2009). Yet, with a little more investment, almost all of these deaths could be prevented. According to a recent review by the World Bank, promoting hygiene is the single most cost-effective means of preventing disease that we know of (Jamieson *et al.*, 2006).

Hygiene, however, is a complex subject which covers a large variety of practices including safe stool disposal, food hygiene, safe disposal of wastes, child care practices, washing, bathing and handwashing. Not all of these practices are as important for health as others, and promoting all of them is impractical and possibly unnecessary. How can we decide which of these practices most need improvement? In an ideal world epidemiologists would have carried out trials of interventions to improve different practices and gauged the effect on the incidence of

diarrhoeal disease. Though some of these practices have been well studied, sadly, for others the state of our knowledge has hardly advanced since the days of Semmelweis and Snow.

Table 1 summarises the evidence for the importance of handwashing with soap, food hygiene, stool disposal, surface cleaning, and waste disposal (Curtis *et al.*, submitted). Public health practitioners increasingly look to the published evidence when they make decisions about what policy to adopt. While the best source of evidence is the randomised



Figure 1. Stimuli used to probe for different handwashing motives (affiliation)

controlled trial of an intervention, when this is not available they look to whether the impact is plausible, whether modelling studies suggest a significant risk, and whether observational studies have established a link between the practice and a disease outcome. In the case of the different hygiene practices, it can be seen that while all practices (except perhaps waste disposal) are highly likely to have an impact on diarrhoea based on plausibility, there is only limited evidence about food, stool, surface and animal hygiene.

While it is highly plausible from the perspective of the faecal-oral transmission of pathogens that most of these practices could cause disease, the safe removal of rubbish does not immediately interrupt the transmission of major and common diseases. Many microbiological risk modelling studies have been carried out to gauge the risks of poor food and surface hygiene, but almost all of these concern Europe or the USA, and almost none have been carried out in the poor environments where the risks are greatest. The fourth column of the table concerns observational studies, which show strong connections between poor hand and

stool hygiene in developing countries. However, this only demonstrates a link, and cannot prove that the link is causal. Amazingly, there seem to be almost no randomised controlled trials of food hygiene, stool or waste disposal and those few on surface hygiene in developed countries proved inconclusive. This does not mean that these practices are not important for health, only that we cannot be sure of their impact because too few studies have been conducted.

The table shows how much work epidemiologists still have to do in figuring out the links between hygiene and disease. It also shows that there is coherent and converging evidence that handwashing with soap can have a significant impact on diarrhoea rates. A large number of reviews have collated this evidence. The most recent concluded that handwashing with soap can reduce diarrhoeal disease by 48% (Cairncross *et al.*, 2010). Ejemot found that handwashing could reduce diarrhoea by 30%, however, in the studies that specified soap use the reduction was 43% (Ejemot *et al.*, 2008, Curtis, 2008). A review by Fewtrell *et al.*, also found a 43% reduction (Fewtrell *et al.*, 2005),

and our earlier review found a 43 - 48% reduction in diarrhoeal risk (Curtis & Cairncross, 2003). While the studies on which these results were based were not all of excellent quality, this represents consistent evidence that handwashing with soap (HWWS) can reduce diarrhoeal risk by about 45%.

Handwashing with soap can also prevent other health problems. It reduces the risk of respiratory infections by about 23% (Rabie & Curtis, 2006, Ensink, 2004). Handwashing by mothers and birth attendants was associated with a 40-44% reduction in neonatal mortality in a recent study in Nepal (Rhee *et al.*, 2008). Handwashing prevents trachoma and ascaris infection (Fung & Cairncross, 2009) and is an effective control measure in pandemics such as SARS (Fung & Cairncross, 2006, Schemann *et al.*, 2002) and Pandemic Flu (Jefferson *et al.*, 2008).

Hence, the epidemiological evidence points to handwashing with soap being one of the most important measures that families can take to prevent disease. So why is this simple measure not universally practiced? If we are to change such ingrained behaviours we first need to understand them.

Understanding hygiene behaviour

Hygiene behaviour is almost as old as life itself. Almost every animal behaves in such a way as to minimise its risk of getting eaten by parasitic life forms such as worms, microbes and viruses. Fish and primates, for example, keep their skins clean and healthy and free of

parasitic worms and flies. Lobsters, bullfrogs and mice keep away from others of the same species that show signs of illness, reindeer and caribou migrate to avoid infecting their young with parasites from heavily dunged grazing grounds, some insects fling their frass away from the leaves they are eating, fish also defecate away from their grazing grounds and birds remove faecal sacs from nests. Badgers change their bedding and chimps have been seen to engage in penile hygiene after sex (Curtis, 2007). Humans engage in the same behaviours, keeping themselves and their environments free of disease-causing agents. Hygiene thus is part of our biology; behaviour that we indulge in instinctively, independent of how much, or how little, we have learnt about germs.

Much of this behaviour is driven by the motive of *disgust*, an innate adaptive system that has evolved to cause us to behave in ways that help us to avoid disease (Curtis & Biran, 2001). However, hygiene is not just a matter of disease avoidance. By being clean people demonstrate their good manners, in effect by not forcing their own emanations or possible infections on others. People clean and tidy themselves and their environments also to impress others – because dirty people are often disrespected and treated as if they are of low *status*. Another motive for being hygienic is to *attract* others. Adolescents at the age to become interested in sex become major consumers of hygiene products and occupy bathrooms for far longer than when they were younger. Hygiene is also a matter of *comfort*. Having sticky, clingy or smelly materials on one's body is uncomfortable and produces the

Table 1. Summary of evidence connecting different hygiene practices with diarrhoeal disease

Hygiene practice	Plausible	Modelling	Observation	RCTs ¹
Handwashing with soap	Strong	Strong	Large	Large
Food hygiene	Strong	Only developed countries	Inconclusive	-
Stool disposal	Strong	-	Large	-
Surface cleaning	Yes	Only developed countries	Inconclusive	Inconclusive
Waste disposal	Weak	Limited	Large	-

1 Randomised Controlled Trials are a rigorous way of determining whether a particular intervention is effective. Participants are randomly assigned to the intervention (e.g. a drug, a health promotion campaign) or the control group and the outcomes for the two groups are compared.

desire to wash it off. Mothers also care for and protect their children; keeping them clean and hygienic is a *nurturing* activity. People often behave hygienically for no other reason than that it is what everyone else is doing - we call this motive *affiliation* because it serves to reinforce membership in social groups. All of these motives (*disgust, status, attraction, comfort, nurture, affiliation*) might be important for handwashing. People might also practice handwashing simply out of habit, or they might do so as part of a long term plan to keep themselves and their families healthy.

We explored the various motives that people have for being hygienic in 11 formative research studies in Africa (Ghana, Tanzania,

Uganda, Madagascar, Senegal, Kenya) Asia (India, China, Vietnam, Kyrgyzstan) and Latin America (Peru). Formative research involves trying to understand why people behave as they do as a way of determining how best to encourage people to change their behaviour (Curtis *et al.*, 1997).

Among a variety of research techniques, the studies employed structured observation to find out how often people were really washing their hands with soap (as opposed to asking people, which hugely overestimates actual practices (Biran *et al.*, 2008)). Table 2 shows that on average only 17% of people in these samples (largely representative of the countries/regions as a whole) were washing their hands with soap at the key moment after

defecation. Practices were not much better at other key occasions.

It was encouraging, however, to see that handwashing with plain water was a relatively common habit and could therefore be used as a building block to getting people to wash with soap.

The studies then used a variety of qualitative and quantitative research techniques to dig into people's motives for handwashing. One approach was to show people pictures depicting the different potential motives for handwashing that we discussed above (see Figures 1 to 3).

We found evidence that all of these motives were relevant to handwashing in the study

countries. *Disgust* was a particularly powerful motivator of handwashing – but only when people felt that their hands had become contaminated in the toilet. They often saw water as sufficiently purifying to remove this contamination. *Affiliation* also turned out to be key: as one Ugandan mother said: “washing hands to fit in is very common with us here”. Though *status* and *attraction* were important for general hygiene, they were less so for handwashing because, as mothers explained, handwashing is generally a private behaviour; people can rarely tell if you have washed your hands or not. *Nurture* was an important motive for handwashing, not so much for the children's health, but mothers cared deeply about their children's future

Table 2. Observed rates of handwashing with soap at key occasions

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

*The Kenya survey took place during a cholera epidemic which inflated handwashing rates



Figure 2. Stimuli used to probe for different handwashing motives (nurture, disgust)

success as social beings and wanted them to have good manners. However, if a small child was crying, the *nurture* motive would militate against handwashing, as a mother would want to run and comfort the child, and not stop on the way to wash her hands. *Comfort* was also described as important by mothers, who would always use soap to wash hands when it was needed to remove grease, oil, fish or other adherent dirt. This meant that hands were more often washed *after* meals rather than *before* them. *Fear* of disease only seemed to motivate handwashing when there was a clear and present danger from cholera or Avian flu, for example. Otherwise, the notion of possible diarrhoeal disease in children at some future date that might or might not be dangerous remained an abstract concern, in the realm of book learning emanating from outsiders to the culture. It had little intrinsic relevance or power to motivate handwashing at the key moments when hands were contaminated.

Habit, however, was a key factor in handwashing practice. Those few who were handwashers generally learnt it at an early age from their families and had been practicing it ever since. The habit was so ingrained that it was automatic, and did not require thinking about (Aunger *et al.*, 2009).

It thus became clear from the studies that educational approaches about germs and diarrhoea risk were unlikely to lead to an increase in handwashing. Indeed, in a trial in rural India we found no evidence of improvements in handwashing behaviour from using an educational approach concerning germs and disease risk (Biran *et al.*, 2009). Most mothers already knew about disease risk from not washing hands – but they still did not do it. We concluded that the powerful drivers of *disgust* and *affiliation* – i.e. doing like everyone else, following the norm – would probably work best to motivate handwashing, as well as *comfort* and *nurture*.

Some of these ideas were incorporated into a national handwashing campaign for Ghana. A television commercial used the idea that there was unseen contamination on hands after visiting the toilet (*disgust*) and that this would be transferred to the child’s food (*nurture*) by showing a mysterious stain on hands transferring to the child’s meal (www.globalhandwashing.org/resources/multimedia.php). This had a powerful impact nationally, leading to rates of reported HWWS before eating climbing by 41% and after the toilet by 13% (Scott *et al.*, 2007).

Other evidence points to disgust being an important driver of handwashing behaviour. A study in Australia found that posters depicting graphic contamination worked better than educational messages to get people washing hands in a public toilet (Drummond *et al.*, 2009). Disgust messages also worked to get both men and women washing hands in a public toilet in the UK (Judah *et al.*, 2009). In this study *affiliation* was the most powerful motive – where a message saying: “is the person next to you washing hands with soap?” worked better than any other overall.

For the future the challenge remains to demonstrate the best ways to improve handwashing behaviour in the settings where it is most important; in Africa, Asia, Latin America and the Pacific. Table 3 summarises what we think are likely to be the best approaches based on the evidence we have gathered about handwashing and from other types of behaviour change campaigns.

Of course, however much people are motivated to wash hands with soap, they cannot practice it if, for example, they do not have soap or water. The formative research studies showed that 97% of households did

have some sort of soap present on the day of the interview. The problem was that the soap was used for washing bodies, clothes and dishes, but not for hands. Similarly people had water available for other purposes but rarely used it for handwashing. A minority of mothers complained of the cost of soap and water, but recognised that the sums involved were much smaller than many everyday expenditures which were less vital for family wellbeing.

The studies also brought to light the inconvenience of soap as a tool for handwashing. It is difficult to hold and wash at the same time, it can slip out of hands and get dirty, it can be eaten by pigs or crows, it can be stolen or misused by children and it can become impure (*‘apavitra’* in Hindi) after contact with toilet activities. Some agencies have begun to search for enabling technologies, such as the tippy tap or other means of supplying soap and water more conveniently (Devine, 2010). For example, the Water and Sanitation Program’s (WSP) Global Scaling-Up Handwashing Project (HWWS) in Vietnam has been testing prototype handwashing station designs and has found that the mechanics of handwashing stations are complex and a universal design should not be assumed. The station design, presentation and ease of operation are all key factors affecting usage and thorough pilot testing is therefore essential (Devine, 2010). In our view a complete redesign of the means of cleaning hands at low cost is warranted. Commercial approaches may be best suited to resolving such problems.

Considerable experience in handwashing promotion has been gained by working with, and learning from, commercial soap manufacturers such as Unilever, Colgate-

Table 3. Some examples of motives and tactics that should be expected to work well in getting people to practice handwashing with soap (HWWS)

Motive	Tactic	Example	Notes
Disgust	Make mothers feel that their hands are contaminated	Depict contamination, use graphic images of faecal matter	Disgust has to be handled carefully so as not to turn people off
Affiliation	Make mothers feel that ‘everyone is doing it’	Pledges in public to wash hands with soap, houses with badges – ‘this is a handwashing household’ Buddy system in school - kids help remind each other	Pledges need to be specific-when exactly to handwash for example. Important to never say how rare handwashing is, as this will drive rates even further down
Nurture	Remind mothers to teach their children good manners	Head teacher sends letter home describing school handwashing campaign and asking mother for support	Get habits ingrained early. In teaching HWWS mothers learn to do it themselves

Palmolive and Procter and Gamble. They have proved ever-willing to collaborate on HWS programs and see that serious commercial benefits can be obtained by selling more soap and, at the same time, saving lives. They are inventive, creative, professional in their marketing and often able to mobilise effectively and quickly at national level when development agencies often lag slowly behind. In particular, commercial marketers are expert at briefing professional creative agencies to ensure that they come up with distinctive and powerful communications that really can change behaviour on a large scale.

A good example of joint public-private working has been the advocacy efforts devoted to Global Handwashing Day which is celebrated



Figure 3. Stimuli used to probe for different handwashing motives (status)

every 15th October in over 80 countries. All of the efforts of epidemiologists and behavioural scientists to better understand the problem of handwashing and to come up with effective solutions would be wasted without such efforts, which have raised the global profile of handwashing and enabled ever-increasing resources to be devoted to its promotion.

In summary, we have seen that epidemiologists since the days of Snow and Semmelweis have been aware of the importance of hygiene for public health, and their work has shown that handwashing is possibly one of the most important protective practices. However, far more studies are still needed to understand the importance of other hygiene practices such as safe stool disposal and food hygiene in developing countries, where we still know little more than we did in the nineteenth century. We have seen that behavioural scientists, too, have an important contribution to make, since without understanding the drivers of hygiene behaviour we cannot develop strategies to change it. Finally, we have seen that public and private actors can sometimes join forces to multiply their efforts at hygiene promotion and advocacy so that we can eventually reach the goal that every child lives in a household where they are protected from infection through safe hygiene.

References

Aunger, R., Schmidt, W., Ranpura, A., Coombes, Y., Maina, P.M., Matiko, C.N. & Curtis, V. (2009). Three kinds of psychological determinants for hand-washing behaviour in Kenya. *Social Science and Medicine*, 70(3), 383-391.

Biran, A., Rabie, T., Schmidt, W., Juvekar, S., Hirve, S. & Curtis, V. (2008). Comparing the performance of indicators of hand-washing practices in rural Indian households. *Tropical Medicine and International Health*, 13, 278-85.

Biran, A., Schmidt, W.-P., Wright, R., Jones, T., Seshadri, M., Isaac, P., Nathan, N. A., Hall, P., McKenna, J., Granger, S.,

Bidinger, P. and Curtis, V. (2009). The effect of a soap promotion and hygiene education campaign on handwashing behaviour in rural India: a cluster randomised trial. *Tropical Medicine and International Health*, 14, 1303-1314.

Bowen, A., Ma, H., Ou, J., Billhimer, W., Long, T., Mintz, E., Hoekstra, R.M. & Luby, S. (2007). A cluster-randomized controlled trial evaluating the effect of a handwashing promotion program in Chinese primary schools. *The American Journal of Tropical Medicine and Hygiene*, 76(6), 1166-1173.

Cairncross, S., Hunt, C., Boisson, S., Bostoen, K., Curtis, V., Fung, I., & Schmidt, W-F. (2010). Water, sanitation and hygiene for the prevention of diarrhoea. *International Journal of Epidemiology*, 39, 193-205.

Curtis, V. (2007). Dirt, disgust and disease: a natural history of hygiene. *Journal of Epidemiology and Community Health*, 61, 660-664.

Curtis, V. (2008). Commentary: Handwashing for preventing diarrhoea: Whats in a number? *International Journal of Epidemiology* 37, 473.

Curtis, V. & Biran, A. (2001). Dirt, disgust, and disease: Is hygiene in our genes? *Perspectives in Biology and Medicine*, 44(1), 17-31.

Curtis, V. & Cairncross, S. (2003). Effect of washing hands with soap on diarrhoea risk in the community: a systematic review. *Lancet Infectious Diseases*, 3(5), 275-281.

Curtis, V., Kanki, B., Cousens, S., Sanou, A., Diallo, I., & Mertens, T. (1997). Dirt and diarrhoea: Formative research in hygiene promotion programmes. *Health Policy and Planning*, 12(2), 122-131.

Devine, J. (2010). Global Scaling Up Handwashing Project: Insights for Designing a Handwashing Station for Rural Vietnamese. *Water and Sanitation Program Learning Note*.

Ejemot, R.I., Ehiri, J.E., Meremikwu, M.M., & Critchley, J.A. (2008). Hand washing for preventing diarrhoea. *Cochrane Database of Systematic Reviews*, 8.

Ensink, J. & Curtis, V. (2007). *Fact Sheet: Health impact of handwashing with soap*. WELL, WEDC, Loughborough University.

Fewtrell, L., Kaufmann, R.B., Kay, D., Enanoria, W., Haller, L., & Colford, J.M. (2005). *Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: a systematic review and meta-analysis*. *The Lancet Infectious Diseases*, 5(1), 42-52.

Fung, I.C.H. & Cairncross, S. (2009). Ascariasis and handwashing. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 103(3), 215-222.

Fung, I. C.-H. & Cairncross, S. (2006). Effectiveness of handwashing in preventing SARS: a review. *Tropical Medicine and International Health*, 11(11), 1749-1758.

Jamison, D.T., Breman, J.G., Measham, A.R., Alleyne, G. & Claeson, M., Evans, et al. (2006). *Disease Control Priorities in Developing Countries*, Oxford: The World Bank and Oxford University Press.

Jefferson, T., Foxlee, R., Mar, C.D., Dooley, L., Ferroni, E., Hewak, et al. (2008). Physical interventions to interrupt or reduce the spread of respiratory viruses: systematic review. *BMJ*, 336, 77-80.

Judah, G., Aunger, R., Schmidt, W-P., Michie, S., Granger, S., & Curtis, V. (2009). Experimental Pretesting of Hand-Washing Interventions in a Natural Setting. *American Journal of Public Health*, 99(s2), S405-411.

O'Reilly, C.E., Freeman, M.C., Ravani, M., Migele, J., Mwaki, A., Ayalo, M., et al. (2008). The impact of a school-based safe water and hygiene programme on knowledge and practices of students and their parents: Nyanza Province, western Kenya. *Epidemiology and Infection*, 136(1), 80-91.

Porzig-Drummond, R., Stevenson, R., Case, T., & Oaten, M. (2009). Can the emotion of disgust be harnessed to promote hand hygiene? Experimental and field-based tests. *Social Science & Medicine*, 68(6), 1006-1012.

Rabie, T. & Curtis, V. (2006). Handwashing and risk of respiratory infections: A quantitative systematic review. *Tropical Medicine and International Health*, 11(3), 258-267.

Rhee, V., Mullany, L.C., Khatry, S.K., Katz, J., LeClerq, S.C., Darmstadt, G.L. & Tielsch, J.M. (2008). Maternal and birth attendant hand washing and neonatal mortality in southern Nepal. *Archives of Pediatrics & Adolescent Medicine*, 162(7), 603-8.

Schémann, J. F., Sacko, D., Malvy, D., Momo, G., Traore, L., Bore, O., et al. (2002). Risk factors for trachoma in Mali. *International Journal of Epidemiology*, 31, 194-201.

Scott, B.E., Schmidt, W.P., Aunger, R., Garbrah-Aidoo, N. & Animashaun, R. (2007). Marketing hygiene behaviours: The impact of different communications channels on reported handwashing behaviour of women in Ghana. *Health Education Research*, 22, 225-33.

Semmelweis, I. (1861). The etiology, the concept and the prophylaxis of childbed fever. In C.A. Pest (Ed.) *Classics of Modern Medicine*. 1981 ed. Birmingham: Hartleben's Verlag-Expedition.

Snow, J. (1855). *On the mode of communication of cholera*. London: John Churchill.

UNICEF & WHO (2009). *Diarrhoea: why children are still dying and what can be done*. UNICEF/WHO.

WHO (2002). *World Health Report 2002*. Geneva: World Health Organization.

Keynote paper

Coming into its own: Hygiene promotion for development

Dr Christine Sijbesma, IRC International Water and Sanitation Centre, The Hague, the Netherlands

Introduction

This paper presents a state-of-the-art overview of current approaches used for hygiene promotion, and aims to help the reader understand the far-ranging benefits and importance of good hygiene practices. It describes behaviours, target groups, locations and timings when hygiene promotion is most crucial, and offers a range of approaches to hygiene promotion and a model for designing or assessing these approaches. The paper also examines a selection of good practices from the region highlighting their strengths and weaknesses, and offering a number of conclusions for hygiene promotion in South-East Asia and the Pacific. Extensive references of web-based papers are given to assist readers in examining specific areas of interest further.

Hygiene promotion benefits: beyond health

Safe hygiene can greatly improve health. Hygienic practices reduce diarrhoea, acute respiratory infections such as pneumonia and influenza, worm infestations and infections of eyes and skin. Ten studies showed that handwashing with soap could cut the risk, by an average of 23%, of upper respiratory infections which are the biggest killers of children under five. In her paper in this publication, Dr Valerie Curtis shows that handwashing with soap reduces diarrhoea, the second leading cause of death in children, by around 45%.¹ The Disease Control Priority Project (DCPP)², in which hundreds of specialists are involved, lists hygiene promotion as the intervention with the greatest effects at the lowest cost³.

However, the value of hygiene promotion goes beyond health benefits. Table 1 shows how the eight Millennium Development Goals (MDGs), which have been adopted by almost all countries in the world, are all related to good hygiene and its promotion. From this, it is clear that either directly or indirectly hygiene promotion supports all the Millennium Development Goals. However, to improve health, some hygiene practices are more important than others. The four most important clusters are discussed in the next section.

Table 1. The Millennium Development Goals (MDGs) and the relevance of hygiene promotion

#	MDG	Relationship with hygiene/hygiene promotion
1	Eradicate extreme poverty and hunger	Households with less WASH-related disease lose fewer working days and have fewer expenses related to illness. Households' productive uses of water surplus and composted waste improve nutritional status and reduce poverty. ¹
2	Achieve universal primary education	Less diarrhoea, respiratory infections and worm infestation improve school attendance and learning performance. ¹ Girls' school attendance is influenced positively when they can use toilets. Providing for privacy and hygiene for older girls during menstruation is very important. ¹
3	Promote gender equality and empower women	Better education for women and girls is related positively with smaller family size and higher income, a higher status of women, better hygiene practices and health. ¹ All this, in turn, benefits maternal and child health and poverty reduction.
4	Reduce child mortality rate	Handwashing with soap, improved water quality and excreta disposal reduce diarrhoea by about 45%, 17% and 36% respectively. Handwashing by midwives and mothers may reduce neonatal mortality by 25% and 60% respectively. ¹
5	Improve maternal health	Nutrition and health are improved by less diarrhoea, fewer worms and the use of surplus water for food and income from kitchen gardens and animal breeding. ¹
6	Combat HIV/AIDS, malaria, and other diseases	Keeping water points and drains free from stagnant water reduces breeding places for malaria-transmitting mosquitoes, especially in areas where surface water is scarce. Good hygiene reduces the risk of chronic diarrhoea in HIV/AIDS infected persons and keeps them healthier.
7	Ensure environmental sustainability	Environmental sustainability means that improving access to safe water and sanitation must go together with hygienic use and maintenance of toilets and water.
8	Develop a global partnership for development	Although not mentioned in the targets for this goal, cooperation among hygiene promoters and local industries, shops and masons has been shown to be important for the adoption of handwashing with soap and sanitary toilets. ¹



Handwashing with ladle, India

CHRISTINE SIJBESMA

The main hygiene behaviours

Four hygiene clusters are known to have the greatest impact on people's, and especially children's, health⁴: (1) washing hands with soap; (2) safe and sustained ways of disposing of and handling human excreta; (3) keeping drinking water safe from source to mouth; (4) using enough water for hygiene, and, although this is not well researched, using the surplus water for small-scale production.

This paper mainly addresses the two first behaviour clusters for the following reasons. Handwashing with soap is the most important behaviour for health benefits. It can reduce diarrhoea by almost half and upper respiratory infections by almost one-fourth. Having a toilet only brings health benefits when combined with good hygiene. Clean toilets with a cover or water seal keep excreta away from human contact. Toilets must also be used hygienically by all family members (not just women and girls) and be used to deposit the excreta of infants. Where there is

no toilet, excreta should be buried (the 'cat method') to prevent disease transmission.

The other two clusters of behaviours (3 and 4 above) apply to specific situations. Making drinking water safe through home treatment is needed especially where there is no improved water supply or when the supply is not safe. Promoting the boiling of drinking water is common, but it is not always realistic. The boiling of water may require too much time or cash for fuel. Solar disinfection by exposing the water to sunlight is a good alternative, but in the poorest and isolated areas polyethylene terephthalate (PET) bottles are not always available, and glass bottles must be less than 2 mm thick for the UV rays to penetrate. Developing new habits at scale is not easy.⁵ The largest evaluation to date showed only about one-third (32%) of households continuing solar disinfection, not sufficient to reduce diarrhoea.⁶

Keeping drinking water safe during storage and at the point of use also requires several good practices. Water drawn by dipping a communal cup into the container is often contaminated. The container for storing water must be covered and regularly cleaned. Water should be taken from the container by pouring from a tap or a long-handled ladle into clean individual cups/glasses.

Besides preserving good quality drinking water, the use of enough water for personal hygiene is important. While handwashing reduces faecal-oral diseases, face washing reduces eye infections and bathing with soap reduces skin infections. Finally, health benefits are linked to habits of using surplus or wastewater for domestic productivity, e.g. for extra food and income from kitchen gardening and keeping livestock.

Adjusting hygiene promotion according to the situation

Whose practices to address, and where and when to promote them, depends on the specific situation. Planners and practitioners sometimes need to adjust hygiene promotion to specific target groups, locations and seasons.

Target groups

Children under five are most at risk of dying from infections because of their own practices, such as sucking hands after touching the ground or their own excreta. Mothers (or grandparents and siblings) can greatly reduce infant diarrhoea by depositing stools safely and by washing their hands with soap after possible contact with stools as well as washing hands before preparing food and feeding young children. This goes also for acute respiratory infections that can be transmitted by sneezing into hands or touching objects infected by air-transmitted droplets. New mothers, those who assist in deliveries, the elderly and their caregivers are special target groups for handwashing with soap, to reduce neo-natal, maternal and old-age related mortality.

Hygiene promotion is needed for men and adolescent boys, in general, but particularly in cultures where women cannot influence male hygiene practices or where they need men's support, financial and otherwise, to adopt new hygiene practices in the home. Mothers (and mothers-in-law) of young women can be a special target group because they determine the behavioural patterns of their daughters (and daughters-in-law).

Households with members infected by HIV/AIDS are a specific category, because half of those infected develop chronic diarrhoea.

Promoting good hygiene and access to enough water, a toilet and a kitchen garden helps people with HIV stay healthier longer. It reduces the negative impact on work, cleanliness and dignity.

Location-specific practices

Promoting the use of more water for hygiene is especially important in areas with a seasonal or permanent water shortage. In water-scarce areas people often have a habit of being frugal with water. Handwashing studies show less handwashing at critical times under such conditions⁷. Less face and skin washing can mean more skin and eye infections. Infection with trachoma, for example, has made about 8 million people blind, and some 84 million people are currently infected. There are two solutions to the problem of water shortage for hygiene: (a) build more infrastructure and (b) promote methods of hygiene that require only small amounts of extra water, for example, washing the face only, using a washing cloth for bathing and washing hands by pouring.

Where water is scarce or must be bought, promoting hygiene habits that require collecting, buying and using even more water also means calculating the required extra amount of effort and its cost. Women focus group discussions in Kalimantan, Indonesia, for example, first wanted to calculate how much extra drinking water had to be bought for teeth brushing. This was usually done with unsafe river water ("since we are told that drinking water must be safe and we do not drink the water with which we brush teeth"). They wanted to know what cost was involved before they would accept brushing teeth with drinking water. The practice was also promoted with men, because they make the financial decisions, and it was difficult for women to influence the hygiene practices of adult men.



Children play a handwashing game at school. The 'fastest' team is not necessarily the 'winner', as the slower team washes their hands more thoroughly

CHRISTINE SJIJESMA

In addition, risks of malaria, filariasis and other mosquito-transmitted diseases increase in dry areas when insufficient drainage practices bring new mosquito breeding places around water points and at drainage places near kitchens and bathing areas.

A specific situation in South-East Asia's river deltas is the increase of arsenic in groundwater used for drinking. This may require specific hygiene promotion programs in combination with home water treatment and/or rainwater harvesting.

Seasonal changes

Especially in rural areas, diarrhoea peaks when the rains start and excreta wash into surface water used for bathing, cooking and drinking. Acute respiratory infections also peak in this season. At this time it is particularly important to have safe hygiene practices. Poor people benefit particularly from good hygiene practices in the wet season, because at the end of the dry season, when there is less food and no green vegetables can be grown, poor people have the lowest resistance against infections. Most at risk are those who, according to custom, are 'fed last and least', often the women and girls.

Having defined the most important practices and environmental factors, the question addressed in the next section is how hygiene programs can be assessed and designed.

Analytical model

Hygiene programs can use different approaches, based on different models of behaviour change. This paper focuses on two major approaches: marketing of a single intervention, and community-based total approaches.

The FOAM model describes four core elements of hygiene promotion programs (Coombes & Devine, 2009):

1. **Focus** of the program. Who are the target audiences and what are the behaviour(s) to be adopted?
2. **Opportunity** for change. Is it possible to practice the behaviour in the specific physical and social environment? Does the practice fit into people's own knowledge system rather than scientific knowledge? Are there relevant materials and convenient, working infrastructure? Will important others, such as opinion leaders, support the change?
3. **Ability** to change. Are people themselves capable of carrying out the behaviour(s)? Do they have the practical knowledge and skills to practice the new behaviour? Can they afford the new practices in terms of money, effort and time?
4. **Motivation** to change. Do the target groups want to carry out the new practice(s)? This relates to the positive or negative attitudes of people to a particular change, their beliefs about its importance and benefits, their general readiness to change (some people are more ready than others), their earlier experiences and competing priorities.

Using the FOAM model, the next section contains the analysis and evidence from several programs for the two key hygiene behaviour clusters, handwashing with soap and safe excreta disposal and toilet use habits, as well as a program for multiple hygiene improvements.

Review of selected cases

Safe handwashing habits at critical times

In this section, social marketing programs for handwashing with soap are analysed. The reason for focusing on this particular approach is that handwashing with soap lends itself well to social marketing, because the products, water and soap, are widely available and relatively cheap. In addition, the practice (washing hands with soap at critical times) is not too complex for promotion through mass channels.

There is a small but growing amount of evidence on the impact of social marketing on handwashing with soap⁸. Examples in Central America, Vietnam and Kenya were chosen for analysis.

Social marketing of handwashing with soap began in three countries in Central America (1996-1999). The partnership for the program combined health departments, national soap companies, media, two large farmer associations, NGOs, two donors and a knowledge centre for facilitation. The private sector contributed almost double the amount of other donations (Saadé & Bateman, 2001; Saadé *et al.*, 2001). A baseline study showed only 3% of the people had perfect handwashing practices before the campaign began. Campaigning combined mass media (radio, TV) and printed materials with interpersonal promotion by NGO fieldworkers and schools.

The campaign had the following FOAM characteristics:

1. **Focus:** The two focus groups that emerged from market research were: low-educated mothers with children under five, and primary school children, both in rural

areas. The focus change was soap used at five critical times, later simplified to three.

2. **Opportunity** factors needed for behaviour change were: accessibility of soap and water, the common interests of the commercial and health stakeholders, available marketing expertise, presence of an intermediary organisation that helped the partners in all stages of the campaign and mothers' concern with child diarrhoea.



School students in Uttaranchal state, India, learn proper handwashing technique

KATHLEEN SHORDT

3. **Ability** to adopt was helped by going for three stages of good practice and affordable soap brands. Mothers also said that they could influence handwashing practices of the whole family.
4. **Motivations** for change were the mothers' concerns about their children's health and

their beliefs that handwashing helps to improve health at least partially.

The evaluation was done best in Guatemala. The rate of diarrhoea fell over time (three surveys). The cost of preventing diarrhoea was less than US\$10 per case (Shordt, 2006). One weakness, however, was that access to

the campaign and to information about handwashing practices was better in urban rather than rural areas.

The campaign is now being taken up, with local adaptations, in Colombia, Nicaragua and Peru; Benin, Ghana, Kenya, Madagascar, Senegal, Tanzania and Uganda; and India, Indonesia, Nepal, the Philippines and Vietnam⁹.

Applying FOAM to the preparation of the campaign in Vietnam shows that careful audience research helped shape a campaign that differs from the Central America campaign on all four aspects (Nguyen, 2010):

1. **Focus** groups are not only mothers and school children but also grandparents who in the Vietnamese culture do a lot of caretaking of grandchildren.
2. **Opportunities:** Access to media and water and soap are high. The campaign further uses the children's song, "Five little fingers", popular with caregivers and children. Handwashing education in schools was designed to be entertaining for children. Promoting special handwashing 'stations' (that is, special places to wash hands) in homes and schools may also help habitual handwashing with soap (Devine, 2010).
3. **Ability:** Inter-personal promotion of handwashing with soap is done by the teachers, and the national women's and youth unions. Together they reach a large part of the target groups. As inter-personal communicators they are also respected and have influence.
4. **Motivation:** The motivating message for caregivers is not child health, but the broader concept of child development, for

example, through better learning ability. For the schoolchildren, a core message is protecting the health of friends, brothers and sisters.

The Vietnamese campaign has four measurable objectives for caregivers and five for schoolchildren. Costs and results are yet to be reported.

These examples show that social marketing may be an effective way to promote handwashing with soap, but requires research that is used for careful planning of the program. These cases are all large and costly campaigns. Perhaps NGOs could adopt a similar approach, but with more local and less costly research and mass media. However, no example of local social marketing was found. Special adaptations of the promoted practice would be needed in areas of social and environmental hardship. Of course handwashing with soap can be promoted through community-based and group-based hygiene promotion. However, in those cases the promotion is part of a more comprehensive total package of hygiene practices.

Open defecation and toilet use

While toilets as a product lend themselves well to social marketing, the adoption of good toilet practices involves a more complex set of behaviours than washing hands with soap. These behaviours include: ending open defecation, toilet use by everyone at all times, the burial of excreta when far from a toilet, proper operation and maintenance of the toilet, safe removal and disposal of sludge and practicing good toilet hygiene by all. Social marketing preferably addresses one specific practice on a large scale and is therefore less suitable than a community approach.



Washing only left hand without soap, poor hygiene practice

CHRISTINE SIBESMA

Four cases are described here relating to the abolishment of open defecation and the adoption of toilet use and hygiene. Two are Community-Led Total Sanitation (CLTS) programs in Bangladesh and India; the third and fourth are community-managed sanitation interventions in India and Indonesia. At the end of this section, a case of two other forms of community-based hygiene promotion are presented: hygiene promotion through school hygiene programs with a community outreach component, and through voluntary learning groups.

In Community-Led Total Sanitation programs, communities use participatory techniques to learn and decide about open defecation. They then commit themselves to abolish open defecation and use mainly simple toilets built with local skills, designs and materials. CLTS programs provide trained facilitators for ‘triggering’ (motivating community decisions to end open defecation) and to promote related hygiene practices (hence the ‘total’ sanitation).

In Bangladesh, VERC, one of WaterAid’s partners, pioneered the approach in rural areas and saw it adopted by other NGOs. The Community-Led Total Sanitation program in Maharashtra, India, is state-managed and works through the local governments. Neither CLTS program gives individual household subsidies, but the Indian program provides a financial reward to villages declared open-defecation free.

The FOAM analyses of the two programs give the following findings:

1. **Focus** groups are all villagers who practice open defecation, either because they have no toilet or because they are not using it. The main desired practice is to stop practicing open defecation by any means.

For example, away from homes, people could practice the cat’s method (burial of excreta in the field), or share toilets of relatives (for example, young couples who are still building their house) as well as the construction and use of temporary and permanent toilets.

2. **Opportunity:** By using village-wide participatory events, the promoters raise awareness on the effects of open defecation and the campaign. The programs adjust to local opportunities and means by giving information on a range of very-low cost to low-cost and medium-cost toilet models that households can build themselves from local materials¹⁰.
3. **Ability:** The programs provide practical information and emphasise local skills for toilet construction. The VERC program is especially strong on engaging the skills of untrained villagers to build their own toilets with local materials. Village leadership is developed to manage follow-up after triggering: promoting and monitoring that households build toilets and open defecation actually stops.
4. **Motivation:** The overarching motivating factors used are not health, but disgust with open defecation: the dirt, the bad smell and lack of privacy and dignity; and pride with having such a clean community. Negative social attitudes to open defecation are strengthened and positive ones emphasised – dignity, privacy and safety for women and girls, and compliance with community decisions. In the Indian program, the Open Defecation Free award is an additional incentive for local leaders.

In both programs the uptake is large-scale. In Bangladesh, reportedly more than 70 million

people abolished open defecation, through VERC and many other programs. And after four years, Maharashtra had more than 3800 open defecation-free villages with over five million households (10% of all households) in mid-2006 (Sanan & Moulik, 2007). However, monitoring actual practice remains a challenge, because of the political and financial rewards. In Bangladesh, the government reported increases in sanitation coverage from 29% in 2003 to 87% in 2008 due to total sanitation and other approaches. This was highly inflated and did not mean that toilets were used (Chambers, 2009). A cost-effectiveness study found a sustained use of toilets, limited open defecation in newer villages and freedom from open defecation in the older villages at an investment cost for promotion and training equivalent to US\$ 1.23 per person in 2002 (Allan, 2003). A sample study by VERC itself showed that all self-built/financed toilets remained in use over time and many, especially the poorer ones, were upgraded to more permanent models that were easier to keep clean (Shayamal *et al.*, 2008). However the study report gives no details on the methods and representativeness of the village and household sampling (Sijbesma, 2008).

In Maharashtra, being free of open defecation in a community was initially verified by an independent party. The monitoring did not always find that open defecation had actually ended (Jain, 2007, in Sijbesma, 2008). Verification in the neighbouring Indian state of Orissa gave 70% use among the 40% of households that had built a latrine (Whittington *et al.*, 2008). It is not clear if this use is by all household members or only by some, for example female members. In the

Maharashtra program, independent verification soon ended, however. Certification became a farce when NGOs commissioned to carry out



Grandfather teaches grandson to use toilet

CHRISTINE SIJBESMA

the independent inspections sub-contracted the work to others and even subcontractors subcontracted others again. The more rigorous verifications have found open defecation in many communities that claim to be open defecation free (Chambers, 2009). And where reuse of excreta is practiced, agricultural needs have over-ruled safe disposal practices (Cole *et al.*, 2008).

In contrast, the community-managed sanitation program in Kerala did not use total sanitation methods and formally did not have open defecation communities as a target. The program was started as a separate sanitation component led by a local NGO that had begun as a socio-economic action research unit (SEUF) in an externally-financed water program. SEUF tried out three approaches to toilet construction and use and found that the approach involving the local government and locally formed committees was the most cost-effective.



Men in Tegal neighbourhood set hygiene priorities of men, Indonesia

CHRISTINE SIBESMA

Its FOAM characteristics were as follows:

1. **Focus** groups were the households that had no toilet. Focus practices were installation and use of a toilet by all family members and keeping toilets clean, with a cleaning brush inside and water and soap for handwashing nearby.
2. **Opportunities** for change were the involvement of local governments and the establishment and continued involvement of mixed local neighbourhood committees for sanitation and water. The neighbourhoods assessed which households in the neighbourhood had no toilet and supplemented local government fund allocations for poor households with their own resources. The target became: each household in our neighbourhood has and uses a sanitary toilet. Measures to reduce corruption lowered toilet costs and helped create the pre-conditions for toilet use by all.

3. **Ability** to change was enhanced by using and training local masons or people with construction skills living in the neighbourhood, and maximising resources through developing a more affordable toilet model. Use of local materials, promotion of gradual construction over time (e.g. first the slab and pan with one off-set pit, and/or a temporary superstructure), training poor local women as toilet masons, shared financing by households and local governments (external subsidy was phased out) and various measures to reduce corruption were all important factors affecting the ability to change.

4. **Motivation** for toilet construction and use was based on local factors, which differed for women and men and were social and economical, rather than health-based. Moreover, the husband and wife of each participating household had to attend three hygiene promotion sessions, covering operation, use and hygiene, and have their attendance cards signed off, and had to pay for their part of the toilet cost before construction. After construction, toilet use and hygiene habits were checked by committee members in three follow-up visits, at toilet completion and one and three months later. Adherence to community-set norms and social control encouraged compliance.

Under the program, 200,000 households and over 2000 schools and playschools built double vault composting toilets between 1996 and 2003 at half the investment cost of the state program, including the support cost for community organisation and training. Initial reported toilet use was 96%. Observations showed that 75% of the toilets had water nearby, but soap was rare (Kurup *et*

al. 1996). Nine years later, a sample study found sustained female use, but halving of male use (Sijbesma, 2009).

There are also important lessons to learn from weaknesses. The example chosen is the second Water and Sanitation for Low-Income Communities (WSLIC-2) project of the Ministry of Health, World Bank and AusAID. This is a highly successful water project, but it illustrates the much more rarely reported institutional challenges for hygiene promotion. The project enabled almost 3000 villages in Indonesia to build and manage their own improved water supply services, which was 20% more than the target. For hygiene promotion, community facilitators, project consultants and local health staff were trained on participatory methods (PHAST) to promote home hygiene and handwashing with soap in schools. Because the project increased access to water and sanitation, hygiene practices may have improved. This is currently measured through a household post-study. There was, however, no clear strategy for hygiene promotion (Robinson, 2005, Shatifan pers. comm.). A FOAM analysis of the program gives the following outcomes:

1. **Focus** for change: The target groups for hygiene improvements were mothers of children under five and school children. A knowledge, conditions and practices study was done to establish the baseline data. However, the findings did not lead to the identification of specific practices for the two focus groups and there was no study of other factors that might help or hinder behavioural change.
2. **Opportunity** for change: The improved water supply and toilet programs made improved practices possible. Other means such as soap and utensils were also

available. The participatory methods of PHAST further help the participants to understand good and risky practices in a practical way and to decide what risks they want to reduce and how.

3. **Ability** to change: Through PHAST training the promoters had learned how to enhance practical understanding of good and risky hygiene behaviour with participatory tools. They had also learned new skills to help the local women and men analyse their practices and plans and monitor improvements. However, several institutional constraints reduced this ability in practice: (1) the district hygiene promoters had no specific job descriptions and goals on hygiene promotion; (2) in the villages, they did the same work as the other staff, such as organisation of community participation for the water supply; (3) the PHAST training had not replaced the guidelines for hygiene promotion, which still followed the traditional top-down educational strategy; (4) for both the villages and the staff hardware outputs were the main performance indicators; and (5) village water and sanitation committees were trained to make hygiene plans, but concentrated mostly on water supply management and making villages open defecation free (ODF).
4. **Motivation** to change hygiene was low both in the agencies and the communities. The priority of the program and the villages was water supply, which received 90% of the time and funds. Overall, the management committee did not really recognise the importance of changing sanitation and hygiene practices. Activities were not monitored or results measured. Now that the project has ended, measurement of

behaviour change is being undertaken through a post-survey with the two target groups and structured household observation. The results should be available at the end of 2010.

Halcrow and Donnelly (2008) report similar institutional problems in an integrated WASH project in Vanuatu.

Finally, two types of hygiene promotion programs are presented that do not work community-wide, but with small groups. The first is through voluntary groups or 'community health clubs'. The second type is WASH-in-school programs with a link to improved hygiene in students' homes through an 'outreach' component.

These learning group programs usually promote several hygiene practices. A famous early



Pinki washing her hands at Premnaga School, Panchat Nathurpa, Mahoba district of Uttar Pradesh, India

example of hygiene promotion through small groups is the radio listening groups around weekly broadcasts of "Mtu ni Afya" (Man is Health) in Tanzania in 1978. After preparatory research and motivating government leaders, a broadcasting program and study group manual were prepared and 75,000 cadres were trained as study group leaders.

A before-after study was done on hygiene knowledge and over 2100 groups were visited to observe measurable changes. Common changes included clearing of vegetation (28%), making, repairing and rebuilding latrines (20%), adopting boiling or filtering of drinking water (12%) and avoiding communal cups when drawing drinking water. A before-after study of 11 practices in 8 villages showed an average improvement of 15% (Hall & Dodds, 1974).

More recently, trained rural health staff in Zimbabwe organised mixed community health clubs. In 25 sessions their members measurably improved hygiene practices as compared to a control sample. A survey on hygiene indicators showed higher scores for all practices for group members compared with a matched control group. Notably the survey reported abolishment of open defecation and observed kitchen gardens (100%), individual cups and plates (almost 100%), handwashing by pouring instead of all in the same basin (90%), a ladle to draw drinking water (50%) and a designated place for handwashing (25%) and soap (6%) (Waterkeyn, 2005). Costs were modest (US\$ 0.60/per person, excluding staff costs, Sijbesma & Christoffers, 2009).

A FOAM analysis shows the following lessons:

1. **Focus** groups were self-selected, so they

might include people who are more motivated, although analysis did not show higher socio-economic levels. There were many hygienic practices and the participants had a wide menu to choose from.

2. **Opportunity** for change was high as everyone who was interested could join. Unlike most hygiene promotion programs which target only women, men attended equally with women. Although no gender analyses were carried out, it may well be that this facilitated the opportunity for change as both men and women could agree on changes and work together to carry out the changes. The menu of improvements, and the fact that they were simple and low-cost, also improved opportunity for change.
3. **Ability** to change was also high in both programs, except for soap which the economic crisis made unaffordable for many households in Zimbabwe. Most changes required no expert knowledge and skills, and were affordable.
4. **Motivation**-wise, neither program gave information about what motivated the improvements achieved. It is, however, likely that making group decisions, opinion leaders setting examples and possibly peer pressure to carry out practices have played a role. The high adoption of kitchen gardens in Zimbabwe seems to indicate that economic factors were important.

A final option is outreach programs through local schools, e.g. through the WASH-in-Schools program of UNICEF and its government and NGO partners. It promotes better home hygiene through more participatory learning on health/hygiene in schools¹¹. The target groups are teachers and school children, and through them, the parents and siblings at

home. Both the class sessions and the school health clubs promote better hygiene habits through participatory learning and peer pressure and control. Emphasis was on freedom from open defecation, hygienic toilet use, handwashing with soap and food hygiene. In Nepal, the school hygiene program of 200 schools reached 60,000 households in 15 districts. In Vietnam it was upgraded to all rural primary schools in nine provinces that have high percentages of ethnic minorities.

An end study in six countries showed improved hygiene in schools when comparing pre- and post-studies in pilot and control schools. The main bottlenecks were soap for handwashing and availability and safe disposal of anal cleansing material, for example, in covered and foot-pedal operated bins and burned afterwards (Bolt *et al.*, 2006). Reported good practices in Nepal included ending open defecation and sustained toilet use, handwashing with soap, safe water storage, food protection and garbage pits (Adhikari & Shrestha, 2008).

These examples show that both community-based and group-based approaches can be used to reduce open defecation and increase safe toilet use. They are also suitable for achieving a wider range of good hygiene habits.

Achieving long-term sustainability

Evidence-based programs demonstrating the sustainability of good hygiene practice over time are still very scarce. Shordt and Cairncross (2004) report on a six-country study which investigated the sustainability of hygiene practices in two different ways. The study compared hygiene practices in samples where programs had finished more recently with samples where the program had ended a longer time ago. If hygiene behaviours were

not sustained, it was reasoned that safe behaviours would decrease over time. The behaviours in communities where the project ended in 1998 would then be less than in those where the program ended in 2000. A second method used to measure sustainability was to compare hygiene practices in the same communities over two years (2001 and 2002) to see if they would decrease.

The research studied handwashing skills, reported handwashing with soap and water (by pocket voting, not questioning), location of soap/water in households, signs of latrine use and maintenance, reported latrine use, drinking water covered/stored safely and so on. The results showed that the promoted practices had continued over time, even after the projects had ended.

In the Indian study, even nine years after the end of the project, handwashing and use of clean latrines seemed to continue in comparison with the control communities where there had been no program. It therefore appears that hygiene promotion can be a very cost-effective intervention whose benefits can last for years. This study also found that where the project has been more intense and local committees and government more active, the long-term results were better.

Another area of investigation considered the type of behaviour change technique used, in order to find out what worked best. The answer was personal contact, group meetings and hygiene classes. This confirms the importance of inter-personal communications and group dynamics in the promotion of hygiene.

There were two findings on gender. One was that better educated women tended to have healthier behaviours. The other was that hygiene promotion (which was given to women) had not changed the latrine use of the men in the Indian study (Shordt, 2004, Cairncross, 2005).

Conclusions and implications

Hygiene promotion approaches

This review confirmed that single hygiene practices, such as handwashing with soap at critical times or hygienic use of toilets, may be promoted best through social marketing approaches. The social marketing interventions described here were, however, all large and costly programs. NGOs can probably apply the same approaches with similar effects at more local level and at much lower costs, using a combination of local media and inter-personal contacts. They

should also carry out the preparatory investigations along the lines of the FOAM model and test the media and messages with the target groups. Checking if culturally, women can influence adult and adolescent male practices is also relevant in some cultures.

More comprehensive changes and the targeting of multiple behaviours seem to work better through group and community approaches and participatory processes. Community-based programs are ideally adapted to local conditions and allow local women and men to organise, set their own priorities and plan and implement their own local activities. Using participatory methods to identify key risks and to trigger change, local hygiene programs are still likely to arrive at a common set of key hygiene practices, such as freedom from open defecation.

Another finding is that when hygiene promotion is part of infrastructure (construction) programs for water supply, it is in danger of not getting the attention that it needs. Where hygiene promotion is part of a water supply program, it should have its own clear strategy, plan of activities, finances, skilled staff, studies and behavioural and process indicators.

Adjusting to context

A second set of findings relates to context. While ending open defecation and handwashing with soap are key target behaviours, the ultimate targets are locally specific. Adjustment to local conditions and needs ('contextualisation') helps to get better results. Examples are adjustment to local water shortages and payments for water. Special programs may be needed in crowded slum areas, in river deltas where arsenic in drinking water is a problem and in areas with

a high percentage of households with HIV-infected members.

Preparatory research for planning programs better is still rare. To do this, NGOs do not have to undertake expensive research studies. Using the FOAM framework they can already get many useful insights about what the different groups do and want and what constraints they face.

A noticeable gap in programs that work to abolish open defecation is the absence of attention for safe end disposal. Pit latrines and septic tanks get filled up at some stage. If the raw excreta then still end up in the environment, the goal of abolishing open defecation is defeated.

Measuring change and costs

Many hygiene promotion programs now set measurable behaviour objectives, but investigations and reporting of behaviour change are still often done through specific evaluations and research studies, and are not built into ongoing programs. Ideally, hygiene promotion programs should build simple databases using community monitoring. Local monitoring can be done through quantitative participatory tools that generate numbers, also called people's statistics or 'party numbers'¹². This data is combined at higher levels and used to compare progress between communities and across indicators. This makes it possible to manage change better, by learning which communities do well and less well and why. This information can also show on which indicators more and less progress is made and for what reasons. Quantitative participatory monitoring is possible even with low- and non-literate groups through participatory rural appraisal



Identifying worst practices, Indonesia

CHRISTINE SIBESMA

methods that give numbers about qualitative data with the help of scenario rating scales.

Moreover, in almost all hygiene promotion cases discussed, information about costs was lacking. This may be one important reason for the low political commitment and resources for hygiene promotion programs, despite general evidence of effectiveness through health, economic and social benefits.

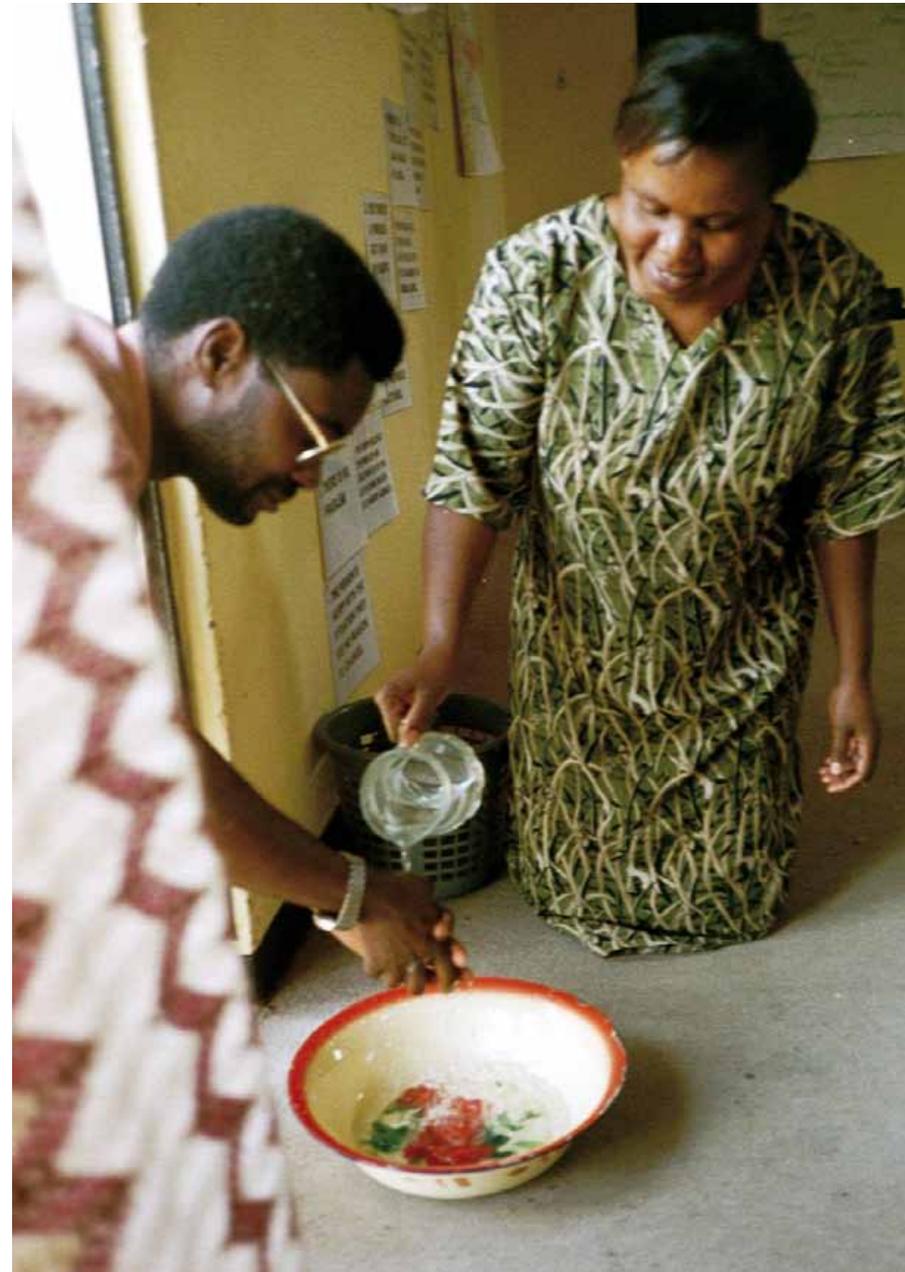
Link with behavioural change theory

Hygiene promotion should use a model of behaviour change. For example, analysing what motivates people to adopt better hygiene practices shows that social and economic reasons are often more important than the health benefits that promoters tend to emphasise. This finding is not really surprising, since health benefits take much longer to appear than, for example, social benefits such as cleanliness and status. In such cases it makes sense for program planners and promoters to rely on what motivates the people and not what they think should be motivating factors, e.g. health knowledge.

A basic choice in hygiene promotion seems to be between models that help promote one behaviour at larger scale and slower approaches that seek to change several practices. The latter need to build organisational and human capacity for planning and management.

However, one thing is obvious: hygiene promotion programs that just tell local people what to do are gradually being replaced by

promotion that uses behavioural change models and evidence from studies on why and how different groups change specific hygiene habits. Ongoing reflection on case studies as in this publication and its dissemination will help learning to continue aiming for better hygiene promotion programs.



Demonstrating good handwashing practice, Zambia

CHRISTINE SJIBESMA

References

Adhikari, S. and Shrestha, N.L. (2008). School led total sanitation: a successful model to promote school and community sanitation and hygiene in Nepal. In: J. Wicken, J. Verhagen, C. Sijbesma, C. Da Silva, & Ryan, P. (Eds.) *Beyond construction: Use by all: Collection of case studies from sanitation and hygiene promotion practitioners in South Asia*. London, UK, WaterAid and Delft, the Netherlands, IRC Accessed at: <http://www.irc.nl/page/40450>.

Allan, S. (2003). *The WaterAid Bangladesh/VERC 100% sanitation approach: Cost, motivation and sustainability*. London, UK: London School of Hygiene and Tropical Medicine. Accessed at: http://www.livelihoods.org/hot_topics/docs/CLTS_Allan.pdf.

Bolt, E., Shordt, K., & Krukkert, I. (2006). *School sanitation and hygiene education: Results from the assessment of a 6-country pilot project*. Delft, the Netherlands: IRC and New York: UNICEF. Accessed at: <http://www.irc.nl/page/28817>.

Chambers, R. (2009). Going to scale with Community-Led Total Sanitation: Reflections on experience, issue and ways forward. *IDS Practice Paper 1*, Number 1. University of Sussex, Brighton, UK: Institute of Development Studies. Accessed at: http://www.communityledtotalsanitation.org/sites/communityledtotalsanitation.org/files/Chambers_Going%20to%20Scale%20with%20CLTS.pdf.

Cole, B., Duc Phuc, P., & Collett, J. (2008). The sum is greater than the parts: An investigation of Plan in Vietnam's double-vault composting latrine program in northern Vietnam. In D. Pedi (Ed.), *Sharing Experiences: Sustainable sanitation in South-East Asia and the Pacific* (pp. 22-26). Brisbane, Australia: International WaterCentre. Accessed at: http://www.wateraid.org/documents/plugin_documents/iwc_sanitationbook_web.pdf.

Coombes, Y. & Devine, J. (2009). *Introducing FOAM: A Framework to Analyze Handwashing Behavior and Design Effective Handwashing Promotion Programs*. World Bank Water and Sanitation Program.

Devine, J. (2010). *Beyond tippy-taps: The role of enabling products role in scaling up and sustaining handwashing*. Paper presented at the South Asia Hygiene Practitioners Workshop. Dhaka, Bangladesh: IRC. Accessed at: <http://www.irc.nl/page/51606>.

Halcrow, G. & Donnelly, J. (2008). Putting community development principles into practice: A case study of a rural water, sanitation and hygiene project in Vanuatu. In Pedi, D. (Ed.), *Sharing Experiences: Sustainable sanitation in South-East Asia and the Pacific* (pp. 22-26). Brisbane, Australia: International WaterCentre. Accessed at: http://www.wateraid.org/documents/plugin_documents/iwc_sanitationbook_web.pdf.

Hall, B.L. & Dodds, T. (1974). Voices for development: the Tanzanian national radio study campaigns (I.E.C. Broadsheets on Distance Learning). Cambridge, UK: International Extension College. Accessed at: http://docs.watsan.net/Scanned_PDF_Files/Class_Code_0_Reference/021-79PA-11275.pdf.

Kurup, K.B. et al. (1996). *The Community-Managed Sanitation Program in Kerala: learning from experience*. The Hague, the Netherlands: IRC. Accessed at: <http://www.irc.nl/page/1869>.

Nguyen, N.K. (2009). *Designing evidence-based communications programs to promote handwashing with soap in Vietnam*. Paper presented at the South Asia Hygiene Practitioners' Workshop, Dhaka, Bangladesh: IRC. Accessed at: <http://www.irc.nl/page/51637>.

Robinson, A. (2005). *Improving hygiene and sanitation behaviour and services. Technical guidance to the World Bank/Indonesian Government/Indonesia's Ministry of Health team in the preparation of hygiene and sanitation promotion components for the proposed National Program for Community Water Supply and Sanitation Services Project*. Jakarta: World Bank.

Saadé, C. & Bateman, M. (2001). Sustainability through Public-Private Partnerships. Unpublished Powerpoint presentation. Washington DC, USA: Basics and EHP.

Saadé, C., Bateman, M., & Bendahmane, D.B. (2001). *Story of a Successful Public-Private Partnership in Central America: Handwashing for Diarrheal Disease Prevention*. Arlington, Virginia: the Basic Support for Child Survival Project (BASICS II), the Environmental Health Project, UNICEF, USAID and the World Bank. Accessed at: <http://www.comminit.com/en/node/180806/303> See also: http://www.ehproject.org/PDF/Joint_Publications/IP002CAHandPmpltEn.pdf.

Sanan, D. & Moulik, S.G. (2007). *Community-Led Total Sanitation in Rural Areas: An Approach that Works* (Field Note). New Delhi, India: UNDP-Water and Sanitation Program. Accessed at: http://docs.watsan.net/Downloaded_Files/PDF/Sanan-2007-Community.pdf.

Shayamal, S., Kashem, M.A., & Rafi, S.M. (2008). Moving up the sanitation ladder: A participatory study of the drivers of sustainability and progress. In J. Wicken, J. Verhagen, C. Sijbesma, C. Da Silva, & Ryan, P. (Eds.) *Beyond construction: Use by all: A collection of case studies from sanitation and hygiene promotion practitioners in South Asia*. London, UK: WaterAid and Delft: the Netherlands, IRC. Accessed at: <http://www.irc.nl/page/40450> and http://www.wateraid.org/international/what_we_do/documents_and_publications/6675.asp.

Shordt, K. (2004). *Sustainability of hygiene promotion and*

education: A six country research study. Paper presented at the 30th WEDC International Conference, People-centred approaches to water and environmental sanitation. Vientiane, Lao PDR. Accessed at: http://docs.watsan.net/Downloaded_Files/PDF/Shordt-2004-Sustainability.pdf

Shordt, K. (2006). *Review of Handwashing Programs*. Paper written for the Hygiene Improvement Project, USAID and Academy for Educational Development (AED). The Hague, the Netherlands: IRC. Accessed at: www.irc.nl/content/download/.../Hand%20Washing%20HIP%202020Jan06.pdf

Shordt, K. & Cairncross, S. (2004). *Sustainability of hygiene behaviour and the effectiveness of change interventions: Findings and implications for water and sanitation programs from a multi-country research study*. Booklet 2. The Hague, the Netherlands: IRC. Accessed at: http://docs.watsan.net/Downloaded_Files/PDF/Shordt-2004-Sustainability%20Booklet2.pdf.

Sijbesma, C. (2008). Sanitation and hygiene in South Asia: Progress and challenges. Summary paper of the South Asian Sanitation & Hygiene Practitioners' Workshop organised by IRC, WaterAid and BRAC in Rajendrapur, Bangladesh. In J. Wicken, J. Verhagen, C. Sijbesma, C. Da Silva, & Ryan, P. (Eds.) *Beyond construction: Use by all: A collection of case studies from sanitation and hygiene promotion practitioners in South Asia*. London, UK: WaterAid and Delft: the Netherlands, IRC. Accessed at: <http://www.irc.nl/page/40450> and http://www.wateraid.org/international/what_we_do/documents_and_publications/6675.asp.

Sijbesma, C. (2009). India: Gender in Community-managed Sanitation Program in Kerala, Module 9, Innovative Activity Profile 3. In *Gender in Agriculture Sourcebook*. Washington DC, USA: World Bank, Food and Agriculture Organization, and International Fund for Agricultural Development. Accessed at: <http://siteresources.worldbank.org/INTGENAGRLIVSOUBOOK/Resources/Module9Innovation3.pdf>.

Sijbesma, C. & Christoffers, T. (2009). The value of hygiene promotion: Cost-effectiveness analysis of interventions in developing countries. *Health Policy & Planning*, 24(6), 418-427. Pre-publication copy available from <http://www.irc.nl/page/37248>.

Waterkeyn, J. (2005). *Decreasing communicable diseases through improved hygiene in community health clubs*. Paper presented at the 31st WEDC International Conference. Kampala, Uganda. Accessed at: <http://wedc.lboro.ac.uk/conferences/pdfs/29/Waterkeyn.pdf>.

Whittington, D., Hanemann, W.M., Sadoff, C. & Jeuland, M. (2008). Water and Sanitation Intervention 2 – Total sanitation campaigns to achieve open defecation-free

communities in South Asia. In *Sanitation and Water Challenge Paper* (pp. 76-89). Copenhagen Consensus Center. Accessed at: <http://www.copenhagenconsensus.com/The%2010%20challenges/Sanitation%20and%20Water-1.aspx>.

End notes

1 Ensink, J. & Curtis, V. (2007). *Fact Sheet: Health impact of handwashing with soap*. WELL, WEDC, Loughborough University. <http://www.lboro.ac.uk/well/resources/fact-sheets/fact-sheets-htm/Handwashing.htm>.

2 DCPD is a joint project of The World Bank, the Fogarty International Center of the National Institutes of Health, the World Health Organization, the Population Reference Bureau and the National Library of Medicine. It is an ongoing effort to assess disease control priorities and produce evidence-based analysis and resource materials to inform health policymaking in developing countries. It is funded mainly by the Bill & Melinda Gates Foundation.

3 In places where basic water and sanitation are not available, hygiene is poor, and oral rehydration therapy (ORT) is not widely used, public health interventions aimed at preventing diarrhoeal diseases are extremely cost-effective.

Promoting hygiene, nutrition (exclusive breastfeeding), measles immunisation and ORT costs less than US\$5 per DALY (years lived with disability) averted; promoting better sanitation about US\$11, a hand pumps program about US\$94, piped house connections about US\$223 and sanitation (promotion + hardware) more than US\$270 (Jamison *et al.*, 2006).

4 See, e.g. Cairncross, S. & Valdmanis V. (2006). Water supply, sanitation and hygiene promotion. In D.T. Jamison *et al.*, (Eds.) *Disease control priorities in developing countries*. New York: Oxford University Press. Accessed at: <http://files.dcp2.org/pdf/DCP/DCP41.pdf>. AND Fewtrell L., Kaufmann R.B., Kay D., Enanoria, W., Haller L., & Colford, J.M. Jr. (2005). Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: a systematic review and meta-analysis. *Lancet Infectious Diseases*, 5(1), 42–52. Accessed at: <http://www.ncbi.nlm.nih.gov/pubmed/15620560>.

5 For the required conditions and practice, see www.irc.nl/page/16714.

6 Mäusezahl, D., Christen, A., Duran Pacheco G., Alvarez Tellez F., Iriarte M., Zapata, M.E. *et al.* (2009). Solar Drinking Water Disinfection (SODIS) to Reduce Childhood Diarrhoea in Rural Bolivia: A Cluster-Randomized, Controlled Trial. *PLoS Medicine*, 6(8): e1000125. Accessed at: [doi:10.1371/journal.pmed.1000125](https://doi.org/10.1371/journal.pmed.1000125).

- 7 See Cairncross S., Hunt, C., Boisson, S., Bostoen, K., Curtis, V., Fung, I.C.H., Schmidt, W.P. (2010). *Water, sanitation and hygiene for the prevention of diarrhoea*. International Journal of Epidemiology. 39(1), 193-205. Free download: http://ije.oxfordjournals.org/cgi/content/full/39/suppl_1/i193. See also <http://washresearch.wordpress.com/2009/10/12/determinants-of-handwashing-practices-in-kenya-the-role-of-media-exposure-poverty-and-infrastructure>.
- 8 Shordt, K. (2006). *Review of handwashing programs*. The Hague, the Netherlands: IRC. Accessed at: www.irc.nl/content/download/.../Hand%20Washing%20HIP%2020Jan06.pdf. In Ghana, a 30% increase in HWWS was achieved, see Scott, B.E. et al., 2007. *Marketing hygiene behaviours: the impact of different communication channels on reported handwashing behaviour of women in Ghana*. Health Education Research. Accessed at: <http://her.oxfordjournals.org/cgi/reprint/cym056v1>. In Bobo-Diassoulo, C. et al. observed an increase in mothers' HWWS of 18% and 17% at two critical times. Curtis, V. et al., (2001). *Evidence of behaviour change following a hygiene promotion programme in Burkina Faso*. Bull WHO, 79 (6), 518-52. Accessed at: <http://www.who.int/bulletin/archives/79%286%29518.pdf>.
- 9 See <http://www.globalhandwashing.org> and Soapbox, the PPP for Handwashing newsletter.
- 10 For a catalogue of models, see the annex in Kar, Kamal and Katherine Pasteur, 2005. *Subsidy or self-respect? Community-led total sanitation. An update on recent developments*. IDS Working Paper 257. Brighton, UK: Institute of Social Studies. <http://www.ntd.co.uk/idsbookshop/details.asp?id=899>.
- 11 www.freshschools.org/Pages/default.aspx. See also: www.schools.watsan.net.
- 12 Chambers, Robert, (2003). Participation and Numbers. PLA Notes, 47, 6-12.

Acknowledgements

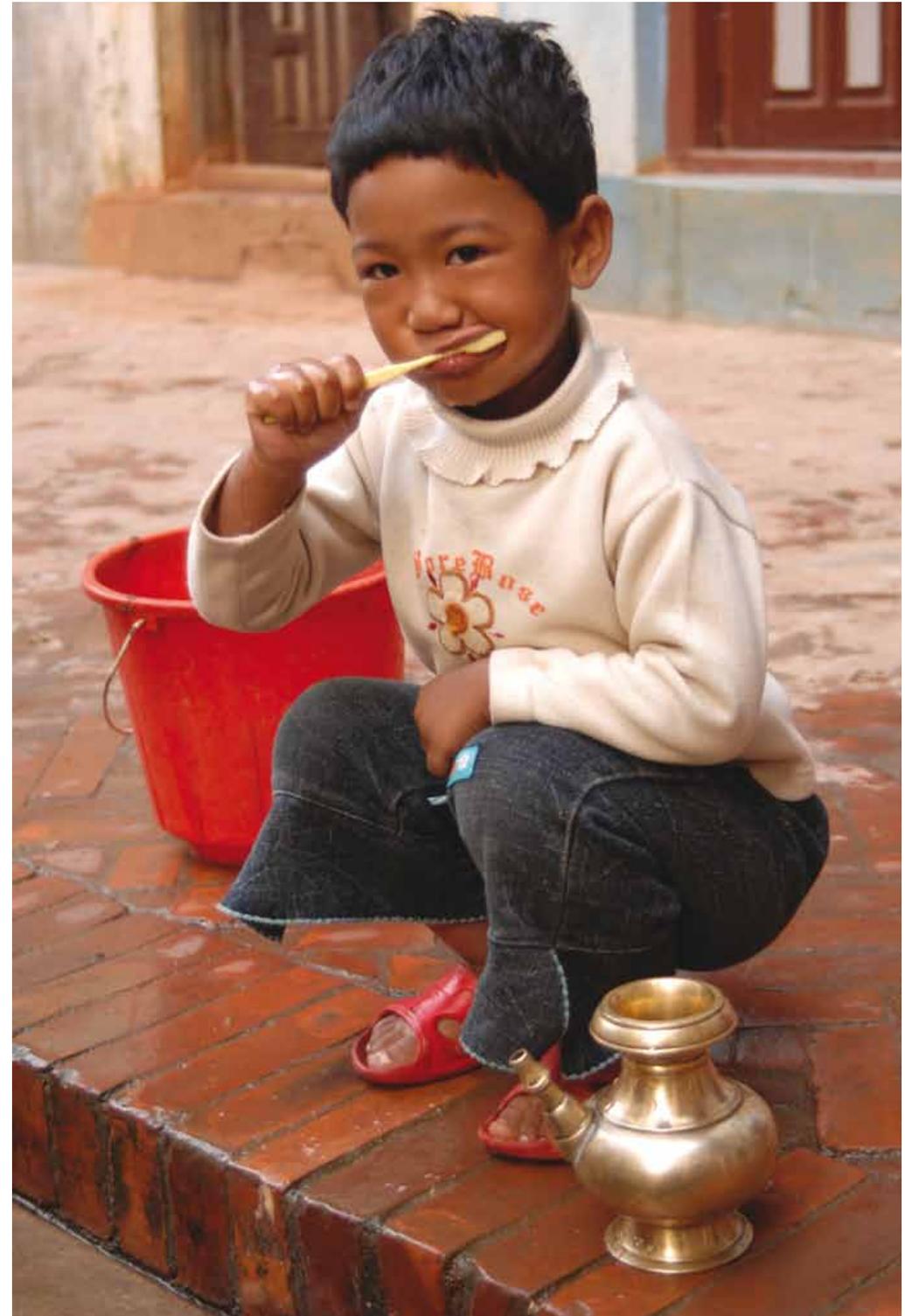
The peer reviews, constructive criticisms and thoughtful and practical suggestions for improvements from Kathleen Shordt, Jan Parry and James Wicken are gratefully acknowledged.



Guryia, 10 years old, washing her hands in the renovated school sanitation block, Kaushal Nagar, India



The case studies



1 Volunteering for water, sanitation and hygiene behaviour improvements

Heather Moran, BESIK (Bee Saneamentu no Ijene iha Komunitade)

Context

Following a turbulent road to independence, Timor-Leste has entered the transition from emergency relief and reconstruction over the past two years to a strategic and planned development phase. The government has made increasing access to sanitation and water its number one priority for both 2010 and 2011. Its commitment is demonstrated through the allocation of US\$11.8 million to supporting water and sanitation programs for 2010. To meet its targets for the Millennium Development Goals by 2015, Timor-Leste



The son of Family Health Promoter Maria Tunis using their home-made tippy tap outside of their latrine

aims to increase improved sanitation coverage in rural areas to more than half the households (from 40% to 55%) and rural access to safe and sufficient water to three out of four households (from 56% to 75%). However, increased water and sanitation coverage, without the practice of behaviours for the use and maintenance of latrines and handwashing with soap, reduces the impact of the construction programs.

Diarrhoeal disease continues to be the second highest killer of children under five in Timor-Leste. The Timor-Leste Ministry of Health is now developing programs to link water infrastructure and sanitation (latrine construction) programs with healthy WASH behaviours. This will ensure health benefits and significantly reduce diarrhoeal disease. This case study describes the Ministry of Health's key effort in promoting the improvement of WASH behaviours throughout Timor-Leste.

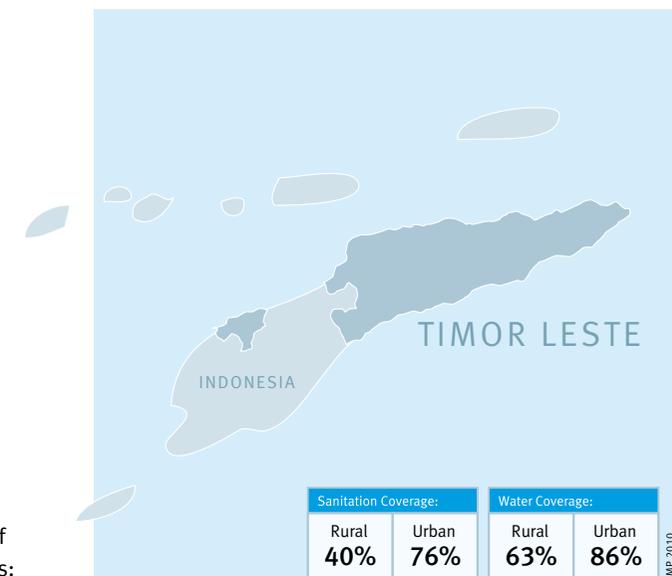
Hygiene behaviour improvements through family health promoters

The Ministry of Health aims to improve community water, sanitation, and hygiene (WASH) behaviours through community mobilisation and capacity building. The approach is to mobilise communities to take responsibility for their own sanitation, to select and train key community members to maintain and manage WASH projects, and to

promote healthy WASH behaviours through community management and district government support. To achieve sustainable improvements in WASH behaviours, the Ministry of Health through the Department of Health Promotion has focused on three areas:

1. Extending health services through a monthly community health service program, called SISCa – Serviso Integrado da Saude Comunitaria (Integrated Community Health Care)
2. Creating groups of volunteers, called Promotor Saude Familia (PSF, or in English, 'Family Health Promoter') and building their capacity
3. Taking a behaviour change approach to promote improvements in WASH practices that are crucial to preventing diarrhoea and other diseases:
 - Handwashing with soap at critical times
 - Safe management of water from source to mouth
 - Safe disposal of adult and child faeces

The key program of the Ministry of Health to provide basic health services and health promotion to rural communities is SISCa. Community members in Timor live in a mountainous country, with flash floods during the rainy season, and hazardous roads which make travelling to health services very difficult. The community selects a place such as the



Acknowledgements

We would like to thank all of the Family Health Promoters who volunteer their time to improving hygiene practices and health in Timor Leste. We would also like to acknowledge the contributions of Carlitos Correia Freitas (Head of the Health Promotion Department, Ministry of Health), Tomasia de Sousa (Head of the Environmental Health Department), Ruth Nichols (Sanitation and Hygiene Advisor, DWASH), Juvenicio Soares (Project Manager, AFMET), and Bendonina dos Reis (Environmental Health Promotion Officer, Ministry of Health, Department of Health Promotion) for the development of this case study. And finally, we would like to thank Carmelinda Pascuela and Maria Tunis for taking time to share their hygiene promotion experiences with us.

village community centre or community members' homes, where SISCa services and hygiene promotion are provided once a month by health staff and the volunteer family health promoters. The SISCAs have brought health services closer to communities, reducing barriers that community members faced in getting health care. In Viqueque, a district



Family Health Promoter, Maria Tunis, with her community in Oecusse

DWASH

situated in the centre of the country and with large rivers and mountains, 41% of the population made use of health services through the SISCa program during the last quarter of 2009 (DHP, 2010). The SISCa program provides health services to communities on a monthly basis. The program provides six services: 1) registration, 2) nutrition, 3) antenatal care, 4) environmental health, 5) general consultations, and 6) health promotion on monthly-rotating topics.

The Family Health Promoter program supports the monthly SISCa and brings health promotion efforts to the community level. Different SISCa services (including environmental health), are usually supported by the family health promoters, under management from district health staff. The aim is to promote healthy WASH behaviours and prevent diseases. The BESIK program (Bee Saneamentu no Ijene iha Komunidade, an Australian Government initiative) is supporting the Ministry of Health in developing a national WASH Behaviour Improvement Strategy. In 2009, BESIK supported the Ministry of Health in developing and training the family health promoters to deliver environmental health messages which included hygiene messages. The health promoters demonstrate healthy hygiene behaviours, such as proper handwashing with soap, to small groups of community members visiting the environmental health table at SISCAs. Community members are also provided with opportunities to practice the WASH behaviours at the SISCa. There are plans to also construct different types of latrines (simple, VIP, and pour-flush options) at every SISCa site to provide community members with sanitation and handwashing facilities but also to provide health staff and promoters with an opportunity

to show community members different types of latrines and model how to properly use them.

Family health promoters are also at the heart of the Ministry's Health Promotion Department efforts at the community level. In theory, one individual from each village (aldeia) in the country is nominated by the community to be trained as a health promoter to support SISCa activities and mobilise people to attend the SISCa. Health promoters are also asked to promote healthy behaviours within their home villages (aldeias). The promoters involve household members in exploring their own WASH practices through the use of a household monitoring tool, composed of a checklist of targeted household hygiene and sanitation behaviours and resources. In addition to providing the Ministry of Health with data on household WASH behaviours, this tool is used to identify and address barriers to targeted behaviours and to reach agreement with key members of the household to try out new hygiene behaviours.

Over the last two years the Ministry's Department of Health Promotion has made great progress in moving from a traditional focus of 'giving information' about safe health practices to a focus on behaviour change principles. Promoters and health staff are trained in interpersonal communication tools to find the barriers to adopting new WASH practices. They are trained in how to negotiate realistic actions for community members to try out new, improved practices. They use motives, education and suggestions that are suitable and realistic to the household's situation. Then the promoters visit households to review the success and problems with the new behaviour

improvements and to support community members in continuing to improve WASH behaviours. In the future, these personal communication activities will be supported by national campaigns for safe hygiene practices.

The way forward

The Family Health Promoter and SISCa programs improve the coverage of health promotion by reaching into communities. The Ministry of Health has recently set up a system to involve health stakeholders, including international and national agencies, in supporting District Health Services to implement the SISCa and Family Health Promoter programs. This has resulted in positive results for promoters in working for safe WASH behaviours. Where District Health Service resources are limited, partner agencies are engaged for support. This includes building capacities to manage and monitor the SISCa and Family Health Promoter programs as well as provision of logistical resources, such as transport, to ensure that programs continue to be implemented.

In many cases, District Public Health Officers and health staff, who guide the health promoters in the communities, have a number of other responsibilities that limit the support and supervision that they are able to provide to the promoters. The Family Health Promoter program works to set up a management committee composed of key stakeholders from the community (traditional and institutional leaders, representatives of women's and youth groups, traditional healers, etc.) to manage SISCa and the promoters. To date, these community

management committees are only beginning to be piloted. The 2009 Ministry evaluation of the Family Health Promoter program emphasised that supportive supervision and management of promoters is essential for effective promotion of health and behaviour change (TAIS, 2009). It has been found that health promoters are most active and effective in communities where there is additional support, such as NGOs providing support to district health staff.

DWASH, a USAID-funded WASH initiative, has found success in helping health promoters

become role models and promote the use of local materials so that community members can practice hygienic behaviours, including handwashing with soap at critical times, latrine use and maintenance, and safe water storage. Strengthening the skills of the health promoters required intensive, supportive counselling and training conducted by HealthNet Timor Leste, a local NGO. HealthNet is specialised in WASH behaviour negotiation skills, working with communities to identify barriers and enablers to practicing key behaviours, and engaging district health staff

and other NGOs in providing support supervision for the promoters. In these communities, the family health promoters have been successful in helping communities adopt hygiene behaviours because they are well-managed and trained. The training increased the capacity of these volunteers to identify problems blocking new behaviours and help find practical solutions to those problems. Additionally, the local NGO worked with the district health staff to develop a module on supportive supervision of the health promoters.

and manage the marketing and sales of the soap. The small income from marketing the soap helps keep the volunteer promoters and cooperative members involved and interested in hygiene promotion. Herbal soap sales continue to rise because of community interest in its medicinal qualities. AFMET has not yet studied the impact of the intervention on handwashing practices. However, the Ministry of Health is now supporting AFMET to develop and pilot communication materials to promote handwashing with soap and to assist in monitoring the impact of the hygiene marketing on handwashing with soap at critical times. AFMET has shown that linking promoters to an activity that provides some income has been successful at sustaining community members in the health promoter program.

A role model for good WASH behaviour

In 2008, Maria Tunis accepted her community's nomination to become a family health promoter, because as a mother, she was interested in helping her community prevent childhood malnutrition. In 2009, DWASH started an intensive campaign to improve hygiene behaviour in Oenoah, Maria's community. DWASH involved Maria, as a volunteer, in their promotion efforts because of her accepted role as a community health promoter. As a result of the training in hygiene behaviour change, Maria built herself a tippy tap out of used water bottles. She put it outside of the latrine that she constructed, so that she and her family could wash their hands after defecating. Maria became a role model for the rest of her community to build handwashing facilities out of local materials. Her neighbours have become more and more interested in building their own handwashing stands. Maria has invested in improved hygiene facilities and with time is 'climbing the hygiene ladder'.

I became more aware that health is very important for people, including myself. I changed my behaviour and immediately built a latrine so that faeces could be disposed in a safe manner and to stop open defecation, and also washing my hands before eating and after working and to treat and store drinking water properly – so it can't become contaminated. I didn't know this before the training. I do it now to improve my health and to protect myself and my children's health. Since DWASH started in Oenoah the biggest change in my community has been the increase in household latrines and washing hands with soap. I have four children, the two eldest use the handwashing facility every day to wash their hands independently but I help the two youngest to wash their hands. Sometimes my husband forgets to wash his hands after defecating and using the toilet but I push him to remember.

Today, almost all the households in Oenoah village (95%) have handwashing facilities and almost all (96%) of the households store their drinking water safely. Maria continues to work closely with the Chefe Aldeia (community chief) to model healthy hygiene behaviours and to promote WASH behaviour improvements in her community.

The Alliance of Friends for Medical Care in East Timor (AFMET), a Japanese NGO, has been active in promoting hygienic behaviours in Timor-Leste since 2000. AFMET originally trained health workers to participate in its community health education program. These community health workers were later brought into the national Family Health Promoter program, which AFMET continued to support. The promoters identified one of the main barriers to practicing correct handwashing as a lack of soap at the household level. While soap is available at local kiosks and markets, people were slow to buy it. AFMET explored ways to increase the amount of soap kept in households and decided to train the health promoters in marketing and making soap out of local materials, such as herbs and coconut oil. In addition to being marketed and sold by people from the community, the herbal soap has medicinal qualities that address common skin conditions, which increased the value that people placed on the purchase of this soap.

To market the herbal soap, AFMET organised Cooperative Groups among the health promoters, who work together to grow the herbs for the soap, make the herbal soap,



Local NGO and community members construct handwashing facilities out of locally resourced bamboo



Carmelinda Pascuela, making soap with fellow Health Promoters

AFMET

Lessons learned

The resources and energy that the Ministry of Health has committed to creating and implementing the Family Health Promoter and SISCa programs have increased promotion of WASH behaviours at the community level. Below are some lessons learned in workshops, consultations with stakeholders, and through experience in the programs. These lessons learned have helped develop the direction for the new WASH Behaviour Improvement Strategy.

- Family health promoters can be effective in supporting behaviour improvement. However, they need ongoing support and guidance to carry out their activities. Both the DWASH and AFMET projects show how promoters are motivated through training and supportive management.
- Hygiene promotion needs to be conducted with a behaviour change model in mind. Knowledge about water, sanitation and hygiene does not immediately lead to improved practices. National campaigns can promote ideal practices and increase knowledge about WASH, but personal communication is needed to convince people to try out practical improvements in their hygiene habits.
- Hygiene promotion needs to be given a higher priority within the government. The Government of Timor-Leste has declared improved access to water and sanitation as the national priority for 2010 and 2011, and demonstrated that priority by committing funds for water and sanitation work. Considering that hygiene improvements give major health rewards, it is worthwhile to prioritise hygiene promotion.

- Women are the key caregivers and teachers of behaviours in the household. Therefore it is very important to have women as hygiene promoters. However, in order to gain support for the behaviours and to reach all people in the population, men should also be involved in hygiene promotion.
- Promotion of WASH behaviours should be carefully planned to fit into and build upon the energy and successes of Community-Led Total Sanitation.
- Health promoters tend to be active longer when they are also involved in activities that provide income.
- While the Department of Health Promotion is developing and strengthening monitoring systems to measure change of household WASH behaviours, it will be difficult to show the impact of family health promoters on WASH behaviours unless there is behaviour-based research.
- Continued support, advocacy, and capacity building of health promoters is critical so that the promotion of WASH behaviours will succeed. Plans and budgets must include support and financing for the program over the long-term.

Moving forward

The Ministry of Health is committed to a comprehensive strategy to improve WASH behaviours in Timor-Leste and BESIK is supporting the development and implementation of this strategy. The new strategy will be built on the programs for Integrated Community Health Care (SISCa) and Family Health Promoters that the Ministry of Health has created to achieve significant improvements in WASH behaviours.

As part of the process of developing the behaviour change strategy for WASH, the Ministry is using learnings from current programs and, supported by BESIK, developing interventions that combine best practices and supportive management strategies in a program that can be implemented at scale throughout Timor-Leste.

A key challenge to promoting and scaling-up this program will be to redirect the attention of policy makers, traditionally given to hardware in water and sanitation, towards WASH improvement programs that are focused on behaviours.

References

Department of Health Promotion. (2010). *National Priorities for Health - Strengthening SISCa Implementation*. Timor Leste: Ministry of Health.

TAIS. (2009). *Evaluation of National Family Health Promoter Program - The National Community Health Volunteers (PSF)*. Prepared for the Department of Health Promotion, Directorate of Community Health Services. Timor-Leste: Ministry of Health.

Soap-making volunteers

Carmelinda Pascuela works as a family hygiene promoter in Mahina I community. Originally Carmelinda's health promotion work was to support the SISCa health activities once a month. Household visits to promote health in her community were difficult, as Carmelinda did not find it easy to discuss health issues with her neighbours and fellow community members.

AFMET invited Carmelinda and some others in her community to form a group to make and sell soap. Carmelinda was then able to support herself and gained the opportunity to approach community members about their hygiene behaviour. AFMET trained Carmelinda and her fellow promoters in communicating effectively about hygiene and handwashing as well as in methods for promoting and managing the sale of soap.

I feel good about the fact that I now have the capacity to act as a health promoter for my own community.

2 Stories from rural hygiene promoters in Vanuatu: PHAST, tippy taps and working with men and women

Gabrielle Halcrow and Jo Crawford, International Women's Development Agency
Jocelyn Loughman, World Vision Vanuatu

Context

Within a broader health program, WASH teams of World Vision in Vanuatu are currently supporting long-term projects with about 15 rural communities in the Provinces of Sanma, Tafea and Pentecost in Vanuatu. The projects are carried out in partnership with the Vanuatu Government's Rural Water Supply Program and the Provincial Environmental Health Units. The goals of the projects are to improve health through sustainable water and sanitation facilities and improved health practices. To ensure community ownership (and therefore sustainability) World Vision Vanuatu uses the Participatory Hygiene and Sanitation Transformation (PHAST) approach to promote safe hygiene and sanitation and community management of water and sanitation facilities. The underlying idea is that no lasting change to people's behaviour will occur unless they understand and believe in the health benefits.

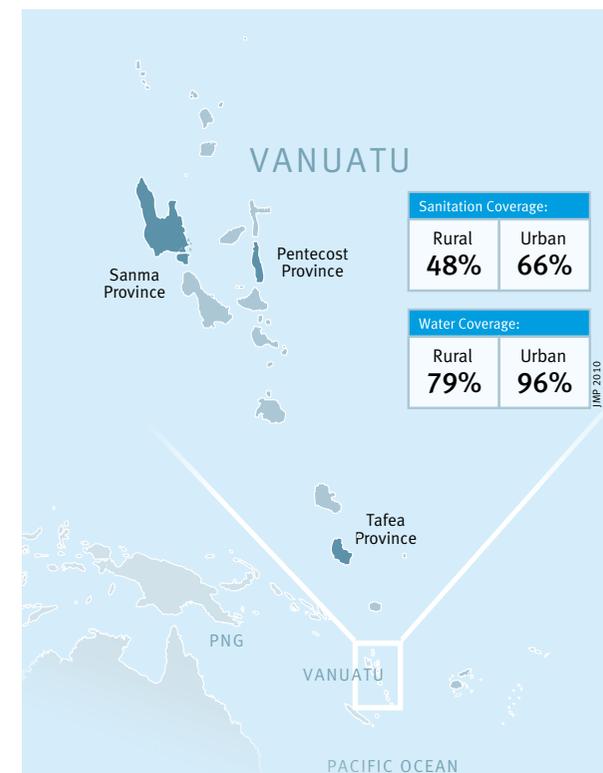
In a PHAST process people participate in groups to discover information, analyse their own situation, work out solutions and make plans to carry out these solutions. PHAST is a seven-step process where each step contains one or more activities. An activity is what the group works through in order to discover information and skills to reach an understanding or take a decision. PHAST is supported by a toolkit of visual aids that are developed locally and used by the facilitators

to help the group work through each activity. The activities involve analysing the health issues in the community including exploring how diseases are being transmitted and effectively blocked, community mapping, three pile sorting (of good, bad and unknown hygiene behaviours), and ranking of technologies in water and sanitation ladders. These activities lead to the final community planning including roles and responsibilities. PHAST is based on adult learning principles. It is proving successful in settings where literacy is low and makes it easier for women to participate alongside men in the Pacific context.

Since early 2007, hygiene promoters (mainly women) have been recruited to the three WASH project teams in each of the provinces. The project teams (including the hygiene promoters) have been trained as PHAST facilitators and as new teams are formed they draw on the skills and experience of the more established teams through mentoring and exchanges. These teams facilitate the seven steps of the participatory planning process with target communities. The result is a community-owned PHAST plan which identifies the target hygiene behaviours, the appropriate technologies to support these and clear responsibilities and roles for achieving their determined goal. Each plan also therefore defines for the project team the supporting role they and the government

partners then provide for the communities over a one to two year period. The plans are facilitated on a rolling basis. For example, on the island of Santo, the team supports only one or two plans per year, giving agreed support in terms of training, technical assistance and contributions to materials. Each plan is based on the community's priorities and setting the plans vary, but commonly include two or three key target behaviours such as handwashing at the critical times, safe disposal of faeces and safe storage of drinking water. They also involve planning for the appropriate technologies to support these behaviours which may be fundraising for community rainwater tanks or a gravity-fed water supply system connecting to tap stands or building VIP toilets and handwashing facilities. In managing their plans, the communities may appoint committees for the different components, appoint volunteer hygiene advocates, set up work teams, undertake fundraising or collect fees for water usage and work with schools and existing groups.

The role of the hygiene promoters is to co-facilitate the PHAST planning process in their teams with the target communities. They then support each community's plan by working with the nominated committees, partners and/or volunteer hygiene promoters in promoting the safe hygiene practices that



Acknowledgements

We would like to thank Mary Kouha and Elina Ronny for sharing their stories as hygiene promoters, as well as World Vision's WASH teams across rural Vanuatu, whose continued work in encouraging women and men to work together to promote safe hygiene practices provides the basis of this case study. Our special acknowledgement goes to the women, men and leaders who respond so positively to these programs and are making change happen for their communities. The sharing of ideas and learnings within the Vanuatu program is enabled and encouraged by their supporting teams, particularly Simon Boe, Janet Strong and Mike Wolfe, with financial support from World Vision Australia. We would like to acknowledge the very fruitful research partnership between the Institute for Sustainable Futures, International Women's Development Agency, World Vision Vanuatu and Live and Learn Environmental Education Fiji which documented the stories and the gender outcomes from the programs in 2009 with financial support from AusAID. Special thanks to the research team in Vanuatu, led by Dr Juliet Willets, with support from Morena Rigamoto, Jimmy Daniel, Ellen Tangap, Jimmy Kawiell, Jeffrey lausolok, Claire Rowland, and Naomi Carrard.

the community considers the most effective to target. Their work includes training nominated volunteer hygiene motivators and conducting any requested health awareness sessions with groups and schools, often drawing on the visual aids and steps from the PHAST tool kit and providing encouragement. They also play an important role in encouraging and involving communities and groups, and building demand for safe hygiene and sanitation practices before the construction of water supplies as part of the plans. Providing a link between the community and the technicians, they strengthen accountability so that the concerns of women and men are heard and technologies are appropriate.

Sharing two stories of success

The hygiene promoters came together in March 2010 to reflect on their work, share experiences and practices in promoting safe hygiene behaviours, and discuss their roles as members of WASH teams. The promoters came from the islands of Santo and Tanna, working with similar project approaches but in very different teams, communities, cultures and geographical areas. This is reflected in their stories of positive experiences and success.

In Tanna, the hygiene promoter is based in World Vision's provincial office and visits the communities regularly travelling by road. Her stories of success focus on her work in

supporting the communities to implement their PHAST plans through encouraging women and men to use the sanitation facilities and to build tippy taps for handwashing. Tippy taps are simple devices for handwashing with running water. We use recycled plastic containers with a small hole near the cap that are filled with water and tipped with a stick and rope tied through a hole in the cap. The containers are made from locally recycled plastic drinking bottles or bamboo. The promoter worked with the community before the construction of new toilets, to help people take up new hygiene practices:

In Tanna most people are illiterate and we have to go slowly, step-by-step. I can speak the language and we can explain things clearly. I can see the changes from what I have done. Before there were old bush toilets that were open and very overgrown. I just talked with them about cleaning the toilets, planting flowers, showed them how to build the tippy taps. By the time the slab construction started people were ready to be involved. Now they have slabs and they use the toilets well and keep them clean.

The following quote from a man in the community confirms the changes resulting from the promoter's work:

We've experienced a big change in this village, especially hygiene. Before we used to live in the Dark Ages. Houses are now clean because of World Vision's hygiene education. Surrounding the houses are clean, and we've started using the toilets and tippy tap. My desire is that all households will have toilets and tippy taps and keep themselves clean and in good health.

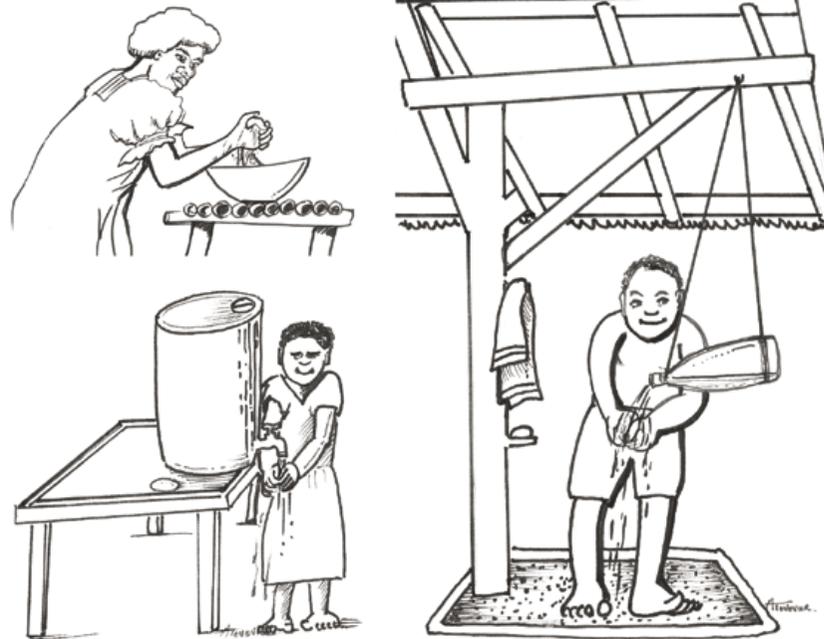
In Santo the female hygiene promoter works with two other male staff as part of a small team that is based for long periods in the inaccessible and isolated North West Coast. Her stories of positive experiences focus on being the only woman working closely with male technical staff as part of the WASH team. She describes the impact of this on the traditional gender division of labour, her own sense of competence and confidence, and the ability of women in the community to imagine women taking on roles alongside men.

When I came in to World Vision I didn't know how to construct all of these slabs. But with the male staff we work as a team. I've learnt how to do all of these things – seat raisers,



Hygiene promoter in Santo facilitating PHAST activities to identify key hygiene practices to target

WORLD VISION VANUATU AND IWDA



Pictures from a tool kit: examples of steps in the handwashing ladder, from a bowl to running water

tap stands, soakaways. I had no idea, so it's a big change. I can do it by myself and help my own community. I don't need to wait for the male staff. When they aren't there I can do it by myself.

When asked why she identified this as a success, she said:

It's a success because I'm a woman and I can do these things. I know in my heart for the other women they are thinking "Yes we can do it".

These successes were then discussed over three days to identify the enabling factors that supported them, and that might be replicated. These factors were clustered around: (a) promoting handwashing practices, and (b) the gender considerations and outcomes.

Climbing the handwashing ladder

On the island of Santo, the team adapted the PHAST planning process by adding an activity to the PHAST step for choosing improved hygiene behaviours and options. They developed a handwashing ladder to use alongside the more traditional water and sanitation ladders. This introduces different types of handwashing facilities, which are then ranked by women and men using their own criteria and values. The idea is that once women and men become familiar and confident with the practice of handwashing, they can work their way up a ladder of facilities (towards safer practices), illustrated with pictures of washing hands with leaves and ashes, a communal bowl of water commonly used in cooking areas, a tippy tap with soap, a recycled drum with a tap, and finally a tap with running water.

The ladder has proved to be an effective tool for discussing and enabling safer

handwashing practices. Sharing the ladder and the tippy tap ideas among the project teams has seen their use spread from Santo to all three of the provinces in which World Vision's projects are located. Many families have adopted tippy taps, showing that it is useful and appropriate technology for the rural areas. It helps encourage safer handwashing, either as a safer step up the handwashing ladder from communal bowls of water or (for many) their initial step on the ladder. The approach supports sustainable hygiene behaviour change, as illustrated by the following quote from a man in Tanna, in the south of Vanuatu:

I have seen a lot of change in my community that can reduce the risk of getting sick; now people have to wash their hands after everything. I've seen many tippy taps with men and women using them and I'm proud of these changes, especially as chairman.

Some families even built structures to protect the (valuable) soap from rain, as shown in the photo on the right.

The success highlights the key role the promoters are playing in linking planning for disease prevention to appropriate technologies and safer handwashing practices.

Working with women and men to promote hygiene

The experience of female hygiene promoters working within male-dominated technical teams, common to many WASH programs, reflects the gendered nature of the work, responsibilities and opportunities. Women work most in the software promotion activities while men deal with the technical hardware activities. The gender imbalance on project

teams and the attitudes of staff regarding gender roles influence the ability of teams to work together and can have both positive and negative outcomes for the projects and the teams. In Santo, the hygiene promoter has a strong working relationship with her team and is proud that she was included in all the activities including operating the geographic positioning system (GPS) and identifying water sources in very challenging terrain.

In Santo we went together to find the water sources, I was very scared and I was the only sister. We had to climb up the rocks.

In Tanna, the hygiene promoter is less supported by the male staff to be involved in the technical activities but has worked closely with men in the community alongside women to promote safer hygiene practices and has trained equal numbers of men and women as hygiene motivators.

The gender roles in the work are similar to those within the communities. The PHAST planning process incorporates a session on the roles of men and women within communities. World Vision has expanded this to include a 24-hour clock about the roles and responsibilities of men and women, raising awareness and encouraging dialogue on the division of labour between men and women. Typically the women's days started earlier, went longer, and were occupied with most of the WASH-related responsibilities within households, while men were more involved in decision-making for these responsibilities and providing construction labour.

Supported by her team, the hygiene promoter in Tanna went beyond the discussion to deal with the imbalance in work loads and provided opportunities for men to be involved alongside



Tippy tap houses



Tippy taps as an appropriate technology for handwashing

women. Her effort to involve men as hygiene advocates has resulted in unexpected positive gender outcomes, with men increasingly sharing household responsibilities and playing a greater role in hygiene (Willetts, *et al.*, 2009). She has been supported by the male members of the team who have encouraged the sharing of roles and responsibilities within WASH committees and brought the message to households.

The International Women’s Development Agency (IWDA) and Institute for Sustainable Futures (ISF) undertook research with World Vision in two of these communities. This showed positive changes and visions for the future. Men in both communities reported increasingly supporting their wives with household activities, sharing the responsibilities and moving away from traditional gender norms.



World Vision Vanuatu has incorporated the 24-hour daily clock activity within the PHAST planning process. The activity helps people discuss and analyse the roles and responsibilities for women and men from sunrise to sunset. This analysis is brought into WASH planning with communities.

WORLD VISION VANUATU AND IWDA

In the words of one of the chiefs:

Previously women were responsible for all household work. But now its time that we share the responsibility – both men and women – to bring upon change in the community.

Household work includes hygiene practices, as one women shared:

Father is taking more responsibility for teaching the children on how to practice good hygiene in the home and cleanliness. He sends the kids off to wash their hands after the toilet and before handling food and to plant flowers.

In a visioning process with the community about the further changes they would like to see, the men’s visions commonly included this theme of sharing, as reflected by what one group said:

In our vision, a man and a woman attend a World Vision PHAST training workshop about hygiene practices. Both of them learned about hygiene practices and then made plans for how to put these into practice – everyone takes turns at doing different jobs at home. They were sharing jobs; a man and woman together were teaching the kids about the hygiene practices, and the children practice them. The whole family went to visit another family and shared what they’d learned in the workshop. Hygiene practices are to clean around the home, constructing the toilets and then keeping them clean, planting flowers, cleaning dishes, teaching children to wash hands after toilet and before eating or after any work done.

These stories highlight the importance of being aware of gender dynamics and the benefits of including women alongside men in WASH teams and in community activities to

promote safer sanitation and hygiene practices. Through taking a more gender-inclusive approach that seeks to recognise and understand the different skills and contributions of women and men in activities, it is possible to raise awareness of the value of women’s labour and increase sharing of roles and responsibilities. This helps ensure that women’s workloads do not increase as a result of activities to improve hygiene practices. In turn, including men helps improve their own hygiene practices and addresses their roles and responsibilities for sanitation and hygiene.

Conclusion

The next step for the hygiene promoters is to develop their own teaching aids to improve their existing PHAST tool kits for training hygiene motivators within communities. Guidance material is being developed to train field staff on how to integrate gender into their projects and teams. The promoters are now developing hygiene plans tailored to support the practices communities have targeted in their current PHAST plans, involving handwashing at critical times and safe disposal of infant faeces. The promoters are seeking to use positive messages to promote the behaviours, not only messages based on health. The messages will be developed through working with families that currently practice these target behaviours, in order to understand the motivating and enabling factors.

There is increasing appreciation of the roles played by hygiene promoters within the WASH teams, the different contributions of men and women on project teams and within communities and in encouraging the

implementation of the hygiene and sanitation components of a community plan before the installation of water facilities. If communities can understand and appreciate why health and hygiene are vital, they are more motivated to contribute and take the lead in the water supply implementation and maintenance. The handwashing ladders included in the initial PHAST planning stage and later in the promotion illustrate the link the hygiene promoters play between the software and hardware components of projects.

The practical opportunities for exchange and learning among the WASH teams in Vanuatu, and World Vision in PNG and the Solomon Islands are building the capacity of the teams in ways that will benefit the communities in the program. Further emphasis in the future in investing in training for hygiene promoters and valuing their profession equally with the water and sanitation technicians will only strengthen these benefits. At the community level, successes are also being recognised and celebrated through learning and reflection processes that bring target communities together in a broader community that is achieving successes in their goals. The host community shares their experiences and this provides other communities with the opportunity to learn about what worked well, what did not, and how success was achieved.

References

- Willetts, J., Halcrow, G., & Carrard, N. (2009). *How do we better address gender in Pacific water and sanitation initiatives? - Vanuatu Case Study*. Gender in Pacific WASH. Accessed at: http://genderinpacificwash.info/system/resources/0000/0002/isf_iwda_vanuatu-case-study.pdf.
- Wood, S., Sawyer, R., & Simpson-Hebert, M. (1998). *PHAST step-by-step guide: A participatory approach for the control of diarrhoeal diseases*. Geneva: WHO.

3 Hygiene Improvement Project: Why WASH matters

Renuka Bery, Julia Rosenbaum, and Eleonore Seumo, Hygiene Improvement Project/Academy for Educational Development
Elizabeth Younger, Hygiene Improvement Project/The Manoff Group

Context

Diarrhoea and other infections are caused or spread by unsafe water, sanitation and hygiene. At one time or another, most people living with HIV or AIDS will have diarrhoea. The immune systems of these people are weakened and they are therefore at greater risk of having diseases related to poor hygiene. They are also more likely to suffer from complications if infected. Diarrhoea reduces a person's ability to absorb medicine and nutrients from food, reducing life expectancy and a person's quality of life. Finally, diarrhoeal disease in people living with HIV adds to the burden of the people who care for them in homes and clinics. Family members then have an increased risk

of diarrhoeal disease, further weakening the families overall who are already struggling to meet the challenges of HIV.

Surprisingly, most HIV programs do not deal with water, sanitation and hygiene (WASH) issues in any significant way when designing home-based care and other activities. People who care for those with HIV and AIDS at home receive training in many aspects of care and support. This training sometimes includes principles of basic hygiene and water, but with little detailed information on how to help household members deal with daily problems that can improve WASH practices in the home. Because of this, the USAID/Hygiene Improvement Project (HIP), led by the Academy for Educational Development (AED),

designed a project to improve water, sanitation and hygiene practices in HIV programs in Ethiopia and Uganda. While this effort focused on home-based care, HIP is working to put these practices more fully into HIV programs including prevention of maternal-to-child transmission of HIV, counselling and testing, supporting orphans and vulnerable children.

In addition, the Hygiene Improvement Project identified a hygiene practice that is highly risky but rarely discussed – managing menstrual blood within the home. Before the widespread use of medicines against the virus, most HIV-positive women stopped menstruating as they grew weaker. However, menstrual blood can have a much higher viral load of HIV and also carries risks of other infectious diseases such as hepatitis and gonorrhoea. Caregivers should protect themselves from HIV or other infectious diseases when handling menstrual blood.

Information on HIV and AIDS

HIV stands for Human Immunodeficiency Virus, meaning: only **H**umans can contract this virus which weakens the **I**mmune system because the **V**irus reproduces inside the cells of the immune system. AIDS stands for Acquired Immune Deficiency Syndrome. A person does not have AIDS immediately after being infected with HIV. A person can have HIV for many years with few or no signs of disease. However, without treatment, HIV will eventually wear down the immune system to the point where the person develops AIDS and is less able to fight off serious, deadly infections.

HIV is spread by having unprotected vaginal (or anal or oral) sex and sexual contact with someone who has HIV. HIV can also be passed on through blood, for example, through infected needles. Infected women can pass HIV to their babies during pregnancy or delivery, as well as through breast-feeding. About one out of four HIV-infected women who are pregnant will pass the infection along to their babies.

Hugging and sharing a bed, utensils, cups and toilet seats do not spread HIV or cause AIDS.



Use a potty if latrine is not accessible

ACADEMY FOR EDUCATIONAL DEVELOPMENT, HYGIENE IMPROVEMENT PROJECT



Ethiopia			
Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
8%	29%	26%	98%

Kenya			
Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
32%	27%	52%	83%

Uganda			
Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
49%	38%	64%	91%

Tanzania			
Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
21%	32%	45%	80%

JMP 2010

Acknowledgements

The authors would like to acknowledge USAID for supporting HIP to develop WASH-HIV integration programs in the four countries: Ethiopia, Kenya, Tanzania and Uganda. We further thank our partners in all the countries: ministries of health and water, national HIV/AIDS programs, NGOs, community groups and the families who contributed to making these experiences rich and valuable for others around the world facing similar challenges.



Ugandan woman uses banana leaf to make a menstrual pad

ACADEMY FOR EDUCATIONAL DEVELOPMENT, HYGIENE IMPROVEMENT PROJECT

HIP's approach

The Hygiene Improvement Project (HIP) reviewed national policies and HIV programs in different countries and found that while WASH is generally accepted in HIV programming, it was not treated in enough detail. To fill this gap, HIP has worked to improve water, sanitation, and hygiene practices within on-going HIV programs.

Changing behaviour is difficult and not always successful as people have different reasons for practicing or not practicing a behaviour. Often behaviour change uses top-down approaches that just tell people to change their behaviours. Instead, the HIP approach is to discuss the options of different improved practices and identify any potential problems and solutions that the family might experience. Then the facilitator will help the household member agree to try one or two new practices for a few weeks. This process is called 'negotiating improved practices'. Gradual change is easier. With this in mind, HIP uses an approach of the Academy for Educational Development called *Improving Behaviours through Negotiating Small Do-able Actions*. The idea is to identify small, easy steps that move people from a current hygiene practice toward the ideal practice. Small do-able actions must be considered possible by the target group where they live and with current resources, while also having a personal and public health impact.

Before getting people to try these small do-able actions, however, HIP had to identify current practices and the small steps that people would find acceptable to move towards the ideal. HIP conducted formative research in Ethiopia, Uganda, and Tanzania and fed the findings from this to Kenya, with adaptations to the local situation.

Evidence base

There are only a few hygiene studies on those affected by HIV. However, research on hygiene in general has shown that improving hygiene practices means that, over time, there will be far fewer cases of diarrhoea, influenza, respiratory infections, skin infections and worm infections. Handwashing with soap reduces the number of cases of diarrhoea over time by around 40% (Curtis & Cairncross, 2003), safe water treatment and home storage by 30-50% (Fewtrell *et al.*, 2005), and proper disposal of faeces by 30% or more (USAID, 2004). John Lule *et al.*, (2005) undertook research on WASH and diarrhoea disease in HIV households in Uganda. This study showed that when there was simple water purification and safe water storage used by persons with HIV, the number of times they had diarrhoea decreased by one-fourth (25%), and the number of days with diarrhoea by one-third (33%). When soap and a latrine were present, the number of days of diarrhoea was reduced.

Trials of improved practices: research

The Hygiene Improvement Project used a research approach called trials of improved practices, developed by subcontractor, The Manoff Group. Trials of improved practices help in understanding current practices and finding small do-able actions within a country's cultural, socioeconomic, and environmental setting. After congratulating people for their current safe WASH practices, researchers invited household members to try a set of improved WASH practices. They discussed the benefits and problems in practicing them and suggested solutions. Using this research, HIP made a menu of options for household members to improve WASH practices — small steps to move people closer to the ideal practice. The small, do-able actions below are for faeces

management. Households work on one or two practices at a time. People may not be able to do all the actions in this list at the same time. It is often easier to start with one or two practices and when these become automatic, to add one or two more. For example, if a household is using locally available materials such as branches and grasses for the walls and door of the latrine, it might be easy to make the latrine bigger. But if the family already has a latrine with brick walls, that might be more difficult to change, so perhaps the family could install a pole in the latrine to help someone who is weak to use it.

Table 1. Small do-able actions for faeces management

Current practice needing improvement	Small do-able actions
<ul style="list-style-type: none"> • Open defecation • Plastic bags used for defecation • Buckets store faeces for hours 	<ul style="list-style-type: none"> • All family members use latrine or potty, day and night
<ul style="list-style-type: none"> • Difficulty using poorly constructed latrines 	<ul style="list-style-type: none"> • Construct larger latrine with support poles/stools to help weak people who have HIV or AIDS
<ul style="list-style-type: none"> • Faeces in potty dumped inappropriately 	<ul style="list-style-type: none"> • Bedridden and children use potty and faeces are disposed of in latrine immediately after defecation • Wash potty with soap and water
<ul style="list-style-type: none"> • Bed-bound person soils bed and lays in excrement for hours 	<ul style="list-style-type: none"> • Use plastic sheeting under sheet to protect bed
<ul style="list-style-type: none"> • Animal faeces found in household compounds 	<ul style="list-style-type: none"> • Keep animals out of house
<ul style="list-style-type: none"> • Caregivers do not protect hands from client faeces 	<ul style="list-style-type: none"> • Wash hands after using latrine or disposing of faeces; place handwashing station next to bed-bound person • Caregivers protect hands with gloves/plastic bag when touching patient's faeces

Negotiating small do-able actions

HIP trains outreach workers to follow the steps below to implement small do-able actions that households can implement one or two at a time.

1. Assess the household member's current hygiene practices.
2. Identify existing safe hygiene and sanitation practices to reinforce and congratulate householder/caregiver on these practices.
3. Identify a few practices to be improved and negotiate (discuss and come to a mutual agreement on) options with caregivers of the person with HIV to try out before the next visit.
4. Find out from household members how the improved practice worked and identify the benefits and solve problems that prevent the person from continuing the improved practice. Support continuation of the good practices.

Country activities

With funding from USAID, HIP staff members work in four countries in East Africa: Ethiopia, Uganda, Tanzania and Kenya. Each country program is slightly different, but all have elements of the program components described below:

Reviewing national policies and guidance

HIP reviewed existing HIV policies and guidelines to improve the WASH-related language. Often the words used are correct but not specific enough for people to change their behaviour effectively. So instead of saying, "Always use clean and safe water," HIP suggests rewording guidelines: "Treat drinking water with a proven treatment method and store water in a narrow neck container with a tightly fitting cover. Serve water by pouring it from the container (or use a container with a tap or transfer water to a covered pitcher). If water cannot be poured, use a ladle and store it by hanging it on the

edge of the container on the inside or on the wall above the container."

Establishing a community of practice

The Hygiene Improvement Project (HIP) formed a community of practice in each country – a group of development partners already working on HIV or community WASH. They met regularly to discuss gaps in the program, share experiences, and develop HIV materials on water, sanitation and hygiene to use in their projects. Members of the community of practice were pioneering organisations that integrated WASH into existing HIV programs. At workshops in Ethiopia and Uganda, the members identified ways to put WASH into on-going projects and committed to a cascade approach to training. Cascade training begins with a training of trainers who then train other workers at the next level, who then may train other workers, and so on. The training has different topics, in modules, so groups with two hours could choose one topic while others could have a one- to three-day training course depending on time and resources available.

Developing country-specific materials

HIP made a Toolkit for both Ethiopia and Uganda and is developing them in Tanzania and Kenya. These materials can be changed to suit the local setting and include manuals, tools, job aids for outreach workers and WASH-HIV indicators.

- The training-of-trainers manual can be adapted to put WASH practices into HIV programs. The whole training can take from 9 to 24 hours, but can be done in a set of shorter sessions.

- Assessment tools use pictures that show steps from least desirable to ideal practice. The assessment cards help outreach workers decide what people's current practices are within the three key WASH behaviours of proper water treatment/storage, faeces management and handwashing, plus menstrual blood management. From this tool, workers choose one practice that needs improving. The workers discuss this with the household member and come to an agreement with the household member to make the improvement.
- Job aids (counselling and reminder cards) guide the outreach worker through the negotiation steps for selecting and implementing an improved behaviour when talking with the household member. The cards help remind the outreach worker about all key messages to deliver regarding improved practices.
- Monitoring and evaluation indicators measure activities and results of the WASH activities in reducing diarrhoea and improving quality of life.



Home-based care worker washing hands with tippy tap

ACADEMY FOR EDUCATIONAL DEVELOPMENT,
HYGIENE IMPROVEMENT PROJECT

Improving practices in Ethiopia

Two months after completing a WASH training, workers in home-based care in one Ethiopian NGO reported that almost 80% of their clients had built tippy taps — water-saving devices made from plastic containers for washing hands. Further, when Tagegn Dessie, 30, who lives with HIV, became too weak to use the latrine, care worker Adisnakew constructed a strap made of rope to help support her. *It really helped my legs so I wouldn't collapse when I went to the bathroom, said Dessie. Adisnakew installed a water bottle next to the latrine and attached a piece of soap on a rope in front of the latrine. This made us remember to wash our hands after using the latrine; even my children started washing their hands after going to the bathroom. Before only my husband and I washed our hands.*



Negotiate improved WASH practices

ACADEMY FOR EDUCATIONAL DEVELOPMENT, HYGIENE IMPROVEMENT PROJECT

Providing intensive assistance during integration

In Uganda and Ethiopia, a training of trainers was held for organisations that support improved home-based care for people with HIV and AIDS. After the training, HIP continued to help the organisations integrate WASH activities into their on-going programs. Depending on the organisation's need, HIP worked to convince senior managers about the importance of the WASH-HIV project, gave technical back-up or were co-trainers during the first "rollout" trainings for fellow staff members, helped integrate WASH into job descriptions, budgeted line items to ensure WASH activities could continue, and so on.

Integrating WASH into existing HIV policies and programs

At the national level, HIP worked with HIV programs and ministries of health and water to put WASH into policies and tools for home-based care of people who have HIV and AIDS. It helped to review policies and documents, such as the Ministry of Health/ World Health Organization Caregiver Handbook for home-based care in Uganda. In Tanzania, the WASH needs of special groups (for example, those living with HIV and AIDS) were added to the national policy. The HIP team worked with Uganda's Village Health Programme to incorporate WASH into existing training. For non-governmental organisations, HIP found that "indicators of success" helped to ensure WASH activities would continue. For example, putting WASH into job descriptions increased the likelihood that staff would have the time and authority to carry out activities. And, if an organisation had WASH indicators to measure success, then budget and staff time was more likely to be given.

Strengthening WASH while improving acceptance

To make this project more acceptable, Tanzanian volunteers in home-based care promoted the small do-able actions at the same time as a general behaviour change campaign promoted improved WASH practices for all.

Monitoring progress

Monitoring progress of water, sanitation and hygiene activities in HIV programs was difficult because the communities of practice involved many organisations. It was not easy to monitor the training or the activities at the household level. HIP conducted the first training of master trainers in each country and easily monitored training quality and numbers trained. However, afterwards, monitoring progress within organisations was challenging because the timing of the next trainings was linked to the organisations' internal schedules, which varied widely. Getting information from organisations on numbers trained, households reached, and behaviour change in households was also difficult. For instance, in Uganda a total of 73 "master trainers" and 214 community field workers were trained from various organisations, forming a pool of over 287 resource persons in the country to support WASH promotion. However, the master trainers have continued to train individuals within their respective organisations and data is not available on exactly how many they have already trained or plan to train in the future. In Ethiopia, 80 master trainers from 10 organisations and some freelance were trained, and in turn trained 450 outreach workers, but it is likely that many more outreach and clinical workers have been trained by those trainers that we have not been able to track.

Lessons and way forward

Building a community of practice takes a driving, committed champion

Most organisations involved in HIV/AIDS and organisations in water, sanitation and hygiene need to be brought into the community of practice. Working together they can improve policies and develop materials and action programs. HIP was the driver in this effort and recommends that to expand the program, some organisation or individual needs to drive the integration in every setting.

In each case, the country-level communities of practice included organisations from both the WASH sector and the home-based-care HIV sectors. The WASH sector gave technical input and built trust for the process and materials so that senior management accepted the recommendations and materials. WASH organisations also gained an understanding of the special needs and possible ways to assist families affected by HIV and AIDS.

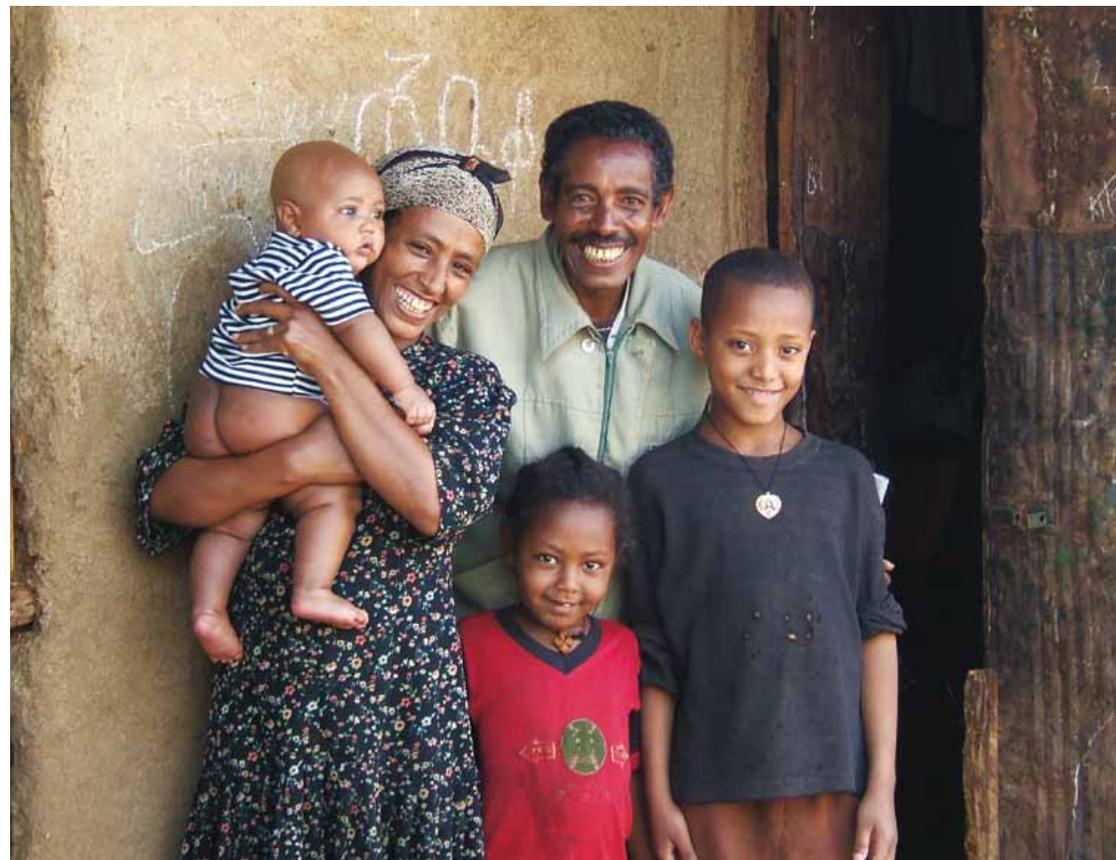
The community of practice model allowed for differing styles of integration to develop at the same time because each participating organisation integrated WASH into its current, on-going program. This strengthened the learning because activities were flexible and could be used in various kinds of HIV programs. Materials were also developed for different types of situations. It is hoped that this model will be able to continue on its own; “outside” financial inputs were minimal and included training an initial group of trainers and developing support materials, but not funding day-to-day field activities.

Maintaining quality

Many countries have hundreds of workers in HIV/AIDS prevention and support activities, and most need training on how to work on water, sanitation and hygiene to improve behaviour in households. Thus, organisations train their staff who then train other workers. This cascade training frequently decreases in quality when the master trainers from the initial training are not directly involved in fieldwork. HIP found that only a few individuals in each training-of-trainers learned enough about the technical information and training techniques to train others successfully. The best of these trainers need to be used very wisely to make the program a success. Supportive supervision and spot-checking of training activities can help to identify when training is changing for the worse, and therefore, can identify where to strengthen it before the next training.

Attention to enabling technologies, particularly sanitation hardware

The average pit latrine needs to be improved for people with HIV who are still mobile (not bed-bound). These changes can be: enlarging the superstructure around the pit to allow a caretaker to help the sick person, adding poles or stools to support weaker people over squat holes, or, clearing obstacles like rocks, roots, or holes on the latrine path. A lesson was that attention is needed for the “hardware” in toilets. One strategy for promoting improved sanitation practices is setting up model latrines in key places (like health centres, churches, or markets) to show how simple changes can improve use. Promoting latrines designed for the elderly and others who have difficulty moving can



Family with home-based care worker

also improve the acceptance of latrine improvement for people with HIV, thereby reducing stigma. Often, disability groups can provide technical assistance to construct and maintain these improved latrines.

Small do-able actions are common across countries

Through work in four different countries, HIP has learned that most small do-able WASH actions are the same across countries. This

means that small do-able actions can be piloted and checked in new country settings with a small amount of research and change or adaption as necessary. Usually the list of do-able activities changes only in small ways in different settings. The list, for example, sometimes includes local water containers or water treatment products available. This can shorten the timeline for starting activities in new countries.



Inaccessible latrine for mobility impaired

ACADEMY FOR EDUCATIONAL DEVELOPMENT, HYGIENE IMPROVEMENT PROJECT

Figure 1. Assessment tool

HAND WASHING How do you wash your hands?

Do not wash hands. ☹️ Use water only and "dip" hands. ☹️ Use pouring water and ash. 😊 Use pouring water and soap. 😊

WATER TREATMENT How do you treat your water?

Do not treat. ☹️ Settling/decanting ☹️ Chlorinate 😊 Filtering through cloth ☹️ Boil 😊

FAECES DISPOSAL How do you get rid of faeces?

Open defecation ☹️ Bury faeces 😊 Use latrine 😊

MENSTRUAL RAG CLEANING FOR RE-USE How do you clean menstrual rags for re-use?

Do not wash. Dry and reuse. ☹️ Rinse in water and dry. ☹️ Wash with soap and water and dry. 😊 Soak 20 minutes in Jik and water. Wash with soap and water. Dry in sun. 😊

Conclusions

Integrating WASH into HIV/AIDS programs is a useful way to meet the water, sanitation and hygiene needs of families affected by HIV and AIDS. Small do-able actions that a household can adopt without added resources or inputs make it possible to change behaviours to improve the lives of people who have HIV/AIDS and the entire household. Program guidelines and implementation tools developed in a few countries serve as a solid base for initiating this integration into on-going programs in other country settings.

About the project

The USAID Hygiene Improvement Project is a six-year project funded by USAID that aims to reduce diarrhoeal disease prevalence through the promotion of key hygiene improvement practices, such as handwashing with soap, safe disposal of faeces, and safe storage and treatment of drinking water at the household level.

References

Curtis, V. & Cairncross, S. (2003). Effect of washing hands with soap on diarrhoea risk in the community: A systematic review. *The Lancet Infectious Diseases*, 3 (5), 275-281.

Fewtrell, L., Kauffman, R.B., Kay, D., Enanoria, W., Haller, L., & Colford, J.M. (2005). Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: A systematic review and meta-analysis. *The Lancet Infectious Diseases*, 5 (1), 42-52.

Lule, J. R., Mermin, J., Ekwari, J. P., Malamba, S., Downing, R., Ransom, R. (2005). Effect of home-based water chlorination and safe storage on diarrhoea among persons with human immunodeficiency virus in Uganda. *The American Society of Tropical Medicine and Hygiene*, 73(5), 926-933.

USAID. (2004). *Environmental Health: Technical and Program Background*. US Agency for International Development. Accessed at: http://www.usaid.gov/our_work/global_health/home/News/ehaad.pdf.

4 Jakarta's impoverished kids lesson series: 10 take-home hygiene messages

Mindy Weimer, Yayasan Tirta Lestari
Mita Sirait, WatSan Action

Context

This case study focuses on WatSan Action's hygiene promotion program implemented by a partner non-governmental organisation, the Yayasan Tirta Lestari, with scavenger communities in Jakarta, Indonesia. WatSan Action recognised that to effectively address the water and sanitation issues of the urban poor, basic hygiene education had to take place. For example, if poor people of Jakarta still use unclean cups they may get diarrhoea even if they have safe drinking water sources.

Though there is an obvious need for basic hygiene education, there was a lack of appropriate material for such an audience.

As WatSan Action began developing and conducting hands-on activities to communicate a few simple messages geared towards water and sanitation, it became clear that personal 'take-home messages' could not be overlooked. Additional topics were highlighted when, for instance, children were coughing and sneezing without regard to covering their mouths during lessons on the water cycle.

After five years of refining a list of take-home messages and accompanying activities, WatSan Action created a manual for training-of-trainers to improve methods for teaching children in poor Indonesian communities about environmental and personal health and hygiene. The aim of our 10 take-home hygiene messages project is to teach children practical ways in which they can change their habits to improve their living conditions.

Background

In the past decade, the notion of environmental health has flourished throughout the international community. However, the city of Jakarta still experiences major challenges managing smog, garbage and water pollution. The lack of preventive education, compounded by relatively weak environmental controls, has turned the tropical city into one of the most polluted on the planet.

The conditions of the millions of poor people living in slums throughout Jakarta show the true face of urban poverty. They suffer from inadequate health systems and lack access to safe water supply and sanitation. Compared to the average population, slum-dwellers have shorter life expectancies, higher infant and maternal mortality, malnutrition and health problems such as dysentery and other waterborne diseases (UN-Habitat, 2006).



Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
36%	67%	71%	89%

JMP 2010



Practicing handwashing with soap

YAYASAN TIRTA LESTARI

Acknowledgements

The author would like to thank the former Public Health Promoters from the Yayasan Tirta Lestari team, YOSHUA Situmorang, Mita Sirait and Tetty Naibaho. Also, volunteers Tricia Wendt and Ashley Kidd, who helped with the research and editing of our manual. A special thanks to Dr. Vikki Uhlmann and Rebecca Weimer, both of whom were instrumental in revising and formatting the manual. Additional thanks to Sika and Chevron for their financial contributions that made this work possible. And lastly, to the families who have participated in our Public Health Promotion Program, we appreciate your involvement and wish you life-long health.



Counting and examining teeth

YAYASAN TIRTA LESTARI

WatSan Action supports the work of the local foundation Yayasan Tirta Lestari's Public Health Promotion (PHP) Programme, which is active in the slum communities in Jakarta. One of the projects of the PHP Programme is to increase the environmental and personal health and hygiene of impoverished children. Many of these children do not go to school, and their parents scavenge trash for a living. Most children do not have toothbrushes, trash bins, soap or other supplies for improving hygiene.

To support action on public health issues of the poor in Jakarta, local foundations like Yayasan Tirta Lestari are taking a community approach to educate and empower. However, effective government action is also needed to sustain progress. Although education is secondary to providing for basic needs, it can be a formidable tool in reducing poverty (IEP, 2008).

The approach

The content for teaching impoverished children about environmental and personal health and hygiene is broken down into ten lessons, each focused around one take-home message. Each lesson in the series is designed with three related questions. Considering that learning by doing is more effective than learning by reading or hearing (Britton, 1996), activities are suggested for each concept question to engage students in learning.

The lessons each last about 1 to 1½ hours, and are usually conducted once per week in a specific order. Usually six months are needed to complete the series, to allow time for household surveys, holidays and evaluation. Lessons were designed for classes of 15 children. They were limited to this number for more effective learning and monitoring of the students. Only children between the ages of 8 to 12 years old who showed willingness to participate were included.

Each of the lessons includes a verbal quiz that covers the three concepts learned about that lesson's topic. Prize incentives related to the topic (for example, toothbrushes) are awarded to correct respondents. The ten lesson topics in the program are listed below, with their take-home hygiene messages and quiz questions. Each topic was chosen taking into consideration whether the children would understand and would be able to make changes, however small, to improve their hygiene and environment.

Lesson 1 – Introducing germs

Germs can cause you to get sick, so it is important to learn about personal hygiene habits that will help protect your health.

- 1) What are germs and why should we know about them?
- 2) How can we protect ourselves from germs?
- 3) Where are there likely to be the most germs living in your surroundings?

Lesson 2 – Washing hands with soap

Handwashing with soap regularly, especially before handling food and after going to the toilet, will prevent germs from spreading and causing sickness.

- 1) Why are clean hands important?
- 2) How do we keep our hands clean?
- 3) When are the important times to wash your hands with soap?

Lesson 3 – Fingernail fun

Germs get caught under your nails, so it is important not to bite your nails and to keep them clean and short.

- 1) Why is it important not to bite your nails?
- 2) Why should you keep your nails clean and short?
- 3) How can we keep our nails clean and short?



Determining food groups

YAYASAN TIRTA LESTARI

Lesson 4 – Brushing teeth matters

Brush your teeth every day after eating and before bedtime to keep your teeth healthy and prevent plaque and bad breath.

- 1) Why are clean teeth important?
- 2) How do we clean our teeth?
- 3) How can we keep our teeth healthy?

Lesson 5 – Snack smart

Snacking from the five major food groups helps to balance your diet and consequently improve your well-being.

- 1) What are the five basic food groups?
- 2) Why is it important to eat a balanced diet?
- 3) What are some examples of smart snacks?

Lesson 6 – Clean hair & skin

Keep your hair and body clean by washing daily to prevent skin and scalp problems.

- 1) Why are clean skin and hair important?
- 2) How do we keep our hair clean?
- 3) How do we keep our skin healthy?



Creating a story of a water droplet through the water cycle

YAYASAN TIRTA LESTARI

Lesson 7 – Drinking safe water

Just because water looks clean does not mean that it is drinkable, so make sure your drinking water is treated and stored properly at home to help prevent getting sick.

- 1) Can you tell by looking at water if it is clean enough to drink? Why?
- 2) What happens if you drink unclean water?
- 3) What can you do in your home to keep your drinking water safe?

Lesson 8 – The water cycle

Our freshwater is scarce, so we must preserve it, not pollute it, and encourage other people to do the same.

- 1) Where does freshwater come from?
- 2) How does littering affect our water sources?
- 3) What can we do to conserve our freshwater sources and keep them clean?

Lesson 9 – Reduce-Reuse-Recycle

You can help save money and the environment at the same time by reducing, reusing and recycling.

- 1) How can we reduce our trash?
- 2) How can we reuse our trash?
- 3) How can we recycle our trash?

Lesson 10 – Breathing & re-greening

Minimising trash-burning and conserving and planting trees are ways you can help your lungs by reducing air pollution.

- 1) How should we manage our trash?
- 2) What happens if we burn trash?
- 3) How can we help improve the air we breathe?

Examples of activities include songs about washing, “I Spy” and “Tag” games about germ messages, stories about freshwater,

and many other engaging ways to help the students grasp the take-home hygiene messages.

Monitoring

To learn about the impact and progress made with students and their families, as well as the teacher, the measures to monitor the results of this project include: (1) household surveys, (2) short verbal quizzes at the end of each lesson, and overall written multiple-choice quizzes at the beginning and end of the lesson series, and (3) an on-going teacher journal. Such measures are useful for project development, donor reporting, and beneficiaries’ sense of achievement.

Impact and outcomes

In 2006, six classes were conducted in six different slum communities. During 2007, an additional community was added and seven classes were conducted. Families in one community were evicted from their homes in 2008; therefore only six classes were conducted that year. In 2009, a lesson series for adults was created as well as a class for Cadres-teacher training (we call volunteer community teachers ‘Cadres’). As a result, the number of children’s classes was reduced to four because of limited resources. During the first quarter of 2010, trained Cadres each taught three lesson series. Thus, this case study is based on the experience of conducting 26 lesson series classes.

Unfortunately the monitoring measures were not completely in place for the majority of the classes conducted. However, the household surveys conducted before and after the program for three classes during 2009 show an average improvement in understanding

and observed practice of 37% (40% in Bintaro Baru, 37% in Cilincing, 34% in Teluk Gong 1 and 35% in Teluk Gong 2). Teluk Gong 1 students’ households were re-surveyed three months after the end of the lesson series in order to measure retention. Results show that there was an improvement in understanding and practice of only 23% from the initial survey (representing a decrease of 11% after three months).

Results highlighted the need to teach parents similar material. Though the parents were keen for their children to participate, they did not support their children’s new hygiene practice at home. The majority of feedback gathered was that they did not understand the messages themselves so they could not help their children learn. Despite the illustrated handouts of the 10 take-home hygiene messages given to the parents during the initial survey, and the reminders throughout the lesson series sent home through the students, the need to develop a lesson series for adults became apparent. Yayasan Tirta Lestari has since developed an appropriate lesson series for adults and conducted four classes to date, though the results are not covered in this paper.

Voices from the program

I hope these Cadres could spread the lesson they have had to all community so everyone can implement the health and hygiene improvement behaviour. – Community Leader, Pak Miftah

There are some neighbours who want the same project implemented in their area, because they think this is a good project for their kids. – Ibu Tan, Cadres Teacher

Thank you very much for your support to facilitate us with knowledge and opportunity to experience and implement a better life quality through PHP activities. – Ibu Tan, Cadres Teacher

My son, Ridho, never forgets to wash his hands after learning the handwashing with soap lesson. – Ibu Eva, Parent

Before these classes, Nanda never washed his hands before a meal. Now he always does it. – Ibu Tati, Parent

I’m still doing garbage separation at home. All my family members do. – Helmy, Public Health Promotion Programme student alumnus



Washing hair together

Successes and challenges

The fact that with each class the children's enthusiasm increases and more children want to join the program is a measure of project success. Parents and students increasingly ask to participate and for additional classes to be added. This has also been a challenge. During lessons, for example, many other children in the community look and continuously want to get involved. To stop curious younger children from disturbing the class, crayons and illustrations of that day's take-home hygiene message are provided to them during the lesson period.

After presenting this project at local conferences, the Indonesian government and various institutions have expressed interest in applying this project in the communities where they work. While this is an encouraging mark of success, it is also challenging

because the project has been evolving and growing, without sufficient resources to formalise and complete documentation so that the project can be taken up by other institutes.

Moving from having the Yayasan Tirta Lestari staff teaching the lessons, to having trained volunteer community members (Cadres) teaching, is a major sign of project success. This has also proven to be challenging as the Cadres need to first learn the basic hygiene messages, as well as develop basic teaching skills. Nonetheless, the Cadres' training was a worthwhile and necessary step in expanding the program. Their results will be monitored.

Project sustainability

This project was based on educating the future generation in Jakarta about healthy habits to improve their environmental and personal health and hygiene. Considering the transient lifestyle of "squatters" who live everyday with the risk of being evicted, education was the deliberate focus of our intervention.

Furthermore, this lesson series was documented in a manual for the purpose of creating a tool for public health implementers to teach basic environmental and personal health and hygiene. The manual is supplementary material for training of trainers conducted by Yayasan Tirta Lestari. The goal is to stimulate other public health implementers through the training of trainers to create a longer-lasting network of support. This is more useful than simply distributing the manual.

This project was designed to be as low-cost as possible, to maximise replication. The

training manual includes a list of supplies and equipment needed (such as shampoo, buckets, crayons, and so on) as well as annexes of support material. The approximate supply cost to run one class for 15 students over six months is US\$1000. This figure includes suggested prize incentives, which although not strictly necessary, positively improve results by encouraging attentiveness while at the same time providing hygiene supplies. Additional costs for equipment are approximately US\$200; largely for a camera and portable handwashing station. The relative operational costs, such as transportation and staff expenses, must also be accounted for by an implementing organisation.

Conclusion

Lesson learned

The activities in the lesson series were designed for children 8 to 12 years old. Though the material is indeed appropriate for that age range, running the class with students of mixed ages from 8 to 12 years old has been challenging because they learn at different speeds. The notable lesson learned was to run parallel classes with children ages 8 to 10 years and another with children aged 10 to 12.

Recommendations

The communities in the program have an average of 300 households. Classes were conducted one at a time. To improve the impact of the lesson series for children at the community level, it is recommended to accommodate all students who meet the criteria in one community and run several classes. As resources allow, it is

recommended to provide these classes during a concurrent timeframe to stimulate greater understanding and learning across the entire community, rather than just with a relatively small number of children.

The way forward

Looking forward, the next steps are to work with volunteer Cadres to continue teaching more classes and to collect more data measuring the impact of this project over time. It is also planned to expand to local clinics, local youth groups and grade schools. Linking with other public health practitioners to share lessons learned would be another valuable way forward.

No two communities are exactly alike; therefore, finding sustainable solutions tailored to each unique group is not a simple task. Nonetheless, we hope this project will be useful in furthering effective basic public health services for underserved urban communities in Indonesia.

References

- Manasco, B. (1996). *Leading Firms Develop Knowledge Strategies*. Knowledge Inc.
- UN-Habitat, Schlein, L. & Kruger, S. (2006). *Urban poor worse off than rural poor but good policies can reduce slums*. City Mayors Society. Accessed at: http://www.citymayors.com/society/urban_poor.html.
- van der Berg, S. (2008). *Poverty and Education - Education Policy Series*. The International Institute for Educational Planning (IIEP) & The International Academy of Education (IAE). Accessed at: <http://unesdoc.unesco.org/images/0018/001817/181754e.pdf>.



Planting anti-mosquito plants

YAYASAN TIRTA LESTARI

5 Tugeda Uime Waka for Helti Komuniti (together we work for healthy communities)

Sarah Davies and Donna Webb, Australian Red Cross

Context

The Solomon Islands archipelago consists of nearly 1000 islands, and natural disasters are common, including earthquakes, tsunamis, cyclones and floods. The Solomon Islands has one of the highest rates of malaria outside Africa (WHO, 2008).

The natural disasters are more difficult to deal with because of ‘the tensions’ – a period of civil unrest that stretched from 1998 to 2003, which severely damaged government infrastructure and the health of the population. Although calm has since been restored, rebuilding the medical, educational and social systems is a long-term challenge.

To improve the health and hygiene practices of some of the Solomon Islands most remote and poor communities, Solomon Islands Red Cross has set up a community-based public health program with support from Australian Red Cross. The program aims to provide communities with the knowledge, skills and long-term support to help them improve health and hygiene practices.

In 2010, the program is mid-way through its second three-year project phase. It is called Tugeda Uime Waka for Helti Komuniti (together we work for healthy communities or THK) with the current project building on the strengths and lessons learned during the first project phase.

Project planning and design was done with the Ministry of Health with careful attention to national policies, strategies and capacities in relation to disease trends and health awareness and promotion activities. The project’s community training in health and hygiene deals with the main health issues identified by the Ministry of Health and also the health concerns identified by community members.

The approach

Each target community and the Solomon Islands Red Cross sign community contracts which outline commitments and accountabilities of both throughout the program. Following contract signing, the communities learn more about the work, values and principles of the Red Cross and Red Crescent Movement. This is followed by participatory hygiene and sanitation transformation (PHAST) training over the course of several weeks, community-based first aid (CBFA) training and an introduction to health aspects of climate change training. After all training is finished (spanning two to three months), Red Cross supports each community to develop an action plan and then provide technical and material assistance to carry out the plans.

Community facilitators

The Solomon Islands have 63 distinct language groups. Only 17% of rural men and women have completed primary school and local kustom (custom) is an integral part of the attitudes and beliefs of people in different communities. For the project to be successful, the use of local volunteers and staff has been essential, as they deliver the training in local languages and within the context of local kustom.

Solomon Islands Red Cross has a volunteer management system within its community-based program. Communities nominate two village health volunteers (one male and one female) to receive in-depth training about malaria prevention, hygiene and sanitation, first aid in the community and dealing with climate change. These village health volunteers are trained by senior branch volunteers who are brought to Solomon Islands Red Cross headquarters twice a year for training courses and to exchange experiences. Village level volunteers join a one-year program in which they work towards attaining senior branch volunteer status. This method gives the volunteers a clear path for developing their skills and level of responsibility.



Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
18%	98%	65%	94%

JMP 2008

Acknowledgements

We would like to thank the entire Solomon Islands Red Cross Tugeda Uime Waka for Helti Komuniti program team for their deep commitment to the program and their support in preparing this case study. Special thanks go to Nancy Jolo (Secretary General) and Clement Manuri (Health Coordinator) for championing the goals of the program and to the staff and volunteers who frequently go above and beyond their usual roles to reach them. We also acknowledge the work done by Red Cross technical advisors in facilitating training and support to the program, in particular to Libby Howell and Kathryn Clarkson for their energy and dedication to adapting the program approach to meet the needs of the families on the Weather Coast and northern Malaita. To these families, we extend our deepest gratitude for welcoming the program into their homes, their collective action and their willingness to adapt.

PHAST

The PHAST approach promotes hygiene, sanitation and community management of water and sanitation facilities with strong participation. It builds on people's own ability to solve their own problems. PHAST aims to empower communities to manage their water and control sanitation-related diseases. It does this through health awareness and understanding which, in turn, leads to environmental and behaviour improvements.

The PHAST process consists of seven steps, each with participatory activities implemented using a tool kit. Most of these tools are a series of pictures used in different ways. The steps, activities and tools are detailed in table one below. The standard PHAST process has been adapted over time for the Solomon Islands and its people, including the design of locally and culturally appropriate pictures.

Table 1. Seven steps of PHAST

		Activity	Tool
Step one	Problem identification	Community stories Health problems in our community	Posters Nurse Mere (this tool helps communities identify the reasons they visit a health clinic)
Step two	Problem analysis	Mapping water and sanitation in the community Good and bad hygiene behaviours Investigating community behaviours How diseases spread	Community mapping Three-pile sorting Pocket chart Transmission routes
Step three	Planning for solutions	Blocking the spread of disease Selecting barriers Tasks of men and women in the community	Blocking the routes Barriers chart Gender role analysis
Step four	Selecting options	Choosing sanitation improvements Choosing improved hygiene behaviours Taking time for questions	Sanitation and water ladder One-pile sorting Question box
Step five	Planning for new facilities and behaviour change	Planning for change Who does what Identifying what might go wrong	Planning posters Problem box
Step six	Planning for monitoring and evaluation	Preparing to check progress	Checking chart
Step seven	Participatory evaluation	Checking progress	Various tools



Ivalyn Delemani participates in a Health Awareness Project in her village of Manakwai

AUSTRALIAN RED CROSS/MEL TOINAY

PHAST is an excellent approach for community participation and very appropriate for the Solomon Islands' communities. The picture-based PHAST education materials help people who are less literate to participate. The use of 'good behaviour/bad behaviour' cards and posters assists with discussions and allows the course facilitator to explain important points. The activities are designed to appeal to all members of the village – young, old, men and women. Men and women are separated, allowing them to talk about personal issues. These activities also allow the sessions to go at a pace appropriate to the learning needs of the participants. More importantly, however, is the fact that the community takes the lead in the process of deciding on their own safe health behaviours.

As part of step five, the community makes their own action plan. Red Cross helps by giving technical advice on the 'how to' of the action plan. Communities choose the actions, which may include building latrines, waste management systems, animal housing, installing rainwater tanks, mosquito nets, or other activities, depending on their needs. Because the community makes these choices, the actions are more likely to be followed through and sustained.

The program's approach means that communities see for themselves that information is more valuable than hardware. Red Cross considers behaviour change as key to any health promotion program and that this cannot occur without knowledge.

Action planning

In addition to PHAST, the community participates in malaria prevention, first aid and health adaptations to climate change training. With increased knowledge, the community then decide what changes they would like to see in their community through an action planning process facilitated by Solomon Islands Red Cross staff and community volunteers. Red Cross staff visit the target communities every two to three weeks for the next two months to monitor progress against action plans and to provide assistance and support when requested.

Exit festivals

Solomon Islands Red Cross has learned over the years that holding an event at the end of a community-based approach is a good way of closing the work positively and ending in a way which reinforces all the messages from the training process. The exit festival is planned from the very beginning where three to four communities who are undergoing the process at the same time are informed that there will be a cash prize at the end for the 'healthiest community' – decided by the Red Cross Branch Managers through a points system. Points are given depending on communities' enthusiasm and the level of ownership taken on.

The exit festival brings together all the communities involved in the program for sports, group activities and stalls for selling local produce and crafts. The festival concludes in a feast which is prepared by the whole community. Speeches are given by chiefs who encourage the communities to continue with the work. During the presentation each community wins a first, second or third prize. The prize money goes to the community's health committees, who plan with their communities on how to spend the money. In the past one community chose to buy a video player to show educational films and use as a social film club.

Monitoring process

In the second phase, baseline knowledge, attitude and practice (KAP) surveys were carried out. After one year of working with a community, end-line assessments will be used to measure the level of success of the program.

The program team meets every six months for a reflections workshop, where successes and lessons learned are documented and built into the yearly program plan. The program team includes community health volunteers, senior volunteers and program staff.

Successes

Both the mid-term review and final evaluation of the first project phase have shown that there had been a modest impact on changing health-related behaviours and improving the health and well-being of communities.

The project has measurably increased the knowledge about disease transmission routes and methods to prevent diarrhoea, skin diseases, hookworm and malaria. More importantly, most community members have transformed their new knowledge into action by adopting some of the easier-to-do practices recommended in the PHAST, such as handwashing after defecation and before preparing food, and ensuring children are regularly bathed. To a lesser extent, some families are now covering food and keeping chickens away from their food. Most communities have also worked together to build chicken coops and pig enclosures, dig drainage ditches, build waste management pits and build latrines. Materials for construction are usually the same as the villagers use to build their homes, and construction is completed entirely by the community themselves. Thus, the operation and maintenance plans can be sustained with minimum help from outside the community. The communities are responsible for and can sustain their own actions. The 19 Weather Coast communities involved in the second phase have constructed 50 pit latrines. Red

Cross sees this as a clear connection between knowledge building and behaviour change. Communities now clearly identify the connection between stopping open defecation and reducing their disease burden and are working towards this aim.

I have had a baby since the training. I don't let my baby run around like a dog. I watch where she is and that she does not step in things.

– Woman, Urahai, Weather Coast

We have cleaned everything up around our house and make sure that we clean the mud off our feet before we come inside and made the ladder safer so the children don't fall off. I like having such a nice clean place to live.

– Man, Aama, Malu'u

The project has also had a positive impact on the skills and knowledge of Solomon Islands Red Cross staff and volunteers and on their potential to act as role models within their own communities.

The project has changed my life. Now I cover food, have made a pit for the toilet, don't share the same towels for swimming. I don't get diarrhoea or stomach aches anymore. We boiled my daughter's clothes and she doesn't get sores anymore.

– Community Volunteer, Weather Coast

Challenges

Participation of women

A focus of the second phase has been to improve the program's gender approach. Initially the program had difficulty in meeting targets for the participation of women in training and as project staff and volunteers. Women's participation has been increased by changing the training schedule and location.

Initially training was conducted over two full days and communities were grouped together. Now training takes place in shorter six hour blocks. Almost all training occurs at the community level and at the most convenient times for community women.

Improving gender equity within the program has been an ongoing area of learning for Solomon Islands Red Cross. When communities start to make their plans of action for behaviour and environmental improvements, Red Cross takes the opportunity to include the roles of men and women in the discussions. Men report being surprised to see that women are overloaded with various responsibilities and that a sharing of the burden is the only way forward. As one woman from Marasa, Weather Coast, reported:

At last we have an organisation who came into our community, educated us on what to do and at the same time facilitated discussion on who will be responsible – otherwise like in the past everything will again fall on the women's shoulders.



Taba'a chief George Gao with Solomon Islands Red Cross Malluu sub-branch officer Ben Lesibana, with the wall that the village built with Red Cross assistance

AUSTRALIAN RED CROSS/MEL TOLINAY

The project took steps to increase the participation of women as volunteers and staff. For example, two women village health volunteers from Malaita were selected, trained and took part in the needs assessment in the Weather Coast, a long distance away from their home island. By enabling the two women to participate, the cultural acceptability of their presence was increased for the people of the Weather Coast. This also gave the women their confidence to undertake a very new and different role.

The Guadalcanal team believe that this was a contributing factor to the increase in female volunteers in their area that year. These two women are also now senior volunteers, with possible opportunities for eventual future promotion into paid roles in their provincial branch of the Solomon Islands Red Cross.



Health Awareness Project

AUSTRALIAN RED CROSS/MEL TOINAY

Language and customs

Before, these things were sensitive issues. It was difficult to discuss 'kustom ways'. We needed to convince people. There were big challenges about discussing human waste but we are breaking barriers and Solomon Islands Red Cross has a lot of respect, says one participant from Malaita.

Red Cross is confident that the keys to success have been the participatory approach of the project, the involvement of people from local communities and therefore use of local language, changing messages to suit local kustom and taboo, and the use of picture-based hygiene and sanitation methods. It is also important that health and hygiene messages should come before any construction so that communities fully understand and are motivated to change their environment.

Remote locations

Both locations, but particularly the Weather Coast, are remote and very difficult to reach. Travel to the Weather Coast communities involves a four to six hour boat trip, followed by a two to four hour walk inland. As the name suggests, the weather is also a factor and heavy rain frequently makes access problematic. The use of community and local volunteers means that the program can continue during these times, but communication and transport are ongoing challenges.

I am hapi tumas (very happy) and proud! The Weather Coast is far away so no one comes, but health of our people is important. We are seeing changes already, people are happy to see us, says one trainer from Solomon Islands Red Cross.

Data collection

The project had put in place a regular reporting, monitoring and evaluation system early on. However, the collection of good data at the local level has been difficult as it involves some new concepts for many of the project staff and volunteers. Also the remote location of the project communities makes it difficult to communicate with the volunteers. In the second phase of the project, the collection of baseline and monitoring data has improved and will continue to be strengthened.

Conclusion

Follow Up

Although people have been changing practices they find easier to adopt, there has also been difficulty in managing their requests for further assistance from Red Cross. In the second phase of the project some material and technical assistance is given to communities as it was seen that support was needed so that people are able to practice skills and knowledge learned in the PHAST training. Contracts are also now being made with communities so that the roles of the Red Cross and the communities are clear. As a result, communities have taken greater responsibility and are more willing to move from knowledge to behaviour change and action.

An additional challenge is to expand the program to other remote communities. The approach is to try to target villages near to those who participated in the previous year. This means that the staff and volunteers can 'pop in' to the communities and check in on how they are doing. The volunteers check that

the knowledge is being used and activities are strong and ongoing. The program also continues to train and involve the local Red Cross branch and sub-branch representatives. These Red Cross people will always be present within the communities.

Lessons

The program has demonstrated that the use of participatory training methods designed for less literate people, integrated with support from different Solomon Islands Red Cross programs such as first aid and climate change, is an effective strategy for health education.

The PHAST method and tools are very acceptable to communities in the Solomon Islands and extremely effective in helping both men and women identify their hygiene and sanitation issues and then helping them to work towards solutions. The tools and training delivery do need to be adapted to the local context for good learning and participation of both men and women. At the same time, communities need support to create an enabling environment in order to practice some of the skills and knowledge learned.

References

WHO. (2008). *World malaria report*. Geneva: World Health Organization.

6 Real involvement, real participation

Miriam Layton and Steve Layton, ATprojects

Context

This paper highlights a project that from its beginning let young women direct the project in terms of product development and design, leading to a solution for menstrual hygiene that is being constructed in schools throughout the Eastern Highlands Province in Papua New Guinea.

The problem being addressed relates to young women and girls dropping out of school because of the stigma and humiliation associated with monthly menstruation. It was therefore hoped that an appropriate response could be developed to address this trend. Unlike many water and sanitation programs, this project focused on the basic needs expressed by the end users. Items as simple as bucket showers and clothes-washing lines were identified by these young women as their real priorities. By continuing to actively involve these young women in “Knowledge Sharing Workshops”, they not only developed their own solutions, but were given access to a workshop and technical staff to make the first prototypes of their ideas.

This ‘real involvement’ from the first stages of the project has led to a practical technical solution that is now in great demand because it was designed by the end-users to meet their own needs.

Mary’s first menstruation

It’s another misty morning in the village, with the feel of rain in the mountain air. But for one 13-year old girl, the weather doesn’t matter. Today, she will be able to leave her house where she has been confined for almost one week. Confinement in the family’s bush-material house did not come easy to Mary. As a keen student she missed being at school for a week, and she knows that at this time of the year her absence could mean missing her exams and having to repeat next year.

But Mary reflects on the last week, and feels that she was lucky that her parents and family supported her during the time of her first menstruation. She decided to write the following short story in one of her school exercise books:

I was at school and became very afraid when I realised I was having my first menstruation. The blood was coming and I had no way of controlling it. I informed the teacher, Mrs Apo (I was so lucky that it was a female teacher as I could not talk about such things to a man), and she was kind and told me not to worry and sent me home with my cousin Rebecca who lives in the same village as me.

When we arrived at the village, I quietly informed my mother. On hearing the news, she sent for my father who was at work in the

coffee garden, and when he arrived home, a room was prepared in our house for me to stay in. As our home is not very big, the room was very small, in fact just big enough for my mattress.

During the next week or so, I did not wash (as washing during this time is against our tradition), but just stayed in that room and waited for the day my family would make a feast and I could leave the home as a woman. During the evenings, some of the elderly women of the village and my mother talked to me and advised me on how I should conduct myself (as I am now a young woman) and how to take care of myself when having my monthly period.

On the last day, I was taken out of the small room in my house and was washed and dressed in traditional clothes ready for the feast (mumu) that my immediate family and relatives had prepared. While the men took care of the feast (customarily it is the men only who prepared the mumu) the women escorted me out of the house to where the feast takes place.

At the feast, my relatives talked to me about how to behave in the community, as now I was no longer a child but a young woman. One important part of this was that they told me I was their pride, because they can now receive a bride price payment when I get married.



Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
41%	71%	33%	87%

JMP 2010

Acknowledgements

The participants of the workshop described in this paper made the development of this product possible. This program would not have been possible without the support of WaterAid Australia. They have not only provided the funding to assist the development of this product, but played the role of a real partner and this relationship has grown from strength to strength. But most importantly the Directors of ATprojects would like to thank all our Papua New Guinean staff for working long hours to ensure that this and our other programs make a difference.

Another burden on the family budget

Papua New Guinea is the richest Pacific island nation and now with the huge liquefied natural gas project being developed by Exxon Mobil, billions of Kina will be flooding into the country. However, the reality for Mary's parents is rather different.

Mary's mother spent the evening of the feast thinking about how the family was going to find the extra money that will now be needed to purchase the sanitary towels Mary will need. In terms of earning a living, Mary's parents have two main sources of income, growing coffee and selling garden produce at the Goroka market. In one year, the coffee brings in about (Kina) K600 and the garden produces another K800.

Having only K1400 per year (roughly Australian \$540), the family mainly lives on garden food, but twice a week Mary's mother buys a tin of fish or meat to give the family some protein; a yearly cost of K395.20.

Every morning the family drinks a cup of tea together and eats their breakfast of sweet

potato. Everyone has sugar with the tea, but there is rarely milk. This morning drink costs the family K312.00 per year. The only other store goods Mary's mother can afford is a small bottle of cooking oil once every two weeks and a packet of salt once a month, costing another K94.40 per year.

Mary's mother is very proud of her daughters, and makes sure that before going to the school the girls wash with soap and their clothes are washed clean. Soap costs the family K46.80 per year.

Mary's mother earns an income for the family selling produce at the Goroka market. The annual cost of the bimonthly round-trip fare is K96.00, with an additional K12.00 for the gate fee at the market. While in Goroka, she visits the secondhand clothing stores, and in one year, spends roughly K100.00 on clothing for the family.

Mary's father is also very proud of his two girls, and as a member of the local primary school board he is always first to pay their school fees, a combined annual cost of K310.00. Mary's father believes in the importance of good hygiene, and has built his family a bush-material toilet. He feels that using toilet paper is an important improvement in his family's lifestyle, but at one roll per week, this luxury costs the family an additional K44.20 a year.

At a total of K1365.60 per year, Mary's family is left with just K34.40 for small luxuries, like replacing broken garden tools or purchasing sanitary towels for the mother. Where is the K72.00 a year for Mary's sanitary towels going to come from?

Mary's parents talked about how they were going to save the money for Mary's sanitary

towels. It was decided that both Mary and her Mother would have to use rags, or a 'traditional' sanitary towel that grows in the forest near their village. The 'traditional' sanitary towel comes from a member of the local fern family called "notuni" in the local language and its soft leaves are used (see picture opposite).

Not as lucky as Mary

Many young school girls have their first menstruation while sitting in a classroom, where the young girl feels a wet sensation and wonders what's happening.

She may, if she is lucky, excuse herself from the class and go to the toilet to find she's bleeding, and may think she's dying. After trying to clean herself with whatever materials are available (often the pages of old exercise books) she runs home, without informing the school, to try to find someone who she could talk to about the "problem".

There are many reasons why these young girls do not know what is happening; it could be the young female students are living with a relative who never considered informing the girls about menstruation. But whatever the case, this first menstruation experience is often traumatic and potentially very embarrassing for the young girls. They have to find somebody who is willing to talk about the situation, which can be quite difficult. There is also the problem of other students in the class making fun of the girls because there are no facilities available for them to wash, and they may start to smell after a short time. Girls also become embarrassed when their fellow female classmates make fun of them because of their lack of understanding of what is taking place.

Most schools do not provide awareness education about menstruation or provide basic washing facilities. One reason for this is that school boards are often dominated by older men who consider menstruation to be a subject that, by tradition, they do not discuss. Attempts to get boards to discuss the issue are met with comments such as "displa em samting blong ol meri em ino samting blong ol man" ("this is a woman's issue, nothing to do with men").

It is also difficult for the teaching staff to deal with the issue as, while there are many female teachers, they are not always allocated to the upper grade classes where girls experience their first menstruation. It should also be mentioned that any form of sex education taught by male teachers is often judged negatively by parents who may also be suspicious of the teacher making sexual advances to their girls.

Generally, there is a lack of understanding about menstruation among men. One such example was the case during which menstruation was being discussed by community development workers. It became clear that the men were very uncomfortable discussing this issue, yet seemingly did not fully appreciate its importance in terms of stopping girls from completing their education.

The way this issue was addressed with the groups of men was to ask them to lower their heads over a table and cover their eyes while their female colleagues explained in great detail the menstruation cycle and how they deal with it. Many of the males were not only embarrassed, but visibly shaken, as perhaps for the first time in their lives, they listened to a group of women talk about menstruation.



Notuni, a fern used as a 'traditional' sanitary towel

APPROJECTS INC.

One result was that when asked to prioritise a number of school projects, the males rated very highly the construction of female showers and simple incinerators to dispose of sanitary towels.

Another issue that is not discussed is the disposal of used sanitary towels (either modern or traditional). Even if it is talked about, the general feeling is that females have some special place where they dispose of these items. In reality this is not the case, as illustrated by an experience in one of our rural schools.

During a school visit to a rural primary school, the staff of ATprojects (an NGO based in the Eastern Highlands Province of Papua New Guinea) went to inspect some old pit latrines with the headmaster of the school. The toilets were in very poor condition and there was no evidence of where girls were disposing of their used sanitary towels. The headmaster was questioned about this. It appeared that the headmaster never visited the school toilets, and he did not know where the girls were disposing of their sanitary towels. When we started to cut down the long grass at the back of the toilets, we found that the girls were throwing their sanitary towels into this long grass, and within minutes, the towels were being consumed by the local pig population of the nearby village.

It is worth noting that researchers at the Papua New Guinea Institute of Medical Research have, on several occasions, referred to our pig population as mobile sanitation systems, as the pigs eat our excreta, which again highlights the contradiction between some traditions and reality.

Knowledge Sharing Workshops

For some time now, ATprojects has used an innovative approach in developing products. This process starts by focusing on what potential end-users (in this case, young female students) see as products or services that they feel are important. This approach is different from the participatory approach used in many community development processes whereby a project or product is designed and costed, after which the end-users are asked to comment on the project or product's suitability.

The Knowledge Sharing Workshop approach provides an environment where end-users are given the tools, not only to develop their own ideas in terms of the projects and products, but importantly, are also provided with assistance to develop prototypes. This process has proven to be successful in developing a whole range of products that are used in rural villages and urban settlements to assist in the care of people with AIDS.

One key element of these workshops is that ATprojects always uses independent facilitators to run the workshops. In this way we limit any possible bias that may result from ATprojects staff facilitating the workshops that feature products or designs which the staff themselves have developed. The issue of girls missing school because of their menstrual periods was initially raised in a Knowledge Sharing Workshop that focused on school infrastructure maintenance. In this workshop a number of head teachers requested that ATprojects look into this issue, particularly with the view of providing some kind of washing facility.

ATprojects decided that two things would be crucial to the success of any workshop that was going to look at female menstruation. Firstly, we would need a facilitator who not only had a health background, but also had experience in community development – in particular female health issues. Here we were fortunate to secure the services of Ms. Ruth Taylor, a long-time Papua New Guinean lecturer at the Goroka Nursing College. Ruth has a particular interest in developing community health services, and we considered that she would be seen as a motherly figure by the young female students attending the workshop.

Secondly, we had to ensure that the girl students who would attend the workshop would be outspoken in their views and not afraid to discuss this traditionally taboo subject. Because of the nature of the workshop, it was very important to not only get permission from the school to release these students, but perhaps more importantly from the students' parents. Contact was made with ten schools. In each school, one of the female teachers was briefed on what we wanted to achieve during the workshop and was also asked if she would feel comfortable attending the workshop herself. Once we had all the approvals from the schools to release the teachers and students and the letters were signed by the parents agreeing to their daughters' attendance at the workshop, a date was set and preparations undertaken.

In the workshop, it quickly became apparent that there was a split among the participants with the female teachers taking a traditional approach, meaning that they did not directly talk about menstruation, but seemed to dance around the issue. The girl students, on

An ATprojects staff member's experience

The Knowledge Sharing Workshop started our own staff talking and here is one of the stories told:

Even at a big institution like universities, it is still an issue when it comes to the proper disposal of used sanitary towels. There is no proper place or device available for burning this waste. The female students generally dispose of waste sanitary towels by firstly wrapping it up in a newspaper and keeping it in their rooms until whenever they are free during the week or at weekends and then burn these at the rubbish dump just next to our dormitories.

However, this was really embarrassing as the rubbish dump was close to the boys' dormitories, and often the boys asked why we were spending so much time burning rubbish!

Cora Moabi – Information officer.



Cora Moabi

ATPROJECTS INC.

the other hand, took a different approach and this situation came to a head when the female students asked the facilitator where the ATprojects male staff members were. While the teachers considered menstruation to be an issue only to be discussed among women, the students felt, given their experience at schools which are usually run

Mrs Seventy's solution

Shortly after the Knowledge Sharing Workshop and before ATprojects had time to complete its design for a simple washing facility, one very enterprising participant, a teacher by the name of Mrs. Seventy, decided that she would take matters into her own hands to find a solution at her school.

She persuaded the board of Asaro Primary School to invest approximately K1500.00 to convert an old existing toilet block into a girls' washing facility. With assistance from ATprojects and its partners, this building was successfully converted.

This building is constructed out of locally available materials and uses water from a previously installed ATprojects water supply. It serves over 90 senior female students at the school; an excellent example of how once the issue is raised in the open, solutions can be found.



Low-cost washing facility

ATPROJECTS INC.

by men, that unless men became involved in the issue nothing would change. It also appeared that of the ten teachers present, only three understood the problems being faced by these young female students and were trying to address the issue in their schools.

One of these three teachers had donated her own secondhand sewing machine to the upper grade girl students who were making simple clothes to sell and the money raised was used to buy sanitary towels. In fact this sewing venture was so successful that the girls raised enough funds to purchase a second sewing machine.

But this positive experience was exceptional. During the workshop the girls told a number of shocking stories about their first experiences with menstruation and the ongoing problems they faced in their efforts to continue to attend school. One young student told the workshop how she was totally unaware of menstruation because her mother is young and uneducated and doesn't discuss this type of issue with her. She said that at her first menstruation, she not only thought she was dying but couldn't understand why everyone in the class, including the male teacher, was making fun of her. She told this story with tears in her eyes, emotionally affected by this experience.

During the course of the workshop there were many occasions where the facilitator, the teachers and ATprojects staff had tears in their eyes after listening to the experiences of the girls. But what was also evident was the strength of these students in their efforts to deal with menstruation with little support from their schools.

Towards the middle of the workshop, the participants started to develop designs for what they considered to be an appropriate solution to assist in menstrual hygiene. In these workshops the solutions developed by participants often differ from those designed by our technical staff. In this case, the staff had given some thought to a simple shower. However, the girls found this to be hilarious and pointed out that they didn't need to wash their entire bodies each time they had bleeding between their legs. The shower idea was abandoned in favour of a simpler washing facility that could be designed to allow the girls to sit down while they washed; using much less water and reducing the cost of the washing facility.

Another misconception was that our technical staff thought that a simple clothes line should be placed inside the washing facility. However, once again the girls did not see the need for privacy but preferred the more sanitary solution of hanging their clothes out in the sun, as this is something that happens in every rural household.

The solution

Using the outcomes of the workshop, ATprojects has been able to design a simple, low-cost washing facility that is based on the current ATloo toilet building design (low-cost VIP toilets being built by ATprojects in rural schools). This design has a cast concrete slab with an inside stand pipe and a floor designed to drain any water out of the building and into a simple pit or drain.

The building is primarily constructed from low cost locally available materials such as woven grass matting (pitpit blinds) and timber

supplied from local saw millers. The design however does incorporate three sheets of waterproof shower liner that is commercially available from local hardware stores and this protects the local materials from rotting due to contact with water and also increases the level of privacy by providing a barrier between woven grass matting and the inside of the washing facility.

The workshop was a success; with the help of the participants, we were able to design a new product that hopefully will meet end-users' expectations, but perhaps more importantly, the workshop has started a dialogue that has been needed for some time.

Following the workshop, we asked one of the students and her teacher (the one who donated her own secondhand sewing machine) if they would take part in a radio program that would be broadcast by the local radio station. They both agreed and a 25-minute program was planned. However, during the recording, the announcer was so taken by the girl's story that the program ran to 55 minutes and was re-broadcast a number of times over the next month or so!

7 Public-Private Partnership for Handwashing with Soap in Indonesia

Ida Rafiqah and Isabel Blackett, Water and Sanitation Program (WSP) - East Asia and the Pacific, World Bank

Context

In Indonesia each year more than 50,000 Indonesian children under five die from diarrhoeal-related diseases. Handwashing with soap effectively reduces diarrhoeal diseases and respiratory infections in children. While handwashing has been promoted in Indonesia for the past 20 years, these efforts have been uncoordinated and unevenly spread across the archipelago, with a population of almost 240 million.

The partnership approach

In 2006, the government called for a national handwashing with soap movement to improve coordination and to take ownership of the program. To increase resources and reach out across the nation, a Public-Private Partnership (PPP) for Handwashing with Soap (HWWS) consisting of government, development organisations and private businesses was created.

In 2007 a Core Group of PPP-HWWS was organised at the national level. The Core Group was originally set up with eight organisations from public, private and non-profit sectors. By 2010, the expanded group now includes:

- government: Ministry of Health and the National Planning Agency (BAPPENAS);
- donor organisations: WSP-World Bank, Asian Development Bank, USAID, UNICEF, WHO;
- the private sector: Reckitt Benckiser, Unilever, Triple Ace, Exxon Mobil, Indofood, Bank BTPN;
- non-governmental organisations: Save the Children, CARE, Johns Hopkins University, Mercy Corps and Plan International; and
- community-based organisations: PKK, Muhammadiyah.

Members of the Core Group develop activities in areas related to their interests and strengths. Some work directly with local government, while others develop their own projects with NGOs active at community level. From 2007, the focus has been on the promotion of HWWS into a sustained national program and on awareness-raising throughout the country.

In 2008 the Minister of Health approved the national Community-based Total Sanitation Strategy (STBM). The STBM has five pillars:



Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
36%	67%	71%	89%

JMP 2010



Dr. I. Nyoman Kandung, former Director General (DG) of Disease Control and Environmental Health, Ministry of Health, and Ir. Budi Yuwono, Director General of Human Settlement, Ministry of Public Works, washed hands with school children during World Water Day, 2008

WATER AND SANITATION PROGRAM (WSP) INDONESIA, WORLD BANK

Acknowledgements

The authors would like to thank Ministry of Health colleagues: Dr. I Nyoman Kandung, former Director General; Prof Tjandra Yoga Aditama, Director General; Dr. Wan Alkadri, former Director of Environmental Health; Dr. Abidinsyah Siregar, former Head of Centre for Health Promotion; Dr. Lily Sulistyawati, Head of Centre for Health Promotion; Zainal Nampira and the Handwashing with Soap team in Directorate of Environmental Health and Centre for Health Promotion, and PPP-HWWS core group partners and supporters. Also to thank the WSP Regional Team Leader Almud Weitz for her review and input to the paper, and WSP colleagues Wendy Sarasdyani and Reini Siregar for their on-going work with the Handwashing with Soap Public-Private Partnership.

end open defecation and adopt handwashing with soap, safe household water systems, solid waste management, and wastewater management. The Minister of Health decree on Community-based Total Sanitation serves as an umbrella law for managing the handwashing program in Indonesia.

Private sector involvement

The message that handwashing is a simple solution to save the lives of children is easy to understand and easy to sell. However, involving business in supporting handwashing programs where the government is the central coordinator requires effort, both on the government side and for business.

Indonesia requires Corporate Social Responsibility (CSR) programs of corporations by a law passed in 2007. Article 74 states that “*Limited liability companies that conduct their businesses in the areas of and/or related to natural resources are obliged to conduct social and environmental responsibility programmes (13)*”.



A performance by the Bina Vokalia School of Music during the Handwashing Stakeholder Assembly in 2008

WATER AND SANITATION PROGRAM (WSP), INDONESIA, WORLD BANK

The CSR law provides opportunities for the government to partner with the private sector, which is important to scale up the program. However, in the beginning, local governments had concerns that corporations would promote specific brands using CSR. The PPP had to increase government confidence to own the handwashing program. Coordinating the PPP in a transparent way with fair competition among companies who are direct competitors has helped the government stay neutral in the partnership. Businesses also had concerns about partnering with the public sector, such as being exploited and the different cultures and style of work. The PPP also advocates for the private sector’s own channels and distribution networks to communicate messages about handwashing with soap. Patient trust-building work was required, but is now producing results.

- A record-breaking attempt involving 5000 school children and 7000 mothers was conducted in 2008, led by Tangerang Administrative with support from USAID, Care and Unilever, and was recorded by the Museum Record Indonesia (MURI) for the most number of people washing hands together at the same time and in the same place.
- Business initiatives in handwashing promotion have included Bank BTPN which has conducted monthly interactive discussions with customers at 46 branches on handwashing with soap and displayed the HWWS videos and posters in all its branches operating in 14 provinces and a total of 366 outlets countrywide.

- Indonesia’s largest noodle maker, Indofoods, is interested in a long-term engagement and ran the HWWS public service announcement on TV terminals in all its factories for three months in 2009.

Certain brands and products that can harm public health are not allowed to participate in the program. Weapons, liquor, tobacco, milk formulae for babies one to six months old (as a breastfeeding substitute) are not suitable supporters for a handwashing campaign, as is stated in the *Technical Guidelines for Co-Branding*¹ document.

National-level program roll-out

The main tasks of the Public-Private Partnership are raising awareness and coordinating handwashing promotion activities throughout the country. Through the Community-based Total Sanitation strategy, water and sanitation projects around the country are required to integrate handwashing components into their plan.

In addition, there are activities conducted directly with stakeholders by the PPP at national level. These are aimed at drawing nationwide attention to handwashing messages and showing national government leadership in the activities. At the national level, the Core Group and partners coordinate communication activities through mass media such as radio and television and in events for specific audiences. Examples of other national program handwashing activities include:

- Global Handwashing Day 2009 involved more than one million students across the country supported by the PPP partners, and led by the Ministry of Health.
- November-December is the main Hajj Pilgrimage season. There are six regional offices for Hajj Travel which host thousands of pilgrims for a couple of nights before embarking to Saudi Arabia. The posters and stickers about the five critical times for handwashing are placed in dining halls, toilets and kitchens.
- A Bird Flu campaign was launched in August 2008 in conjunction with Muhammadiyah, the largest faith-based mass organisation in Indonesia, and was conducted in nine cities in five provinces. The campaign recommended the practice of handwashing with soap to prevent bird flu, and was supported by USAID, WSP, Unilever and Reckitt Benckiser.

HWWS campaign materials

The Public-Private Partnership develops documents to provide a basic understanding and a framework of the initiative in Indonesia. These include:

- the *General Guideline for HWWS Programme Management*² explaining the design of the program, policy and the strategy;
- Technical Guidelines for carrying out HWWS programs;
- the Catalogue of Handwashing Facilities Options showing design options for areas with and without piped water supply;

1 The Technical Guidelines for Co-Branding were developed by the HWWS Core Group.

2 The General Guideline for HWWS Programme Management and Technical Guidelines were developed by the PPP to support the government’s total sanitation strategy.

- Technical Guidelines for Co-Branding outlining rules of work between local authorities and the private sector;
- PPP General Guidelines describing who can be partners in the handwashing program; and
- the Advocacy and Communication Strategy describing strategies for communicating HWWS messages to audiences.

Handwashing program materials include:

- a pocket book for community organisations and local health promoters;
- a story book for mothers of younger children and comics for school children;
- public service announcements for TV, video and audio; and
- a fact sheet, stickers, re-usable shopping bags and posters.

These can be reproduced by the private sector if credit is given to the original developer, either the PPP secretariat or a partner organisation.

Training-of-trainer modules for government officers were also prepared. These describe guidelines about the program and content issues such as: the importance of soap in preventing the spread of germs from hands; types of diseases that can be controlled; social marketing; steps in building partnerships at local level; and choices of settings to carry out activities. There is also information about how to conduct group discussions, make action plans, and energiser techniques for use in training. These modules are used by the HWWS team in the Ministry of Health's capacity building in regional and local water and sanitation implementation projects.

Key operating methods of the Public-Private Partnership

Working closely with Ministry of Health directorates

The work program of the Public-Private Partnership (PPP) for handwashing is linked to the activities of three Ministry of Health directorates. Based in the Directorate of Environmental Health, the PPP coordinator works closely with the handwashing with soap team and the Total Sanitation program secretariat. The Centre for Health Promotion has access to community health centres in the entire country and an excellent network with the private sector. The Centre for Public Communications mobilises journalists and the media. These three Ministry directorates play important roles in promoting handwashing with soap.

Private sector involvement

The private sector has been increasingly involved in the program. Promoting handwashing increases the public demand for soap, plastic containers, plastic hoses for water piping and other products related to washing hands with soap. The Corporate Social Responsibility law also motivates businesses not related to soap or water to support the handwashing program. Exxon Mobil, an oil and gas company, for example, integrated handwashing messages in mothers and girls empowerment and education programs in Aceh, Central and East Java. Indofood displayed the handwashing promotion materials at 32 production sites to remind workers to always wash hands before touching the raw food material. A talk show was conducted with support of Reckitt Benckiser and the Royal Trauma Hospital to

increase public awareness on H1N1 flu pandemic, and the importance of handwashing with soap. The show reached around 11 million viewers.

Collaborating with water and sanitation projects

The PPP for handwashing with soap developed solid links with large-scale water and sanitation projects coordinated by the Ministry of Health. These include projects supported by the World Bank, Asian Development Bank, and NGOs such as Mercy Corps, Plan International and Care. The project staff often meet at coordination meetings of the Community-based Total Sanitation program. At the meetings it was agreed that all projects must have in their plans a component for handwashing with soap. This has helped bring the handwashing messages to a large number of officials and their project teams. Through them, the PPP has been able to connect with local administrations at various levels around the nation, helping to scale up the program and reach wider target audiences.

Cost sharing

The PPP for HWWS secretariat in Indonesia has been supported by the World Bank's Water and Sanitation Program, East Asia and the Pacific. As the owner of the movement, the Ministry of Health co-funds the work through its budget for Community-based Total Sanitation. Costs are shared among the national government, international development programs, private sector, NGOs and other hygiene promotion projects. The local government administrations are expected to take a greater part in the HWWS program by allocating budgets and cooperating with the private sector.

Monitoring and results assessment

Each partner in the PPP has its own tools for baseline surveys and monitoring. The tools largely avoid asking people about their HWWS behaviour, which often results in the respondent giving a 'correct answer', but not necessarily reflecting actual handwashing practices. Additionally, the Ministry of Health has developed a means to measure advocacy



Exxon Mobil staff helping to promote handwashing with soap to mothers and girls during Women's Week, 2008

WATER AND SANITATION PROGRAM (WSP) INDONESIA, WORLD BANK

and awareness activities, which will be used for reporting by local government health officers to national level.

The focus of the first three years of work was on advocacy, awareness raising and establishing a framework for government's future role in promoting handwashing with soap, rather than on behaviour change at community level. Starting in June 2010, an integrated activity with WSP's Total Sanitation and Sanitation Marketing program will be carried out to measure handwashing behaviour among people in areas which have been declared free from open defecation. A



A mother with her baby washes her hands using a tippy tap

WATER AND SANITATION PROGRAM (WSP) INDONESIA, WORLD BANK

combination of all the data reported by the different partners from their project areas and data collected in Ministry of Health is expected to present an overall picture of both HWWS programs and practices in Indonesia.

Conclusions

The first three years of PPP for HWWS have focused on building trust and setting up partnerships with a wide range of organisations. Government leadership of the handwashing promotion within the broader total sanitation strategy ensures that the program will continue over time. With the support of the private sector and community-based organisations in awareness-raising

campaigns, handwashing promotion has reached target audiences in wider areas than the government or development organisations alone could have reached.

Key challenges of moving forward

Commitment of the partners

The program is led by the government whose commitment comes through the Community-based Total Sanitation strategy. The Public-Private Partnership works with various stakeholders and places the government in the centre of the partnership, as a means to move from donor-supported projects to nation-wide involvement coordinated by the government. However, government needs to increase its budget for the program so that it is less dependent on external funding. For the private sector, commitment to the program should move beyond supporting specific events to more strategic planning, both short- and long-term. Under the law of Corporate Social Responsibility, businesses can help carry out the whole behaviour change program, from the baseline survey all the way through until evaluation after the program.

Local implementation

Even though the national government has agreed to support the handwashing program, given the level of decentralisation in Indonesia, local governments are the key implementers of any centrally-approved policy or strategy. Thus, local government officials must be motivated, because the national government does not directly command local administrations.

Sustainability of the program

The two main elements that secured progress of the Public-Private Partnership for handwashing with soap in Indonesia for the past three years were government leadership from various directorates in Ministry of Health and the involvement of private sector and donor/development organisations. In addition, other ministries have been involved through coordination of the National Water Supply and Sanitation Working Group (AMPL). The AMPL network has made hygiene a priority, which helps to move promotion of handwashing with soap from piecemeal, village-by-village efforts to a broader national program.

With the strong public-private network and a growing HWWS community, combined with clear guidance from the government's Total Sanitation Strategy, promotion of handwashing with soap will play a key part in improving Indonesia's progress towards better sanitation and hygiene in the years to come.

Lessons learned

The private sector has gradually realised that public health promotion is not, and should not, be the sole responsibility of the government, but that the involvement of the private sector is essential. This has helped move the program from a limited role with sanitation projects, NGOs and local citizens (mainly supported by external donors), to a wider involvement of multinational and local industries with government.

Recommendations

For a country with a large population and many existing or potential players in handwashing promotion, and the potential

for private sector involvement, it is recommended to first focus on creating a strong supportive environment with government. This will create umbrella laws and strategies and structures for the sustained attention of government and stakeholders, and move the program from piecemeal activities to a coordinated nationwide program.

When the support environment has been created at national level, a nationwide community-based behaviour change program will be more easily introduced, and all hygiene community players including the private sector can support each other in different areas to cover all audiences in the country.

References

- Curtis, V., Cardoso, J., & Scott, B. (2000). *The Handwashing Handbook: A guide for developing a hygiene promotion program to increase handwashing with soap*. Washington, DC: The World Bank Group.
- Departemen Kesehatan (Ministry of Health) RI. (2008). *General Guidelines for HWWS Program Management*. Jakarta, Ministry of Health.
- Indonesia Business Link. (2009). *CEO Perspectives on Corporate Social Responsibility*. Jakarta.
- Indonesia Sanitation Sector Development Program. (2007). *Hand Washing with Soap Campaign Strategy - Version 20*. Jakarta.
- Kotler, P. & Lee, N. (2005). *Corporate Social Responsibility: Doing the Most Good for Your Company and Your Cause*. Hoboken: John Wiley & Sons.
- National Institute of Health. (2007). *Making Health Communication Programs Work*. Bethesda: National Cancer Institute.
- Rimbatmaja, R., Figueroa, M.E., Semiarto, A., Pooroe-Utomo, N., Amirudin, A., Lestari A., & Amini, F. (2007). *Health and Hygiene Behaviors in Indonesia: Results of the Formative Research*. Jakarta, Indonesia: USAID Environmental Services Project (ESP).
- Water Community Working Group / Kelompok Kerja Komunitas Air. (2008). *Cuci Tangan Pakai Sabun: Kami Sudah, Anda? Accessed at: <http://www.komunikasiair.org/news/ctpsday-pertiwi.htm>*.

8 The development of an entertainment education program to promote handwashing with soap among primary school children in Vietnam

Nga Kim Nguyen, The Vietnam Handwashing Initiative, Water and Sanitation Program (WSP), World Bank

Context

The Vietnam Handwashing Initiative aims to reduce disease and mortality in children through a communications program to promote handwashing with soap among caretakers of children under five and among primary school children aged six to ten years. Vietnam is one of four countries within the Water and Sanitation Program's (WSP) Global Scaling-Up Handwashing Project funded by

the Bill and Melinda Gates Foundation, which focuses on learning how to apply innovative promotional approaches to behaviour change to generate widespread and sustained improvements in handwashing with soap at scale among women of reproductive age (ages 15-49) and primary school-aged children (ages 5-9). The project is currently being implemented in Peru, Senegal, Tanzania, and Vietnam by local and national

governments with technical support from WSP. In Vietnam, the program is supported by the Ministry of Health and Ministry of Education and Training, and the main implementing partner is the Vietnam Women's Union.

To help children improve their hygiene habits, the Vietnam Handwashing Initiative developed a children's campaign that includes both: (1) a national mass media campaign targeting children, and (2) a school-based interpersonal communication activities campaign with Youth Union members and teachers. The development of the children's campaign began in July 2008 with research in rural and semi-urban schools. The campaign itself was started in August 2009 at the beginning of the new school year.

Campaign development process

Formative research

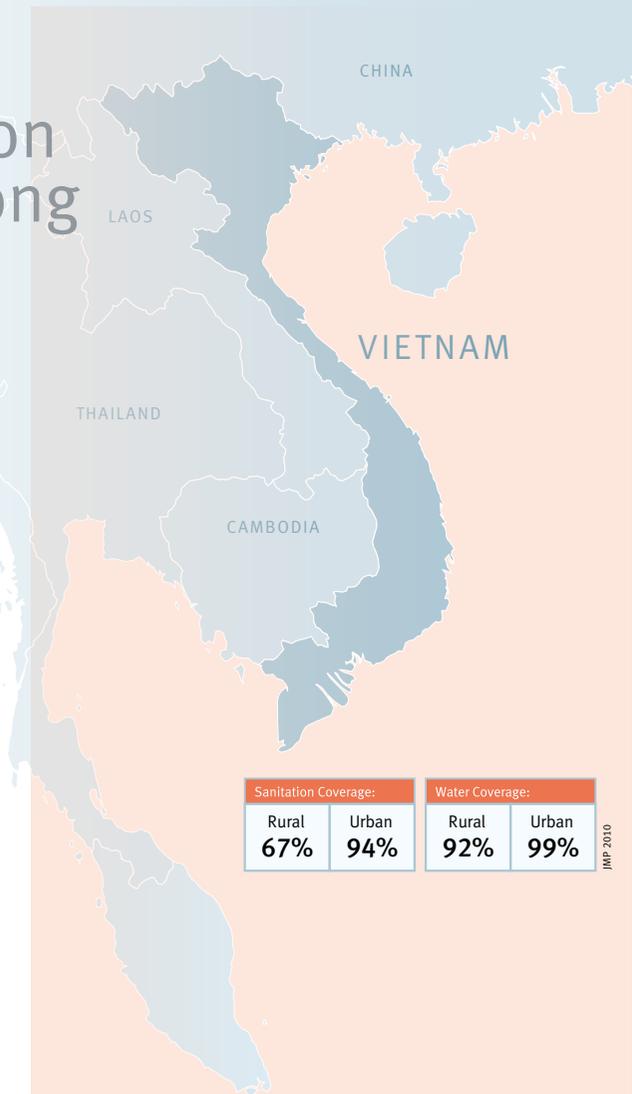
The research aimed to understand the school and home context where handwashing promotion will take place. In the school, this included social dynamics, roles and responsibilities of staff members, a typical school day, and access to water, sanitation and soap. The research also aimed to gain insight into the minds and realities of children aged six to ten to better understand the barriers and motivations to washing hands with soap.



This is one of the most effective programs we have carried out in our school - Headmaster, Nghe An province

Nghe An Women's Union facilitate a handwashing activity with local children

NGHE AN WOMEN'S UNION



Acknowledgements

I would like to thank the teachers, students and families who gave us their time and provided insight to the lives of primary school children in Vietnam. I would also like to thank the Vietnam Women's Union who helped to facilitate the study and to the researchers who helped develop the innovative tools. And finally, to my WSP colleagues who have helped in the development of the children's program and in reviewing this paper including Minh Thi Hien Nguyen, Lam Xuan Dinh, Jacqueline Devine, Almud Weitz, and Amy Lynn Grossman.

Six primary schools were purposely chosen from three provinces to represent northern, central and southern regions of Vietnam. In each province, one peri-urban and one rural area were chosen. The age for primary school in Vietnam is from six to eleven, equivalent to grades one to five. Experience in research with primary school children in Africa showed that it can be difficult to draw out information from very young primary school children. Therefore, it was decided that the research team would interview children mainly from grades four and five (9-10 years old), although younger children were included in one exercise (Motivator Pictures). Roughly 30 students in total participated in each of the research methods below with the exception of the Motivator Pictures exercise where younger children were invited to join a total of 42 students. Eighteen students were included in the Belief Interviews, which were then followed by observations of sanitation and handwashing facilities in the children's homes.

Research methods

- *Family structure diagrams* were developed by each child to learn about the social relationships within the child's household and how those relationships might affect children's ability to wash hands with soap. This method used pictures where the child (shown at the centre of the paper) drew lines to the person in the home they were closest to, spent the most time with, feared most, and so on. The nature of the relationships was shown using different lines or by attaching a note to each of the figures. After the activity, the researchers could look at a child's paper and understand the family relationships based on the length, colour and thickness of the lines between the child and family member.
- *Daily diaries* were used to learn about what children do from morning to evening. Drawings of two clocks (one for morning, one for afternoon/evening hours) were used for children to fill in activities that they did for each hour(s) per day. This was done as a group exercise to get a sense, overall, of what children generally do each day. Daily diaries were developed for both summer holidays and school days as children's activities tended to differ depending on whether they attended school or not.
- A series of *Motivation Pictures* showing various handwashing scenes were presented to children and they were asked to tell a story based on how they interpreted the pictures. The objective was to understand the emotional driver for washing hands such as disgust, morality, shame, regret, and so on.
- Students were asked to name their favourite *role models*, the reasons for their

admiration and to list the careers they wanted. This helped to understand who children look up to, why and what children want to be as adults. Children were asked to write down their own answers. Pile sorting and voting were then used to find group agreement on the most admired people, why these were admired, and on the most desirable careers.

- *Belief interviews* were conducted with individual students to understand what children believe are the benefits to washing hands with soap, the causes of diarrhoea, and so on.
- *In-depth interviews and focus group discussions* with headmasters and teachers were carried out to understand the school's organisation, including teacher workloads, roles and responsibilities of staff, and the connections between the school and home, among others.
- *Direct observations* were made of water, sanitation and hygiene facilities in both schools and homes to understand access and availability of water and soap.

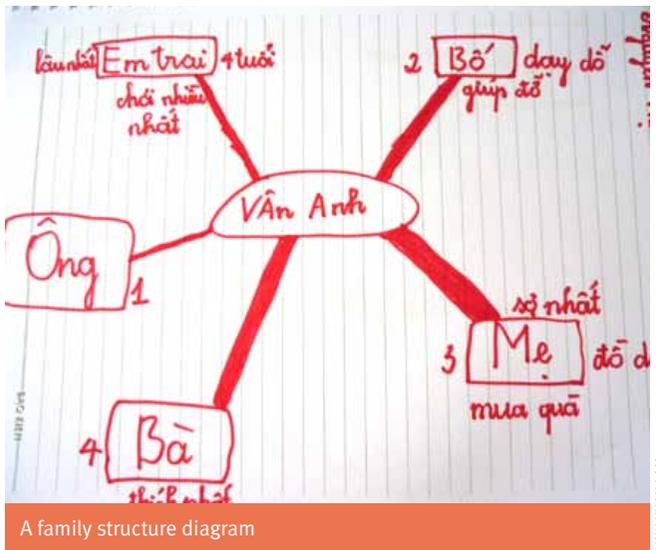
Summary of research findings

- Children know that they need to wash their hands with soap but do not know when.
- Smell is the most striking quality of soap for children.
- Fathers and mothers are equally feared by children. Children spend the most time playing with their brothers and sisters. Grandmothers had an important influence in the home where they were present.
- The desire to prevent others from getting sick (especially younger brothers and sisters) is a leading motivation for handwashing with soap.

- The Ho Chi Minh Pioneers' Union (national children's organisation) is a desirable group to belong to. They meet before class once a week to organise after-school activities and are led by one teacher from the school.
- Role models are people who reflect important values in the society: education, hard work and altruism (unselfish caring for the welfare of others).
- School days are long and highly regimented with limited opportunities for play.
- Teachers have a full load and handwashing with soap is already part of the curriculum.
- Hygiene lessons are often limited to theory. A lack of facilities prevents children from practicing handwashing with soap at many schools.
- There is very little access to soap (and sometimes water and sanitation) in schools.
- Management of soap is also a major challenge in schools with handwashing facilities.
- The most likely time to wash hands with soap in schools is after using the toilet because almost all rural school children return home to eat their midday meal.
- TV is a child's window to wider society (Le, Duong, & Aunger, 2008).

Developing a behaviour change framework

In an ideal situation, a behaviour change framework would help to guide the research. In 2007, WSP developed a framework for WSP program managers of the Global Scaling-Up Handwashing Project, titled FOAM (Coombes & Devine, 2009). The framework provided a way to analyse the determinants or factors that can help or hinder handwashing with



A family structure diagram

soap behaviour, such as access to soap, beliefs regarding the cause of diarrhoea, and so on. FOAM stands for:

Focus: who are target audiences and what is the behaviour we want them to adopt?

Opportunity: is the target audience able to carry out the behaviour?

Ability: is the target audience capable of carrying out the behaviour?

Motivation: does the target audience want to carry out the behaviour?

After analysing the research findings in Vietnam using this FOAM framework, the objectives of the communication campaign were selected. After the campaign, children in semi-urban and rural school ages six to ten will:

- know that even clean-looking and clean-smelling hands can have germs;
- believe that handwashing with water alone is not enough – soap is needed;
- believe that handwashing with soap is an important practice to demonstrate in front of friends and family because good handwashing will protect themselves, their family and friends;
- be motivated to wash their hands with soap at two critical times (before eating and after using the latrine); and
- be motivated and feel excited about handwashing with soap and want to practice it.

Campaign development

The research findings revealed that altruism (unselfish caring for the welfare of others) is highly valued by children as well as the desire to protect their younger brothers and sisters from illness. Thus, the campaign for children

was based on the theme of children as the “pride of the family”. Handwashing with soap was positioned as an easy, fun and smart behaviour with a tagline of “Wash your hands with soap for your own health and the health of others around you”.

Due to the fact that Vietnamese children have little free time in their daily lives, WSP supported its partners to work with an advertising agency to develop a program using an entertainment/education approach that would generate interest, enthusiasm and promote the practice of handwashing with soap. As a result, a campaign with colourful, attractive and positive characters was developed around a superhero that gets special powers by handwashing with soap in order to help his family and others. This was tested with two different characters: a cartoon rabbit character and another, more realistic rural school boy, Bi, who becomes a superhero. The character of Bi was more acceptable to children, and was further refined and pretested again several times before the final production.

Rather than a top-down education approach, the campaign combined mass media and interpersonal communications activities. A series of ten cartoon strips was printed in the weekly national children’s “Youth” magazine beginning in September 2009. These were made into animated cartoons shown on a popular nightly children’s television show “Goodnight Baby” beginning in March 2010. In addition, popular children’s games were modified for use in schools along with singing of the “Five Clean Fingers” song used in the program for mothers and grandmothers. Simple guidelines and an instructional DVD were made for training teachers about how to play the games as an addition to existing lessons on handwashing with soap. Each

school within the program areas will carry out five extracurricular activities throughout the year including participating in a national handwashing drawing contest through the “Youth” magazine.

Program implementation

Activities to promote handwashing with soap have been carried out in 512 rural and semi-urban schools throughout Vietnam, through May 2010. Activities that have been completed thus far include:

- Bi comic strips aired in ten consecutive editions of “Youth” magazine;
- Bi animated cartoons aired on “Goodnight Baby” every Saturday evening for ten weeks;
- Handwashing content integrated into five shows of “Goodnight Baby”;
- National handwashing drawing contest completed with over 2000 submissions nationwide;
- Training for over 670 teachers;
- 260 “My Superhero” contests;
- Over 1000 Global Handwashing Day school events in 2008 and 2009; and
- 512 school Handwashing with Soap launch events and four additional school-based events per school.

Over 10,000 students have been reached thus far through the school program and an estimated 630,000 children have been reached via the mass media program.

To deal with the lack of handwashing facilities at schools, guidance on developing low-cost handwashing stations is provided to teachers and headmasters during the training courses. Rather than waiting for large-scale investments to improve their water and sanitation facilities,

teachers, headmasters or the parents associations can purchase plastic buckets and plastic water dippers which are inexpensive and available for purchase anywhere in Vietnam for immediate use in schools. Teachers are advised to put soap bars inside loosely woven fabrics such as mesh so that the soap remains inside a container at all times and can be more easily managed.



Students playing “catch the dirty hand” game

Lessons learned

Several of the key lessons learned thus far have to do with keeping the quality high in the design and implementation of a behaviour change communications campaign. Below are the main lessons learned and recommendations that may be helpful for managers in developing behaviour change programs.

- Policy makers and program managers are often under pressure to quickly roll out a communications campaign, especially if they lack time or financial resources. Thus they may be tempted to skip or shortcut

These activities are really fun and I get to play them with lots of my friends - Student, Dong Thap Province



Teachers carrying out games with students at school

DINH XUAN LAM

the consumer research stage. However, based on our experience in Vietnam, this first step is the most important in designing a campaign. The research findings are very important for identifying the factors that determine behaviour and are used to make the campaign objectives. The campaign objectives will then be used as the basis for monitoring and evaluation.

- Research tools need to be developed that can uncover the individual, family and larger society factors that may help or stop people from washing hands with soap. This includes knowing the distance, on average, between the latrine and the handwashing area, understanding who within the household (mother or father) can buy soap or who is in charge of or manages soap in households and schools (adults or children), and so on.
- The normal research tools used with adults such as focus group discussion and in-depth interviews may not give enough

useful insight needed as many children easily get bored with questions and are easily influenced by the responses of their friends. Thus, research activities need to be varied, participatory and fun. Children should be allowed to take the lead in drawing the family structures, daily diaries, and so on. Pictures are a useful and easy way to get information and start discussion, particularly from less outspoken children.

- During brainstorming activities, it may be better to ask children to list only their top three choices (three most desirable careers, for example) rather than listing all of their ideas. This makes the pile sorting and prioritising easier for children. During the voting, it was often necessary to ask children to close their eyes and vote to reduce the influence of the more outspoken students.
- During pretesting, it is crucial to test at least two different campaign ideas (such as the rabbit and the boy superheroes). This ensures that audiences are provided a chance to respond to alternative concepts rather than only making comments on variations of the same concept. Ideally, there should be at least two rounds of pretesting. The first round helps to determine which concept to further develop and the second round is used to fine-tune the concept including working, layout, colour, and so on. We had to carry out at least three rounds of pretesting in developing the campaign.
- Research and pretesting should be done by an experienced person who has worked with children before and who can turn the discussion into an activity or game to help keep the children's attention. Discuss the

key ideas you would like the children to provide feedback on and let them tell you the story of what they see from your creative ideas.

- Timing is crucial. Start early when children are attentive and alert. Limit each group activity to one hour including a short break.
- To build on the private sector's experience in designing appealing advertising campaigns, an international advertising agency was contracted to design the children's campaign. Advertising agencies do not always base their creative ideas on evidence and research data. The advertising agency was given the results of the children's research, as well as guidelines. However the agency did not use these fully. Although the creative ideas looked good, WSP and its partners often had to supervise closely so that the creative ideas reflected the research findings. The directions given to the agency are an important tool to guide and measure the creative ideas of the agency. Although a creative concept may be very attractive, if it does not reflect the requirements of the brief, it should be sent back to the agency. It is important to state clearly and exactly what the agency will be measured against and then to hold the firm accountable.

Conclusion

WSP's experience in supporting the Ministry of Health and the Vietnam Women's Union to implement the Vietnam Handwashing Initiative has demonstrated that there is a need and demand for behaviour change communications that use varied approaches to improve hygiene in Vietnam. The health and education ministries have endorsed all

the communication products from the campaign. Teachers and school administrators have been particularly keen to include within their schools the informal and participatory games developed for children. In addition to national institutions, WSP has responded to requests for support from provincial health and education departments as well as from several World Bank investment projects in water and sanitation to integrate handwashing into their existing programs. Most recently, in December 2009, the Vietnam Women's Union signed a Memorandum of Understanding with the World Bank agreeing to mainstream handwashing activities into the Women's Union program within all 63 provinces in Vietnam without additional financial support from WSP. From 2010 until the end of 2011, the Handwashing Initiative will focus its efforts on expanding the children's program by training provincial Departments of Education and Training and provincial mass organisations in provinces that were not in the program. This is part of the effort to build an enabling environment where handwashing with soap activities can be continued even after project funds cease.

References

- Coombes, Y. & Devine, J. (2009). *Introducing FOAM: A Framework to Analyze Handwashing Behavior and Design Effective Handwashing Promotion Programs*. World Bank Water and Sanitation Program.
- Le, X., Duong, V. & Anger, R. (2008). *Schools Formative Research*. World Bank Water and Sanitation Program.

9 Global Handwashing Day and beyond

Ann Thomas, UNICEF

Context

Global Handwashing Day (GHD) was initiated in 2008 during the International Year of Sanitation. The first GHD was a success around the world – over 80 countries and some 200 million children participated. The aims of the day are to shine a spotlight on the state of handwashing in every country, raise awareness of benefits of handwashing with soap (HWWS) and support a global and local culture of handwashing with soap. Global Handwashing Day was launched by the global Public-Private Partnership for Handwashing with Soap, a coalition of international, private and academic organisations.¹

Much of the success of GHD is attributable to the universality of handwashing, and the ability of countries to take on the messages and use them in local contexts and activities. World records were set, with all levels of stakeholders involved and greater attention given to the importance of handwashing with soap. The second Global Handwashing Day, on 15 October 2009, matched the first in

¹ Partners of the PPPHW include Academy for Educational Development, Centres for Disease Control and Prevention, Colgate-Palmolive, International Centre for Diarrhoeal Disease Research, Johns Hopkins Bloomberg School of Public Health, London School of Hygiene & Tropical Medicine, Procter & Gamble, UNICEF, Unilever, USAID, Water and Sanitation Program, and the Water Supply and Sanitation Collaborative Council.

global participation and engagement. Now the challenge is to ensure that planning and activities for GHD can be a springboard for more advanced partnership, policy and planning for improved handwashing practices. This article discusses the successes and challenges of Global Handwashing Day to date with a view to addressing the question of how future GHDs can be fully used to

support improved handwashing communications and programming nationally. In particular, insights from countries are presented and discussed in light of the potential roles of partnership in bringing handwashing with soap into the mainstream. The insights and stories presented are based on UNICEF programming experiences.



Children participate in Global Handwashing Day activities in India

UNICEF



Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
45%	76%	78%	96%

JMP 2010

Acknowledgements

I would like to acknowledge the collective creativity and enthusiasm of all the countries celebrating Global Handwashing Day in the past few years. Their engagement has been the motor behind the Day and provided insights into partnering effectively toward better handwashing with soap practice. This article is based on the stories and the learnings that have been shared. I would also like to thank colleagues at UNICEF, particularly those in the Partnerships team who have gently guided our interactions with various sectors and the business community globally, allowing us to engage in handwashing with soap programming in new ways. Finally, thanks to Therese Dooley and Bette Scott for reviewing this paper and providing valuable inputs to its development.

Successes and challenges of global handwashing day

Adaptability of the messages and logo

Global Handwashing Day (GHD) has without doubt raised the profile for the business of promoting handwashing with soap through the many media/advocacy activities held on the day. The success of the campaign is due to many factors; but one important element has been the adaptability of centrally produced materials such as the GHD Planners Guide and the logo – the symbol for GHD. These were easily adapted and translated into national handwashing campaigns in over 80 countries.

Events such as staging and setting Guinness World Records for handwashing with soap, announcements in papers, television and radio as well as songs by national/international stars and SMS/internet campaigns have pushed handwashing to centre stage in many countries, if only for a day. Additionally the ability of countries to showcase national talents/celebrities (such as child stars in Mozambique and cricket celebrities in India) while giving the day a local flavour (such as rickshaw campaigns in Nepal and camel parades in Chad) is an added bonus. This is perhaps one of the key factors in the success of the day (see Box 1 for an example from Mali).

Linking with ongoing campaigns

Global Handwashing Day lent itself easily to current work in countries to support ongoing health campaigns. Particularly in 2009, swine flu (H1N1) campaigns and GHD activities had

greater combined power in terms of both outreach and impact. Information from countries such as Bolivia suggest that the heightened public awareness and fear of the swine flu (H1N1) epidemic increased rates of handwashing with soap and had a positive side effect in terms of reducing diarrhoeal disease (see Box 2).

Scale

As handwashing programs struggle with the issue of going to scale, Global Handwashing Day has not only provided a simple entry point for raising national awareness; but perhaps also provided a platform for decision-makers to announce national commitments and action. In many countries, the planning process, and possibly even a sense of global competition, has helped authorities to think big not only in terms of publicity but in terms of meaningful actions. There are excellent examples from South Asia where even small commitments on the national stage can mean huge impact for schools and behavioural norms country-wide (see Box 3). It is hoped this trend leads to greater investments, commitments and action beyond Global Handwashing Day.

Partnership

Another success factor of GHD is the strength of the Public-Private Partnership for Handwashing in terms of the expertise, reach and capacity. The ability of public, private and academic agencies to bring together an ideal mix of marketing, operation and evidence-based knowledge has been a major boost for HWWS efforts globally. Box 4 provides an

Box 1 Mali – Multiple handwashing fronts

On 15 October 2009, at Modibo Keita Sports Stadium in Bamako, a whistle blew, signalling the start of a mass handwashing demonstration – hoping to achieve a new world record. Out on the playing field, 10,000 children began lathering vigorously in unison. On stage, leading the handwashers, was the President of Mali. In the stands were many other government ministers, including the Minister of Health and his Cabinet, as well as other celebrities and dignitaries, and many more children – 15,000 people strong and all cheering the handwashers as they vigorously lathered, washed, rinsed and dried. A concert by a variety of famous artists and groups accompanied the handwashers. Later, another astonishing event took place: an earth-to-space discussion on the importance of handwashing with soap between astronaut Frank de Winne of the European Space Agency and schoolchildren in the town of Gao. Finally, three million text messages were sent out to mobile phone users, spreading the message far into the country.



UNICEF

Box 2 Bolivia – Handwashing through social unity in a pandemic

Bolivia took handwashing with soap to the people during GHD celebrations, using street fairs, dramas, festivals and marches – even a soccer game between Bolivia and Brazil – to raise awareness of handwashing with soap. Street fairs and dramas highlighted that handwashing was not only an individual behaviour but had an element of social responsibility as well. This message became all the more critical when public concern about the H1N1 (swine flu) disease propelled GHD's significance and momentum. Heightened risk perception is claimed to be a motivator for health behaviour change as is the idea of 'affiliation' – doing what is considered to be the right thing. The combination of both in Bolivia's handwashing with soap campaigns seemed a driving factor in moving people to properly wash their hands and to make sure their neighbours did as well. Anecdotal evidence from Bolivia suggests that diarrhoeal rates dropped as an additional benefit during the H1N1 season due to increased handwashing with soap.



Children practise handwashing together

UNICEF

example of how the different expertise of the group adds up to a strong group of allies advocating for HWWS globally.

Advocacy, education or behaviour change?

Countries have effectively engaged in activities to promote handwashing with soap and to celebrate GHD. The many activities can be categorised as:

- pure advocacy, for example, setting world records, street fairs;
- education, such as traditional hygiene education in schools; and
- activities on the line between awareness and national behaviour change campaigns, including the H1N1 swine flu campaigns and schools programs for handwashing with soap.

An understanding where advocacy ends and behaviour change programming begins is not required for organising either. However, understanding the difference between advocacy and programs for behavioural change can help in developing appropriate monitoring, setting realistic expectations and making long-term plans for national handwashing programs.

Hindering some of the efforts is a confused understanding of the terms advocacy, education and behaviour change and how they all fit into a long-term strategy for handwashing with soap and WASH in schools. The majority of activities from the past two years fall into the definition of advocacy and education – that is, high profile media events, schools education programs and discussions with decision-makers. Evaluations of GHD 2009 revealed that countries often evaluated advocacy-oriented activities against criteria for behaviour change rather than indicators or achievement in advocacy, awareness creation or policy impacts. This meant that, where the Global Handwashing Day emphasised advocacy, the evaluations did not fully reflect the successes and impact of those advocacy efforts. On the other hand, evaluations of behavioural change in advocacy programs could perhaps show a negative result for behaviour change where, in fact, this was never the planned intervention.

Very few of the activities were actually targeted to change behaviour in the sense of targeting the motivators of behaviours and looking to change behaviour over the long term. Awareness of handwashing is one step down the road to adopting the behaviour.

Box 3 India – HWWS at scale

In terms of sheer numbers, India leads the way in organising handwashing events at scale: last year reaching out to over 80 million people in 533,500 schools and community centres. India's strategy extends GHD beyond a single day, both to boost visibility and to move beyond a one-day focus on behaviour change into a campaign to create a social norm. India's Global Handwashing Day focused on two elements: the midday school meal and the proper way to wash hands, dealing with the fact that many people wash their hands, but not necessarily at the proper times or in the correct manner. Cricket sensation Sachin Tendulkar, a.k.a. the 'Master Blaster', told Indian children through the media that "clean hands are strong hands".

Part of the challenge for countries will be in collecting information on existing behaviours and developing the evidence on existing practice to galvanise national efforts into a national program aimed at long-term change. Effective monitoring will be an area of focus in upcoming campaigns.

This year, support to countries will look at strengthening the links between the various activities and setting outcomes and improving monitoring. The role of children in

each of these steps will be important. Furthermore, knowing specific outcomes that are desired, countries will be able to effectively plan appropriate partnerships, monitoring and activities to achieve these outcomes.

Looking forward

Rumours for contenders for this year's World Record challengers (Guinness World Record for the largest number of children washing hands) are already circulating and the work leading up

to this year's GHD events has begun. Following on from last year's activities, the questions for this year include: how can the momentum – the power and excitement – of Global Handwashing Day be converted into political will, better school handwashing programs, and greater attention to programming for behaviour change?

Partnering effectively

UNICEF has a rich history of partnership in public health sectors such as immunisation, HIV/AIDS and WASH to increase impact and reach of activities. Global Handwashing Day has provided yet another platform on which to develop joint campaigns with messages which can then be implemented by various partners. As in other sectors, partnership with the private sector is not new territory. What perhaps distinguishes GHD are the wide-



Children at Modibo Keita Sports Stadium, Mali, get ready to wash their hands at the handwashing stations

ranging partnerships that have either been proposed or developed and have quickly led to new opportunities and questions.

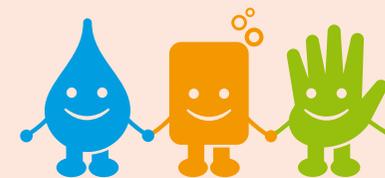
In the past two Global Handwashing Days, UNICEF at the global level has worked very effectively with the global PPPHW to promote GHD and improved HWWS. However at the country level, UNICEF tends to work most closely with Ministries of Health for GHD activities and there are few examples of partnering directly with the soap industry at country level for GHD. Partnership with soap companies has not consistently resulted in win-win situations given the inherent conflict of interest for UNICEF of promoting a behaviour (HWWS) and promoting a particular soap brand. Where partnerships often do succeed is when those partnerships are with industry partners outside of the soap sector, such as mobile phone providers where the issue of the service or product (that is, cell phone service) and the message (handwashing with soap) are not conflicting. For this reason, most partnerships with soap companies need to be 'unbranded', which has little appeal for country level soap brand managers thereby dissolving the partnership.

At the global level the branding issue is less problematic given that the partnership is with the parent companies (such as P&G, Unilever) as opposed to particular soap brands (for example, SafeGuard, Lifebuoy). Globally, these companies share a longer-term perspective on the overall value of GHD as a marketing/image vehicle and are less concerned with the more immediate concern of selling a particular brand.

From a governmental perspective, partnership with the private sector, while more frequent in the last few decades, still raises fears about

Box 4 Marketing support from Procter and Gamble

Procter and Gamble (P&G) understands the value of effective marketing in promoting distinctive brands. In collaboration with its partner brand design agency, Landor, the P&G team applied its considerable marketing knowledge to develop and test the GHD logo. Landor offered its services *pro bono* and received over 200 designs from its in-house team of designers. The designs were judged against three key criteria: 1) the logo had to appeal to children; 2) it had to efficiently convey the key elements of HWWS; and 3) it had to be easily recognisable globally. A selection of the most promising designs was presented to the Partnership for voting and discussion. The top designs were then field tested in approximately ten countries. The resulting logo consisting of a hand, a water droplet and a bar of soap was broadly translated into a series of posters, videos, etc. The support of the P&G and Landor teams is a great example of a partnership where unique expertise was leveraged in support of the Partnership's common goal.



Global Handwashing Day
October 15

the perceptions of the public. These fears include, for example, the possible perception by the public that government might favour one company over another or of conflicting interests (that is, promoting a particular brand and a public health message at the same time). For the most part, the public sector generally chooses unbranded campaigns as the middle road of partnership, meaning that soap companies are not allowed to present a brand in joint messages or activities with the government. For some companies, this has been a deal-breaker, other companies recognise the longer-term advantages of partnership/association and these alliances have worked effectively.

One successful approach for mitigating some of these concerns of PPP is the inclusion of soap manufacturer associations and smaller more local soap companies into the partnership from the start, ensuring transparency of the actions/meetings of the group and that no one group is seen to be given an unfair advantage. The presence of more than one soap company in a partnership has the added benefit of

self-regulating the private sector within the group, as all companies will be interested to see that no one company receives special consideration.

The conflict of interest in promoting a brand and a behaviour has confounded many GHD partnerships within countries. Split campaigns were seen in countries such as India and Bangladesh for GHD 2009. In India, the government held GHD on 27 October, due to the national Diwali celebrations. On 15 October another consortium of partners celebrated GHD in the state of Tamil Nadu in partnership with the state government. In this case, both campaigns were run in schools, supported by government and offered high level advocacy events. The experience here suggests that Global Handwashing Day has sustainability and is being taken on wholeheartedly by the private sector. It also suggests that there may be room for further thought and discussion as to whether stronger government coordination of GHD educational programming and public health messaging will need to play a role in years to come, as more partners take on GHD.

The reality of corporate social responsibility is changing, and with it, rules for partnering with the public sector. Most companies now realise the benefits of positively influencing the environments in which they work. For this, they are looking longer-term in terms of aligning economic, social and environmental goals. Companies involved in Global Handwashing Day often see the benefit of positioning new products around GHD, of using the excitement of the day for entering new markets as well as for supporting new handwashing habits in a new generation of consumers within schools. In this context, partnership makes sense, as the private sector brings marketing expertise and the promise of sustainability through its ongoing objective to drive soap sales.

What perhaps does need to evolve now is the capacity of the public sector to understand the range of partnership opportunities, fully assess the value of GHD in terms of education, advocacy and marketing, the rules for working with companies and how to negotiate effectively for better partnerships that lead to improved handwashing with soap in the long term, without

compromising the quality or integrity of campaigns. Towards this end, more constructive dialogue is needed on the role that private sector may play in public health and on the many different forms that profit can take.

Conclusion

Global Handwashing Day has raised awareness in much of the world. Now that the awareness is there, countries need to think strategically about how to move from good intentions, a great marketing campaign and awareness, toward the longer-term impact of creating behaviour change. Based on the lessons of the past year, some of the recommendations may include:

- Developing a national/local understanding of the state of current handwashing behaviours and existing schools programming on HWWS. This might include the current state of practice of HWWS, the facilities available to children for HWWS (that is, in schools and at home), the current state of knowledge of HWWS, and so on.
- Understanding the various stakeholders interested in improving behaviours which may include public and private sector and bringing all on board for a long-term vision of behaviour change, increasing the amount of handwashers globally and including handwashing with soap in basic school curricula.
- Understanding the various motivations and benefits to all partners and being explicit and firm in what skills/resources are needed, and the opportunities that are available through partnership.

- Taking stock of the advantages of partnering with different agencies in contrast to the benefits derived from the campaign for each. Using this knowledge to effectively negotiate knowledge/ resources exchange for an enhanced campaign.
- Developing a communications strategy for Global Handwashing Day that highlights the various advocacy events, educational activities and longer-term behaviour change, and the roles that different partners can play.
- Developing a mechanism for monitoring and evaluating each of the activities.



Handwashing stations at Modibo Keita Sports Stadium, Mali

10 A strong foundation: Revising Cambodia's National School Health Curriculum to prevent and control intestinal worms

Leng Wannak and Aminuzzaman Talukder, Helen Keller International – Cambodia
Pen Saroeun, Ministry of Education, Youth and Sport (School Health Department)
Kim Koporc, Children Without Worms

Context

About 400 million children around the world have intestinal worms that are transmitted through soil (WHO, 2009). Found widely in tropical and subtropical areas, these worms – including roundworms, whipworms and hookworms – cause malnutrition and make children more likely to get other serious infections. Intestinal worm infections stunt children's growth when their bodies are developing. This can lead to slower mental development, reduced school attendance and performance, and later, to decreased productivity as adults – all of which continue the cycle of poverty. In severe cases, soil-transmitted worm infections can lead to death.

Practices that prevent and control intestinal worms

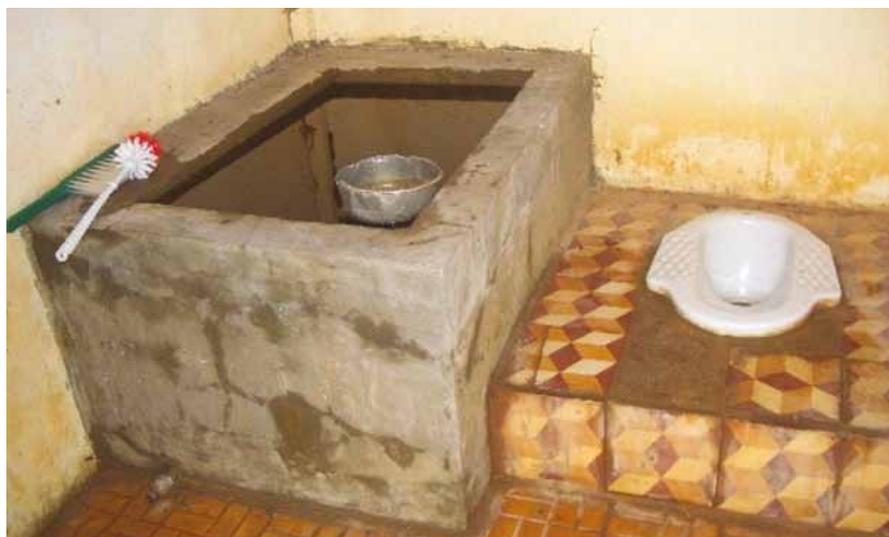
- Washing hands after defecating
- Washing hands with soap before preparing food
- Washing vegetables well before eating
- Eating well-cooked food
- Drinking boiled or filtered water
- Wearing shoes
- Not sharing clothes
- Cutting nails regularly
- Playing in clean areas
- Taking de-worming tablets

This case study describes a partnership to develop and test a primary school curriculum in Cambodia that will increase knowledge of soil-transmitted worms and promote behaviours that will help reduce transmission.

In 2004, Cambodia became the first country to begin providing 75% of school-age children with regular anti-worm treatment, thus reaching the World Health Organization's 2010 target six years ahead of schedule. The drugs reach nearly 2.5 million children across Cambodia's 24 provinces through a school-based de-worming program in which

thousands of teachers participated. The program was supported by the WHO, UNICEF and others. Before the anti-worm treatment, about half of all children were infected with intestinal worms in all provinces of Cambodia.

Prevention is vital to maintain the gains made with de-worming campaigns. This extensive drug distribution program is complemented by school health programs. However, the current national primary school curriculum on health and hygiene, developed by the Ministry of Education, Youth and Sport (MoEYS), deals with soil-transmitted worms only indirectly



HELEN KELLER INTERNATIONAL, CAMBODIA



Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
18%	67%	56%	81%

JMP 2010

Acknowledgements

The authors would like to thank the several organisations that supported the situational analysis phase of the School Health Curriculum Project, including the National Malaria Centre, the National Centre for Health Promotion, the Rural Health Department, Cooperation for a Sustainable Cambodian Society, and Sovann Phum. We offer a special thanks to all the individuals who gave their time to participate in planning meetings, workshops, and the surveys. This article would not have been possible without the support and cooperation of many school directors, teachers and students from four primary schools. We extend our heartfelt and sincere thanks for their patience, time, enthusiasm and motivation. Their dedication and expertise have been invaluable to the project. This project is financially supported by a grant from Johnson & Johnson.

through such topics as handwashing, drinking clean water, using a latrine and causes of diarrhoea and other common illnesses. Specific instruction is extremely limited.

Overall, the outreach and nature of all Cambodia's projects to control intestinal worms are not well understood, even by those working in the field. Further, given the country's limited resources for school health



Children at Poek Ho (Waterfall) school in Kandal province, Cambodia who will learn to prevent soil-transmitted helminth infections (STH) through the new school health curriculum

CHILDREN WITHOUT WORMS

programming, improved coordination is needed among the many agencies working in the field.

The project

Children Without Worms (CWW), a partnership between the Task Force for Global Health and Johnson & Johnson, has joined with Helen Keller International – Cambodia, the Ministry of Health, and the Department of School Health within the MoEYS to assess existing school health programs and improve the curriculum. The overall goal is to better promote the CWW framework for water, sanitation, hygiene, education and deworming.¹

Schools are key to worm control efforts because they provide the setting to treat children and provide health and hygiene education (Mascie-Taylor *et al.*, 2003)

What follows are lessons learned from the first phase of the project – an in-depth analysis of the existing national curriculum. A new School Health Guide will be developed in the second phase to further promote hygiene and education in the CWW framework.

The process

At present, six Cambodian governmental and non-governmental organisations (NGOs) support programs that directly or indirectly prevent and control worm infestation. These are: the School Health Department, the National Malaria Centre, the National Centre for Health Promotion, the Rural Health Department, Cooperation for a Sustainable Cambodian Society, and Sovann Phum. These organisations are working closely with HKI and the MoEYS to provide information about the current curriculum and help develop the new School Health Guide.

The situation analysis that began in September 2009 was conducted to learn about what is being done, how, where, and by whom and to look at how the existing school health curriculum on worm control and prevention has been implemented. Information was collected from four governmental institutions, two NGOs and four primary schools.

Two questionnaires were developed, one for governmental institutions and NGOs and one for directors and teachers at primary schools. Both questionnaires covered quantitative and qualitative aspects of school health activities related to soil-transmitted worms.

Information from governmental institutions/ NGOs was collected on matters such as:

- objectives of the program and nature of activities related to soil-transmitted worms;
- target group, selection process and implementation strategies;
- training activities and technical assistance provided;
- behaviour change communication materials;
- funding and sustainability of program/ activities; and
- challenges related to worm prevention and control.



A child at Poek Ho (Waterfall) school

CHILDREN WITHOUT WORMS

Children Without Worms (CWW) and Helen Keller International (HKI)

Launched in 2006, CWW focuses specifically on global treatment and prevention of soil-transmitted worms. The program is treating approximately 20 million children with mebendazole, a deworming medicine, and is working to stop the cycle of re-infection through health education, access to clean water and improved sanitation infrastructures. CWW strives to reach those who are most severely affected or at high risk in countries with limited access to safe and effective treatment. The program is currently active in eight countries: Bangladesh, Cambodia, Cameroon, Cape Verde, Lao People's Democratic Republic, Nicaragua, Uganda and Zambia.

Cambodia was selected by CWW to receive donated mebendazole in recognition of its commitment to worm control. The program has provided more than five million doses of the medicine to Cambodia each year since 2008, enabling the country to reach all at-risk children.

This partnership builds on HKI's successful creation of a School Health Guide for Trachoma Prevention as well as HKI's programs for school health. Prevention and treatment of diseases like soil-transmitted worms and trachoma are integrated into HKI's school health programs because these conditions affect so many school-age children. In schools, HKI can support an integrated set of community-health interventions, health education, dietary supplements and/or medicine, and promote measures to improve hygiene and sanitation practices that can greatly improve disease-prevention efforts.

¹ CWW's WASHED Framework is based on the WASH (water, sanitation and hygiene) strategy, which is promoted by many organisations working to improve access to and use of potable water and safe and sanitary latrines.

Information from primary schools was collected on matters such as:

- curriculum content;
- teaching methods and materials;
- human resource development;
- school facilities for prevention and control of soil-transmitted worms; and
- knowledge, attitude and practice of teachers and students.

HKI and the Department of School Health also interviewed school directors, teachers, students and NGO and governmental program managers and representatives on the ground.

Finally, a workshop gathered stakeholders involved in worm prevention and control projects to share the results of the situation analysis, gather ideas to improve the current curriculum, develop learning objectives and activities to increase knowledge and support behaviour change, and to define roles and responsibilities among the stakeholders.

Findings

Over the past decade, governmental institutions and NGOs have been increasingly active in supporting school health programs. However, much work remains to ensure that worm prevention and control efforts are operating in a sustainable way across the country. Key lessons from the situation analysis include:

- Current strategies to prevent and control soil-transmitted worm infections have solid foundations, but improvements are necessary.
- Training manuals and teaching materials focus primarily on general health, hygiene and sanitation. They include only limited information about soil-transmitted worm

infections. The National Malaria Centre does provide some specific materials, including posters on preventing and eliminating soil-transmitted worms and teacher guidelines for mass distribution of medicines. However, the materials are not equally distributed among primary schools, and some schools have little or no resources for educating students about intestinal worms.

- Teachers often do not use all of the materials or allot enough time for lessons on health, hygiene and sanitation.
- Most schools lack adequate personal hygiene facilities and materials, including latrines, wells, water filters, rubbish bins, soap, towels, nail clippers, toothbrushes and toothpaste.
- The majority of students interviewed could name one activity that reduces the chance of worm infestation. However, only 18% – less than one in five children – knew that de-worming tablets could be taken to prevent intestinal worms.
- The government has limited technical and financial resources for school health activities and outreach services. In areas with poor road access, primary schools often lack the resources to support good school health programs.
- Government institutions, including schools, have limited staff.
- NGO-supported worm control activities – which are part of larger school health education programs – are effective, but cover only a limited number of schools.

In addition to these findings, the survey shows the importance of carrying out thoughtful research to identify resources needed for public health programs. For

example, when representatives from HKI and Children Without Worms first met with the MoEYS to discuss the project, the Ministry identified health education materials as a priority need. However, the analysis revealed that education materials were available, but that lesson plans and time given to teach children about health, hygiene and worm infection were limited. Instead of producing more communications materials that would likely not have been helpful or used effectively, the analysis identified key gaps in the existing curriculum that need to be filled. The analysis therefore emphasised the importance of utilising and building upon existing health education materials, rather than re-inventing the wheel and producing new materials unnecessarily.

Based on our curriculum, we do not have time to learn much about hygiene and sanitation issues. We only learn and discuss a few sessions per year on prevention and control of worm infections. In addition, we have the problem of lack of facilities such as soap, clean water and nail cutters which also contributes to this problem of soil-transmitted worm related diseases.
– A group of students from grade 6 of Chungruk Primary School from Kampong Speu Province.



Children at Poek Ho (Waterfall) school in Kandal province, Cambodia

Some data from the survey

Table 1 shows some survey results from four schools (38 children and 24 teachers and school directors). The results highlight the need to increase knowledge and understanding about effective ways of preventing and controlling soil-transmitted worm infections among both students and teachers.

Table 1. Knowledge on ways of preventing and controlling soil-transmitted worm infections

Prevention tactics	Answering correctly*	
	Number	Percent (%)
Students (total: 38 children)		
Washing hands with soap before food preparation	30	79
Drinking boiled or filtered water	21	55
Wearing shoes	18	47
Eating well-cooked food	19	50
Washing hands after defecating	18	47
Regular nail cutting	12	31
Taking de-worming tablets	7	18
Washing vegetables well before eating	5	13
Playing in clean areas	5	13
Teachers/Directors (total: 24 adults)		
Washing hands with soap before food preparation	14	58
Drinking boiled or filtered water	16	67
Wearing shoes	15	62
Eating well-cooked food	14	58
Washing hands after defecating	10	42
Regular nail cutting	6	25
Taking de-worming tablets	6	25
Washing vegetables well before eating	6	25
Playing in clean areas	1	4

*Number and % of total who knew that the practice protects against worm infections.

Proper nail care is an often overlooked but important aspect of personal hygiene. Dirt beneath unclipped nails trapping faeces, parasites or other harmful substances can spread a number of infections and diseases, including worm infections. This analysis also assessed the number of students who were wearing shoes properly, a simple and effective measure for preventing infection with hookworm (see Table 2).

The current curriculum for the primary school certainly has some gaps in information on control and prevention of worms with limited time allocation of 10-15 minutes per session. We need detailed information with clear instructions, such as teaching objectives, teaching activities, teaching materials etc. in the curriculum, so that teachers can easily follow when teaching their students. The information on control and prevention of soil-transmitted worms should be in curriculum for all grades of the primary school.

– Ms. Hem Phann, Director of Chambak Primary school from Takeo Province

Recommendations

This review of soil-transmitted worm infection in the national primary school health curriculum has highlighted several key areas for improvement:

- Currently, NGOs are essential for successful school health programs. NGOs should continue their efforts to develop the capacity of school staff. Eventually schools should be able to carry out effective school health and education related to worm infections, without depending on NGOs.
- Communication and coordination should be improved among governmental institutions and NGOs carrying out the school health programs to deal with this issue. Consistent training messages, behaviour change communication materials and monitoring systems should be selected for a standard package of activities.
- NGOs should change their primary school health lessons to include specific instruction on preventing and controlling worm infections. This addition fits into existing lessons on general hygiene and sanitation and will help improve children's overall health.
- Lessons on controlling intestinal worm infection should be added to the current primary school curriculum at all grade levels. Currently, the curriculum only includes specific information on intestinal worms in grade five. More time overall should be given for lessons to improve learning outcomes.
- The national curriculum should have clearer instructions for teachers. Adding instructions about the goals, specific objectives, content, teaching methods, teaching materials and time needed for each lesson will help teachers educate more effectively. Suggestions for evaluating student knowledge should also be included.
- Local health staff should train school directors and teachers about the control and transmission of worms. This will help make a strong link between schools and local health centres. NGOs and governmental trainers should support and train local health staff.
- The links between health centres and schools need to be strengthened to ensure that de-worming tablets are distributed to primary schools. This review found that some schools do not receive the medications.

Table 2. Caring for nails and wearing shoes

Name of school	Number of students		Total students	Nails			Shoes		
	Male	Female		Both sexes			Good	Fair	Poor
Chung Ruk	62	50	112	13%	29%	58%	12%	80%	8%
SovannKiri	58	59	117	25%	49%	26%	28%	65%	7%
Cham bak	70	46	116	46%	33%	22%	29%	54%	16%
Ang Run	32	48	80	29%	61%	10%	16%	69%	15%
Total	222	203	425	28%	43%	29%	22%	67%	11%

- More communication materials, latrines, soap, water filters, and other important resources need to be provided to primary schools so that students have the opportunity to change their behaviour, rather than simply having increased knowledge about soil-transmitted worms.
- NGO and government-led water, sanitation and hygiene programs (WASH) should consider the importance of reducing worms in their school WASH interventions, rather than only focusing on reducing rates of diarrhoea.
- A strong recording and reporting system should be put in place to monitor de-worming tablet coverage. Training

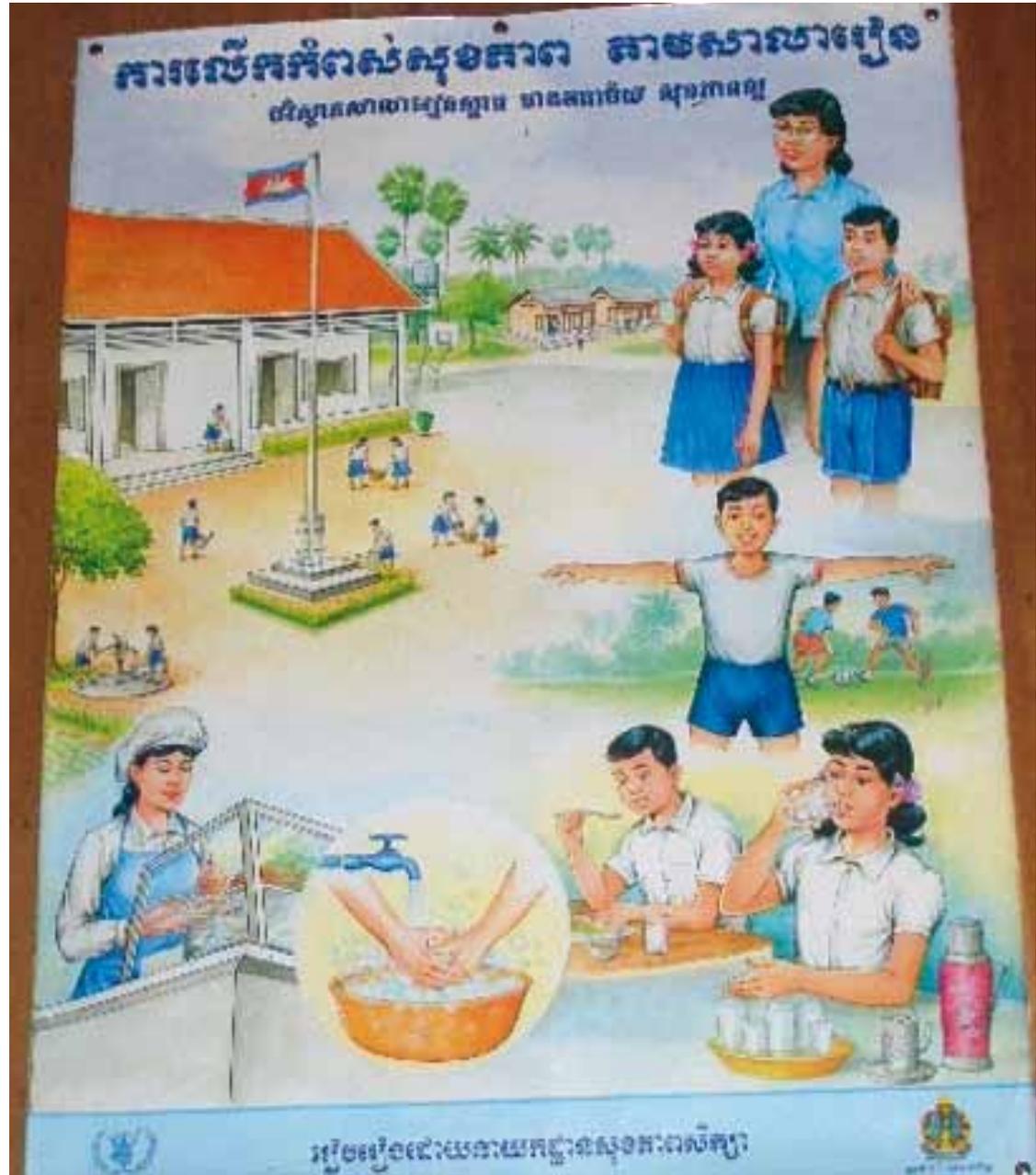
I am very happy to hear that there will be an effort to revise the current teaching curriculum of the primary school for prevention and control of the worms. I think current curriculum has limited information on these issues.
 – A teacher from Grade 4 of Chungrum Primary School from Kampong Speu Province

should be provided to teachers to improve their capacity and raise awareness about the importance of recording this information. Such a system will guide future efforts to increase real coverage by identifying problem areas.



Children at Poek Ho (Waterfall) school in Kandal province, Cambodia

HELEN KELLER INTERNATIONAL, CAMBODIA



A poster highlighting the importance of hygiene

HELEN KELLER INTERNATIONAL, CAMBODIA



Children at Poek Ho (Waterfall) school in Kandal province, Cambodia

HELEN KELLER INTERNATIONAL, CAMBODIA

Moving Forward

This analysis focused on curricular materials relevant to hygiene, sanitation and control of worm infection. The project identified groups working in school health in Cambodia and learned more about their activities. It developed a package of school health messages to be included in a national curriculum. Over the course of the next year, the program will:

- Begin its second phase in which the curriculum is developed, distributed and pilot tested in a number of regions.
- Form a team of key representatives from the governmental organisations, NGOs and schools that participated in the first

workshop to contribute to curriculum changes. This team will also review and approve the new curriculum before it is tested in primary schools.

- Field-test the revised curriculum, conduct an evaluation and make changes as needed.
- Continue to have workshops and other evaluation activities to share ongoing results.
- Assess impact of the revised curriculum on students' knowledge of the control of soil-transmitted helminth infections.

References

- Gungoren, B., Latipov, R., Regallet, G., & Musabaev, E. (2007). Effect of hygiene promotion on the risk of reinfection rate of intestinal parasites in children in rural Uzbekistan. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 101(6), 564-569.
- Mascie-Taylor, C.G., Karim, R., Karim, E., Akhtar, S., Ahmed, T., & Montanari, R.M. (2003). The cost-effectiveness of health education in improving knowledge and awareness about intestinal parasites in rural Bangladesh. *Economics and Human Biology*, 1(3), 321-330.
- WHO Western Pacific Regional Office (WPRO). (2009). *First Mekong-Plus Programme Managers Workshop on Lymphatic Filariasis and other Helminthiasis*. MVP/WPRO.

Further reading

- IRC (2007). *Towards Effective Programming for WASH in Schools: A manual on scaling up programmes for water, sanitation and hygiene in schools*. Delft, the Netherlands: The International Water and Sanitation Centre. Accessed at: <http://www.irc.nl/page/37621>.
- UNICEF - Water, Sanitation and Hygiene website: http://www.unicef.org/wash/index_3951.html.
- WHO (2006). *A Guide: Trachoma prevention through school health curriculum development*. Geneva: World Health Organization. Accessed at: <http://www.who.int/blindness/guide%20english.pdf>.

11 Student-led hygiene promotion and empowerment in rural schools in the Western Pacific (a photo story)

Christian Nielsen, Live and Learn Environmental Education

Live and Learn Environmental Education (Live & Learn) is locally registered as a non-government organisation in Fiji, Vanuatu, and the Solomon Islands. For the past eleven years, hygiene promotion has been a key focus of our work and during this time we have developed an extensive 'Sustainable Schools Network' through which 700 schools

are participating. The most important aspect of our work is creating a learning process that promotes a shift in hygiene promotion from 'transferring messages and information' to 'creating new knowledge, attitudes and practices through participation and thinking'. Live & Learn promotes an integrated approach to hygiene promotion where students see

hygiene and health as totally interlinked with other issues in the community.

The photo story describes this approach, starting with a Rapid Assessment of Perception (RAP). The RAP is a participatory research tool that seeks an understanding of how students perceive hygiene in their own village. Findings from the RAP help to inform education content and the approach, and allows students to lead hygiene change. Using the information from the RAP, Live & Learn allows students to lead schools-based hygiene projects. Live & Learn's approach challenges conventional learning where children commit information to memory so thoroughly that they can recall facts almost instantly when given the right stimulus cue (like an exam), whether or not they understand them, or can process, apply or extend them. Learning by doing strengthens confidence and empowers. The purpose of hygiene education is to strengthen knowledge, attitude and practices, and develop young people's capacity to give them confidence to extend and apply their knowledge.



Rapid Assessment of Perceptions (RAP): Students ranking constraints to safe hygiene for the purpose of developing school-based action plans

LIVE AND LEARN ENVIRONMENTAL EDUCATION

Fiji			
Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
55%	87%	51%	43%

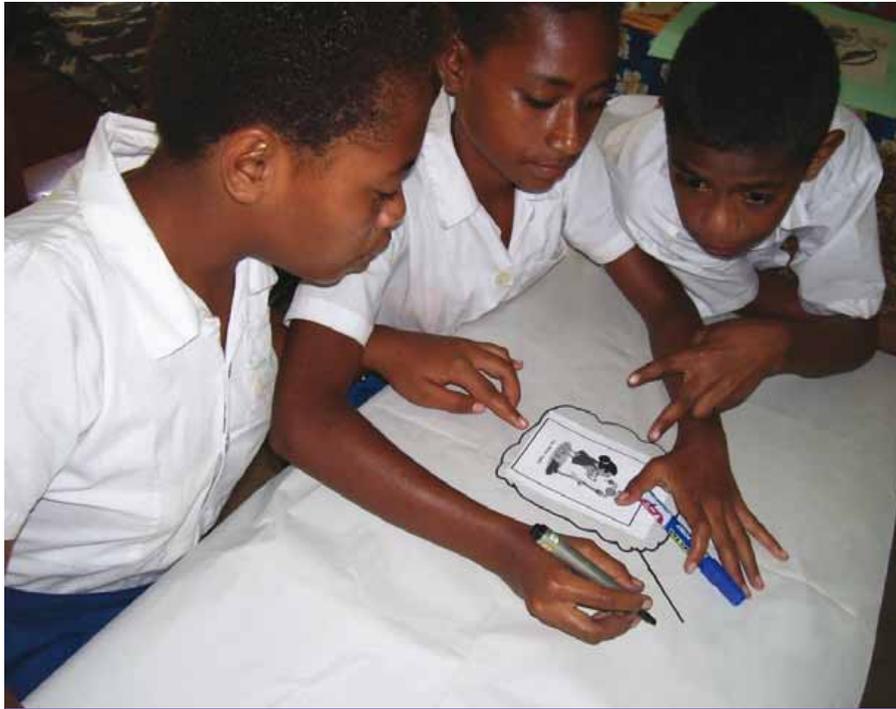
Vanuatu			
Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
48%	66%	79%	96%

Solomon Islands			
Sanitation Coverage:		Water Coverage:	
Rural	Urban	Rural	Urban
18%	98%	65%	94%

JMP 2008
JMP 2010
JMP 2008

Acknowledgements

Live and Learn Environmental Education – Fiji Islands and
Live and Learn Environmental Education – Papua New Guinea.



Rapid Assessment of Perceptions: Younger students linking their hygiene knowledge to change and action through mapping

LIVE AND LEARN ENVIRONMENTAL EDUCATION



Action planning: Using findings from the RAP to develop local action plans and inspire change at school level

LIVE AND LEARN ENVIRONMENTAL EDUCATION



Teacher training: The RAP provides a foundation to train teachers so that they can support students in taking action to address their concerns

LIVE AND LEARN ENVIRONMENTAL EDUCATION



Project-based action: Action plans leading to the building of twenty handwashing basins in Sigatoka, Fiji

LIVE AND LEARN ENVIRONMENTAL EDUCATION



Public awareness: Students design their own resources for Global Handwashing Day to use for community awareness

LIVE AND LEARN ENVIRONMENTAL EDUCATION



LIVE AND LEARN ENVIRONMENTAL EDUCATION

Changing behaviour: Testing soap made through a school project



LIVE AND LEARN ENVIRONMENTAL EDUCATION

Linking with the community: Communities using soap bought from a school-based cooperative. Soap making is now part of the year 7 science project

This book is a collection of case studies on the effective promotion of good hygiene practices in South-East Asia and the Pacific. It aims to contribute to a growing community of practice.



This book is printed using a waterless printing process to reduce pollutants entering our waterways and to save our precious water supplies. The paper used to print this publication is produced in an ISO 14001 accredited facility and is FSC mixed sources ensuring fibre is traceable and sourced from certified and well managed forests.

www.wateraid.org.au
www.watercentre.org
www.irc.nl