WaterAid

Hygiene Promotion within Sanitation

INTRODUCTION

A staggering 48.2 million (38.4%) children less than five years of age in India are stunted, a condition that results from severe and persistent undernutrition. Inadequate hygiene contributes to undernutrition among young children, with half of all undernutrition cases associated with diarrhoea and infections resulting from unsafe water and sanitation, and unhygienic behaviours[1]. Repeated diarrhoea in the first two years of life directly contributes to a quarter of all cases of stunting[2]. Hygiene behaviours, such as handwashing, can help prevent diarrhoea and acute respiratory infections, two prominent causes of mortality among children under age five globally and in India[3].

Hygiene behaviours work by breaking the transmission of water and sanitation-related diseases (Figure 1) via primary barriers that effectively separate faeces from human contact through safe disposal of excreta (i.e., by using toilets and safely disposing of child faeces), and remove faecal matter from hands after contact with excreta (i.e., by washing hands with soap and water after defecation). Secondary barriers are hygiene behaviours that prevent faecal pathogens present in hands and the environment from increasing and reaching new hosts. These include handwashing before preparing food, eating and feeding infants and children; food hygiene; safe handling and storage of drinking water; and keeping household premises free from faecal contamination. The faecal-oral route suggests that to arrest faecal contamination, toilet use should be accompanied by other key hygiene behaviours.

Hygiene behaviours are an important disease prevention and health promotion strategy that can confer long-term economic benefits. Economic gains from decreased incidence of diarrhoea and acute respiratory infections resulting from handwashing with soap are significant. Annual net costs to India from not washing hands with soap after contact with faeces are estimated at USD 23 billion, and net returns from national behaviour change

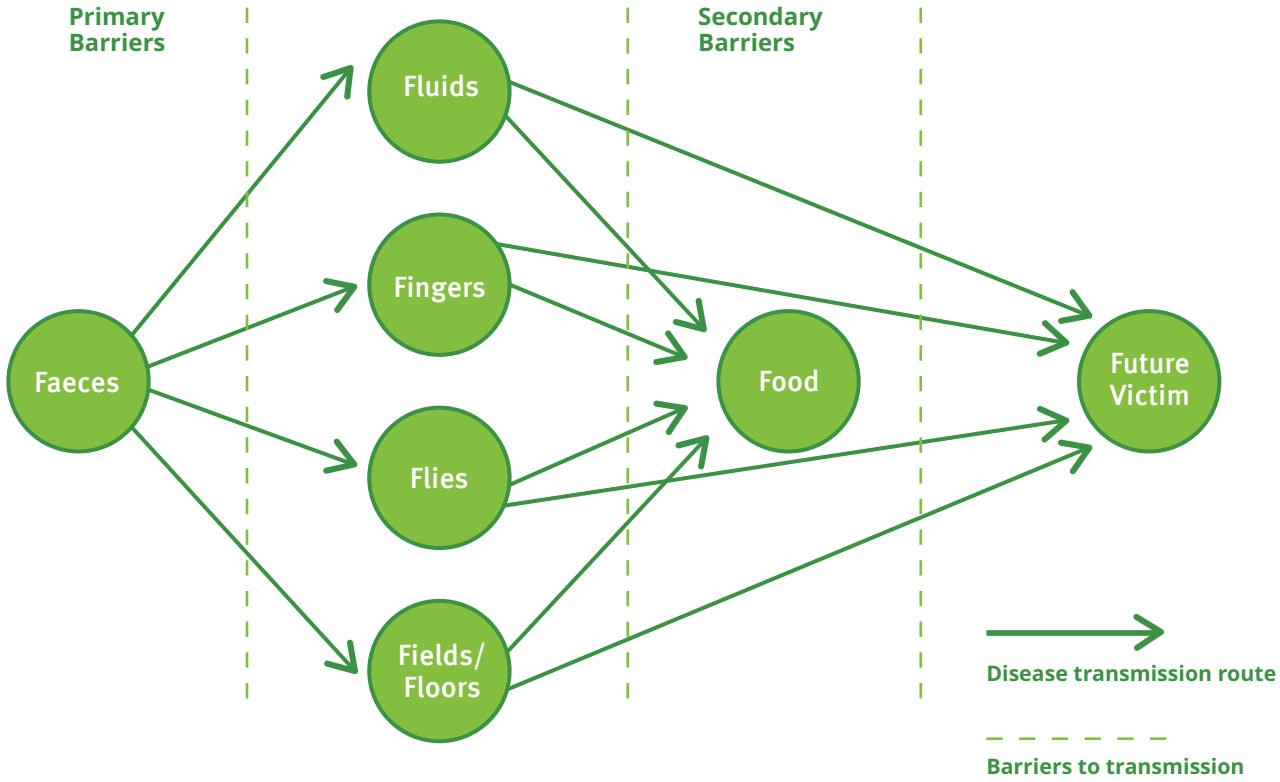


Figure 1: Faecal-oral route of transmission of diseases

programmes aimed at handwashing are estimated to be USD 5.6 billion, at USD 23 per disability-adjusted life year (DALY) avoided[4].

Against this backdrop, this paper discusses three key hygiene behaviours relevant in the context of sanitation and child and adolescent health: handwashing with soap at critical times, safe disposal of child faeces and menstrual hygiene. It also proposes how attention to hygiene behaviours can be integrated into multi-sectoral policies and programmes.

1. HANDWASHING WITH SOAP

Handwashing comprises cleaning hands with soap and water at critical times: after defecation, after cleaning a child's bottom, before feeding infants/children, before eating and before food preparation. Washing hands with soap at these moments is estimated to reduce diarrhoeal diseases by 47% and respiratory infections by 23%, having tremendous health benefits for children[5].

Evidence suggests that knowledge of handwashing is high, yet the actual practice of handwashing with soap at critical times is much lower. The National Family Health Survey (NFHS) 4 (2015-16) found that a vast majority of rural households surveyed (96.3%) had a place to wash hands. Of the available handwashing spaces, 49.4% had soap and water, 19.4% had only water, and 11.5% did not have water or any cleansing agent[6], suggesting that handwashing with soap may not be a common practice. A cross-sectional study on

handwashing knowledge and practices in four Indian states found high rates of handwashing after defecation (99.3%) and before eating (91.9%), but lower rates at other critical times related to childcare activities, particularly when feeding infants and young children (26.3%), and disposing of child faeces (16.7%). Soap was the preferred cleansing agent for activities that involved contact with faecal matter, that is, after defecation, washing a child's bottom and disposing of child faeces. For activities that did not involve such contact, between two-fifths and a half of the respondents used water alone to clean their hands[7].

What works to promote handwashing at critical times?

Washing hands with soap at recommended times requires functional facilities—that is, handwashing stations with soap and a source of clean water—are available, and that good handwashing habits are perceived to be important, internalised and practised[8]. The lack of infrastructure can hinder handwashing even among those who are aware of its importance and have favourable attitudes towards the behaviour[9]. To improve handwashing at critical times, interventions will have to consider the following:

Presence and placement of handwashing infrastructure, visual cues and reminders to create an environment favourable to habit formation. In rural Bangladesh, primary school students were more likely to wash their hands when guided by footprints leading from the toilet to the handwashing station, and handprints on the handwashing station[10]. Posters informing about critical times to wash hands and handwashing steps, placed at strategic locations like near the toilet and handwashing stations or near the eating area in schools and households, encourage handwashing[11].

Increasing knowledge by training influencer groups—for example, schoolteachers, frontline workers, peer educators and parents—to impart hygiene education to children, mothers and caregivers. Such education must emphasise: 1) the importance of hand hygiene to protect against illness; 2) handwashing with soap at recommended times (after defecation, before eating); and 3) handwashing steps[12]. Hygiene education, while essential, may itself be insufficient to bring about a change in

KEY TAKEAWAYS FOR HANDWASHING INTERVENTIONS

1. Presence of functional handwashing space, soap and water.
2. Placement of handwashing stations at locations where handwashing is needed, such as toilets and eating areas.
3. Visual reminders and cues to wash hands.
4. Increasing knowledge of the importance of handwashing, critical times and handwashing steps.
5. Targeting psychological drivers– nurture, disgust, affiliation and social status.
6. Multi-modal interventions with message reinforcement.

WaterAid/ Adam Ferguson

Children washing hands while attending pre-school in Harijan Basti slum in New Delhi, India

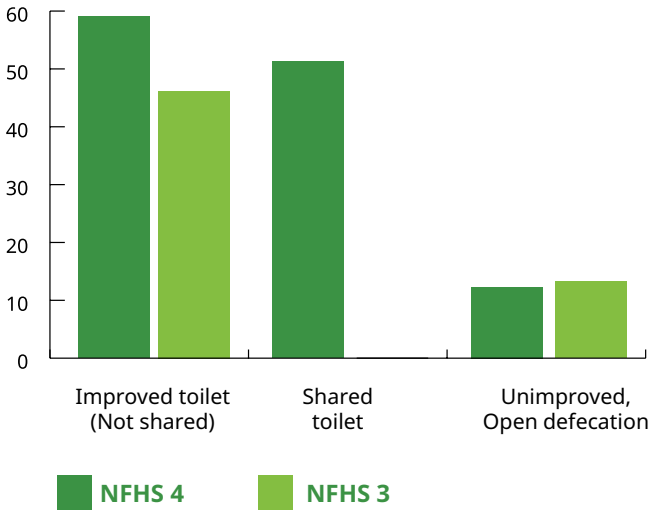
hygiene behaviour and sustain it, as it may not effectively change the intention to wash hands with soap[13].

Interventions using psychological factors enhance knowledge of the importance of handwashing and handwashing steps. Such interventions use emotive drivers of nurture, disgust, affiliation and social status to trigger and sustain handwashing practices[14]. The Super Amma campaign in Chittoor in Andhra Pradesh targeted key emotional drivers of disgust, the desire to avoid and remove contamination; nurture, the desire for a happy and thriving child; status, the desire to have greater access to resources than others; and affiliation, the desire to fit in. The comprehensive campaign had community- and school-based events, involving animated films, comic skits and public pledging ceremonies, during which mothers promised to wash their hands at critical times and to help their children do so as well.

Mutli-modal interventions: There is some evidence that communities that receive multiple interventions and reinforcement of hygiene messages and behaviours demonstrate higher rates of self-reported handwashing with soap after contact with faecal matter[15]. In Nepal, WaterAid integrated hygiene promotion into the country's routine immunisation programme, using the behaviour-centred design approach[16].

The yearlong intervention worked with mothers and caregivers of infants (0-12 months). On average, five contacts were made with mothers, providing information; addressing key emotive drivers related to handwashing at critical times (particularly nurture and social status); restructuring the home environment to make it more convenient to wash hands after defecation and before preparing food and feeding a child; and placing visual reminders for handwashing at strategic places in the house. The intervention has been successful in improving hand hygiene among mothers of young children[17].

Figure 2: Safe disposal of child faeces by access to toilet



2. SAFE DISPOSAL OF INFANT AND CHILD FAECES

A child's stool is considered to be disposed of safely when the child uses the toilet/latrine, or when the faeces is put or rinsed in the toilet/latrine or buried properly. In contrast, unsafe disposal of child faeces occurs when the faeces is put or rinsed in a drain or ditch, thrown in the garbage or left in the open[18].

Young children's stool is commonly perceived to be less harmful than adults' faeces[19,20] and is often discarded in the open or buried[21,22]. This perception is contradictory to the evidence that children's faeces have more harmful pathogens given the higher incidence of enteric infections among young children than among adults[23,24]. Young children are more vulnerable to ingesting faecal pathogens than adults. Mouthing, whereby children put their hands and objects in their mouths; geophagia, the practice of eating mud, clay, chalk; and physical exploration of their environment increase children's exposure to faecal pathogens present in their living environment[25,26,27,28]. Globally, evidence suggests that children whose stools were disposed of in an unsafe manner are at a greater risk of diarrhoea than children whose stools are safely disposed in latrine[29,30,31]. An analysis of the National Family Health Survey 3 data for India revealed that children whose stools were dealt with inappropriately had 11% greater odds of diarrhoea as compared to children whose excreta was appropriately handled. Further, an increase in the unsafe disposal of children's stool at the community level significantly increased the risk of diarrhoea in children, more than the improper disposal of the index child's stool alone[32].

The National Family Health Survey 4 (2015-16)[33] found that only 36.1% of mothers with children under five years of age disposed of their child's faeces safely. The survey findings also suggest that access to improved sanitation may be associated with safer practices (Figure 2).

What works to promote safe disposal of child faeces?

To engender safe disposal of child faeces, interventions will have to consider the following:

Improved sanitation and related hardware for children: A latrine in a house can increase safe disposal of children's stool[34]. Specific hardware interventions for children include: 1) reusable traditional cloth diapers for children that capture faeces, making it easier to discard it in toilets; 2) Child-friendly potties at homes and anganwadi centres that are easy to use, transport, clean and empty/rinse into the latrines; 3) Latrine seats appropriate for children at homes and anganwadi centres; and 4) scoopers to pick up child faeces from the floor/ ground to dispose it of safely.

Behaviour change interventions must be directed towards caregivers of children under five and focus on:

- Changing caregivers' perception of the harmfulness of child faeces
- Providing information on how unsafe disposal of children's stool can harm their health
- Informing caregivers in the household and in anganwadis about the benefits of using potties for children and the safe disposal of child faeces
- Providing information and support to caregivers in households and anganwadis on solutions for safe disposal and training children on potty use
- Training older children, more than two years, to use the child potty or toilet

KEY TAKEAWAYS FOR SAFE DISPOSAL OF CHILD FAECES INTERVENTIONS

1. Presence of functional latrine in the household.
2. Child friendly potties or child appropriate latrine seats, and scoopers to pick up faeces.
3. Targeting of caregivers in homes and anganwadis with hygiene promotion and behaviour change strategies.
4. Demonstrations on how older children can be assisted and taught to use the latrine.

3. MENSTRUAL HYGIENE MANAGEMENT (MHM)

Menstrual hygiene requires three things: one, that women and adolescent girls use a clean material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period; two, that they use soap and water for washing the body as required; and three, that they have access to facilities to dispose of used menstrual management materials[35]. Ensuring menstrual hygiene also entails improving the knowledge of menstruation and related hygiene practices, and addressing societal beliefs and taboos surrounding menstruation.

India has over 300 million girls and women of reproductive age (15-49 years), a majority of whom menstruate every month. Menstruation is a normal physiological phenomenon, yet it is surrounded by taboos,

WaterAid/Tejaswi Balasundaram

Safe disposal of child faeces session in an anganwadi in Raichur, Karnataka

myths and misconceptions. Because of the culture of silence and shame, women and girls are unprepared for menarche (the first menstruation) and are unable to manage their menses in a safe and hygienic way. This, in turn, makes them susceptible to reproductive tract infections, stress and anxiety and gender-based violence. It also contributes to absenteeism from school and the workplace. A systematic review found that only 48% of adolescent girls in India were aware of menstruation before menarche, and only 55% considered menstruation normal[36]. The National Family and Health Survey 4 reported that only 57.6% of young women, in the age group of 15-24 years, used a hygienic method of protection during their menses[37].

KEY TAKEAWAYS FOR MENSTRUAL HYGIENE MANAGEMENT INTERVENTIONS

1. Increase awareness and tackle inequitable gender norms.
2. Provide a basket of safe menstrual hygiene products with comprehensive information to enable girls, women to make a choice.
3. Sanitation facilities to be responsive to menstrual hygiene needs, including water for facilities, disposal facilities and design features that allow for privacy and safety.

WaterAid/ Poulomi Basu

Pooja Bharti, a community leader talking about menstrual hygiene and women's health to community women in Juhi Bamburiha, Kanpur, India.

Access to safe and private water, sanitation and hygiene (WASH) facilities is central to enabling girls to manage their menses hygienically. Research finds that when gender-segregated toilets are not available at schools, worksites or public spaces, girls and women tend to stay at home, missing school or work days, or use unsafe sanitation facilities, or not use any facility at all[38]. While the exact pathways by which inadequate WASH in schools affects absenteeism is being studied, some research shows that girls can miss up to 10% of their school days during menstruation[39]. In India, almost a quarter of girls reported remaining absent from school during menses[40]. When latrines are inaccessible and unsafe, girls may use a menstrual absorbent longer than they should, causing discomfort and staining. Such practice may also place them at the risk of catching infections.

What works to promote menstrual hygiene management?

Interventions increasing awareness and tackling harmful social norms through comprehensive information on menstruation and menstrual hygiene practices, including product use and disposal.

Menstrual hygiene product interventions focused on informed product choice, where girls are presented with a basket of products,

along with comprehensive information on the advantages and disadvantages of each, instructions for hygienic use and disposal and cost considerations. Such an approach does not impose any single product on a girl, rather it encourages her to select products that best suit her needs and environment.

Sanitation interventions must recognise that girls and women have distinct sanitation needs, and should be tailored to meet these needs, especially in schools. Sanitation facilities responsive to menstrual hygiene management must include: 1) separate toilets for women/ girls that are functional, clean, private and safe; 2) access to water; 3) access to safe disposal mechanisms; and 4) storage facilities (hook, nook, and shelf). Additional amenities include a separate resting and changing space with access to menstrual hygiene products, and spaces for washing and drying cloth absorbents[41]. Such facilities should be available at home, in communities, at public spaces and educational and work sites[42].

Disposal of menstrual waste is a growing concern given the increase in the use of disposable sanitary pads. The favoured disposal option in India is incinerators. However, few safe incinerators exist in India given that most are poorly designed and constructed, and do not adhere to emission standards. To address this, the Ministry of Drinking Water and Sanitation's Solid and Liquid Waste Management guidelines do pay attention to the management of menstrual waste through a resource book that describes menstrual waste management options[43].

CURRENT STATUS OF HYGIENE PROMOTION IN HEALTH, NUTRITION, AND EDUCATION PROGRAMMES

Given the critical role of hygiene behaviour for child health and nutrition, hygiene promotion is recognised as a component in some health and nutrition programmes and schemes under the ministries of health and family welfare (MoHFW); women and child development (MWCD); and human resource development (MHRD). Other programmes serving women, children and adolescents do not explicitly include hygiene, but do provide opportunities for hygiene integration.

Table 1 on next page presents key programmes and schemes of MoHFW, MWCD, MHRD and the Ministry of Drinking Water and Sanitation (MDWS) and indicates the extent to which these initiatives address handwashing with soap, safe disposal of child faeces and menstrual hygiene.

TABLE 1 Hygiene integration in India's programmes: status and opportunities

Ministry	Programme	Target group	Service provided by	Current status of hygiene promotion		
				Hand hygiene	Safe disposal of child faeces	MHM
MoHFW National Health Mission	Pradhan Mantri Surakshit Matritva Abhiyan (for antenatal care)	Pregnant women	Health care providers			For post-partum bleeding
	Mother-child protection card	Pregnant women, mothers, children under 3	Auxiliary nurse midwife (ANM), Anganwadi worker			
	Rashtriya Bal Swasthya Karyakram	Children, adolescents	Accredited social health activist (ASHA)			
	Home-based newborn care	Newborns and their mothers	ASHA			
	Routine immunisation	Children	Doctors, ANM, ASHA, Anganwadi worker			
	Infant and young child feeding	Mothers, caregivers	Yashodha, ANM, ASHA			
	Intensified Diarrhoea Control Fortnight	Mothers, caregivers	ASHA, ANM			
	Nutrition rehabilitation centres	Mothers, caregivers	Doctors			
	National Deworming Days	Mothers, caregivers	ASHA, Anganwadi workers , teachers			
	Menstrual Hygiene Scheme	Adolescent girls	ASHA			
	Rashriya Kishor Swasthya Karyakram	Adolescent girls				
	Weekly iron and folic acid supplementation	Adolescent girls	ASHA, ANM			
	Adolescent friendly health clinics	Adolescent girls	Health care providers			
MWCD Integrated Child Development Services (ICDS) Scheme	Supplementary nutrition	Pregnant and lactating mothers Children under 6	Anganwadi worker and helper			
	Pre-school non formal education (anganwadi centres)	Children 3-6 years	Anganwadi worker			
	Health check ups	Children under 6 Pregnant and lactating mothers	ANM/Medical officer/ anganwadi worker			

Ministry	Programme	Target group	Service provided by	Current status of hygiene promotion		
				Hand hygiene	Safe disposal of child faeces	MHM
	Sneha Shivir (for malnourished children)	Children under 6 Mothers/caregivers	ANM/anganwadi worker			
	Poshan Andolan	Mothers, children under 6, adolescent girls	Anganwadi worker			
MHRD	Swachh Vidyalaya	School-going children				
	National MHM Guidelines for Schools	Adolescent girls in school				
MDWS	Gender Guidelines	All				
	Solid Liquid Resource Management	All				

Colour key	
	Currently absent, but potentially presents opportunities for integration.
	Mentions hygiene, but provides little or no details on hygiene promotion.
	Some articulation of hygiene promotion, particularly handwashing and safe disposal of child faeces.
	Integrates hygiene promotion or hygiene behaviour change well.

CONSIDERATIONS FOR INTEGRATING HYGIENE INTO HEALTH, NUTRITION AND EDUCATION POLICIES AND PROGRAMMES

Hygiene behaviours complement efforts to provide universal access to sanitation.

Water and sanitation programmes may prioritise the following policy actions for promoting hygiene across sectors:

- Be the nodal agency to foster coordination between WASH, health, nutrition and education agencies and policies to enable integration of hygiene promotion and behaviour change into other relevant development/social sector programmes and schemes.
- Position hygiene promotion and behaviour change, in conjunction with access to safe water and sanitation, as important disease prevention and health promotion strategies to be incorporated into ongoing health, nutrition and education programmes. Provide adequate guidance to state governments in this regard.
- Create platforms to engage multiple government departments and multi-sectoral development partners in the development of policies, plans and implementation guidelines for hygiene integration.

- Encourage the participation of WASH sector actors in health and nutrition forums at the national, state, district (e.g., District Health Society) and gram panchayat/village (e.g., Village Health, Sanitation, Nutrition Committee) levels.
- Co-develop standards for hygiene facilities (e.g., infrastructure) and practices with other relevant stakeholders. Include indicators on hygiene (e.g., handwashing station with soap and water) into routine monitoring and assessments of sanitation coverage and usage.
- Implement hygiene promotion campaigns on key behaviours that provide information on the importance of hygiene and tackle important barriers to engaging in such behaviours.

Other sectors addressing health, nutrition and education also provide a fertile platform for such integration. Key considerations for other government programmes are presented below:

Institutional mechanisms

- Use evidence to advocate for high-level political support for integrated cross-sectoral approaches, including coordination mechanisms under the leadership of relevant ministers and administrative heads.
- Facilitate, strengthen and inform institutional structures (e.g., District Health Society) and mechanisms involving regular meetings to plan and review progress (e.g., annual Program Implementation Plans at the state level).
- Develop systems to share information and data (e.g., Common Application Software under Poshan Abhiyaan).
- Promote the involvement of multiple sectors and stakeholders in joint sector reviews (e.g., Common Review Missions under National Health Mission).

Delivery mechanisms

- Build the capacity and knowledge of swachhagrahis, frontline health workers (auxiliary nurse midwifes, accredited social health activists, or ASHA, and anganwadi workers), teachers and caregivers in the intersections between health, nutrition, education and WASH, with the aim of shaping them as hygiene promoters for different community groups.
- Strengthen community outreach programmes (e.g. embedding hygiene promotion into sanitation campaigns, routine immunisation, Integrated Child Development Services, and integrated management of childhood illness approaches).
- Use institutional settings (e.g. sub-centres and primary health centres, schools, anganwadi centres) and health promotion events (e.g., Immunisation drives, National Deworming Day, Intensified Diarrhoea Control Fortnight, and village health and nutrition days) as entry points for integrated programmes and hygiene promotion.

Intervention strategies

- Focus on changing hygiene behaviour rather than improving knowledge of hygiene practices.

- Target multiple key hygiene behaviours: latrine use, washing hands with soap, safe disposal of child faeces, food hygiene, safe storage and handling of drinking water.
- Target caregivers of young children at homes and in anganwadis, teachers, cooks and helpers in schools for hand hygiene and safe disposal of child faeces.
- Reach out to adolescents both in school and out of school, and key influencers such as mothers.
- At the very minimal, include key hygiene messages as a part of ongoing information, education and communication (IEC) material used in the delivery of sanitation, health and nutrition programmes directed at pregnant women, mothers and caregivers of children under five, and adolescent girls.
- Use visual cues or reminders at strategic places (toilet, handwashing station and eating space) to encourage handwashing in a correct manner, and use and proper disposal of menstrual hygiene products.
- Demonstrate hygiene behaviour (e.g., handwashing steps, how to help young children use the latrine).
- Use behaviour-change strategies to sustain hygiene behaviours critical to child health.
- In addition to preventative approaches, include WASH interventions in the treatment and management of severe and moderate acute malnutrition (e.g. household water treatment kits, hygiene promotion to caregivers).

Financing

- Estimate the financial needs realistically and ensure that financing is available for hygiene-related hardware (e.g., handwashing stations with water and soap, child-friendly toilets and potties, safe disposal options for menstrual waste, operations and maintenance for hardware), software (e.g., IEC material, hygiene promotion campaigns), capacity building of frontline workers and teachers, and routine monitoring of hygiene behaviours in all multi-sectoral nutrition, health, education and WASH plans.
- Attract and channelise donor support for multi-sectoral hygiene action under nutrition, health, education and WASH plans.

Monitoring and evaluation

- Establish and share common nutrition, health and WASH indicators, and incorporate them into relevant monitoring platforms.
- Incorporate research, including operational research, into nutrition, health and WASH programmes.
- Document programmatic experience and share lessons nationally, regionally and globally.

Equity and inclusion

- Using data, identify those communities or areas that have poor access to health, nutrition and WASH services, and devise strategies to reach out to these communities with comprehensive interventions.

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