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WASH (Water, Sanitation and Hygiene)

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ABSTRACT

WASH is related to any country's concern in relation to the health of their people. It becomes the right of the citizen to acquire safe water, sanitation and hygiene measures. WASH are among the most crucial for human to create healthy life. WASH interventions aim to prevent and control transmission of bacteria, viruses and parasites. The poor and unsafe access to WASH plays a key role in transmission of various diseases. Since independence India is struggling to prevent OFD, and provide good sanitation. Many policies and programmes are on the way to promote wash, as the pride of the nation SWACHH Bharat Mission was initiated by the government in engaging public private partnership. WASH interventions such as safe water, storage for portable water, latrines for sanitation and soap for hygiene, bath and hand washing.

Keywords: *WASH, water, hygiene, sanitation, clean, diseases, practices, hand washing, open field defecation*

INTRODUCTION:

WASH is the acronym for Water, Sanitation and Hygiene. Due to their interdependent nature, these three core issues are grouped together to represent a growing sector. While each a separate field of work, each is dependent on the presence of the other. For example, without toilets, water sources become contaminated; without clean water, basic hygiene practices are not possible.[1] Access to water and sanitation is one of the major challenges for the 21st century. World Health Organization (WHO) estimates that still "2.5 billion people- more than one third of the global population – live without basic sanitation facilities".[2]

In 2015, 750 million people lacked access to safe, clean drinking water and approximately 2,300 people die every day from diarrhoea.[3] Water is not only an important factor of public health, but also of general livelihoods and development: crop production, livestock production, industry, commerce and daily life depend on access to water. Water-supply and sanitation conditions therefore directly affect health and food security and are key components in the fight against Hunger and Malnutrition.[4]

Growing evidence suggests a link between child linear growth and household water, sanitation and hygiene (WASH) practices.[5] It has previously been estimated that as much as 50% of child under nutrition may be attributable to poor WASH practices.[6] Ingestion of high quantities of faecal bacteria from both human and animal sources by infants and young children through mouthing soiled fingers and household items, and the ingestion of soil and poultry faeces are common in many rural low-income environments. This leads to intestinal infections which affect a child's nutritional status.[7] In India, approximately 53% of households and 624 million people defecate in the open.[8]

Open defecation is more pervasive in rural versus urban areas (74% vs 17%). Recently, an ecological analysis of data from 112 rural districts of India demonstrated a strong association between the prevalence of open defecation and stunting.[9] Safe drinking water, sanitation, and hygiene (WASH) are

fundamental to an improved standard of living. Globally, 91% of households used improved drinking water sources in 2015, while for improved sanitation it is 68%. Wealth disparities are stark, with rural populations, slum dwellers and marginalized groups lagging significantly behind. Universal, affordable and sustainable access to WASH is a key public health issue within international development and is the focus of Sustainable Development Goal-6.(SDG). [10]

Research points to significant health and socio-economic consequences of poor nutritional status, child growth and school performance caused by inadequate WASH. Many innovations in behavior change and service delivery offer potential for scaling up services to meet the SDGs.[11] In the broader context, UNICEF's activities in Water, Sanitation and Hygiene (WASH) contribute to the achievement of the Millennium Development Goals. United Nations international observance days for WASH namely: World Water Day for water (22 March), World Toilet Day for sanitation (26 November) and Global Hand washing Day for hygiene (15 October).[12]

Of the world's seven billion people, six billion have mobile phones. Yet only 4.5 billion people have access to toilets or latrines — meaning is that two and a half billion people, mostly in rural areas, do not have proper sanitation. There are 1.1 billion people still defecating in the open. In many countries, 95 per cent or more of the poorest fifth of the population practices open defecation. [13]

Health Consequences *of* Contaminated water, poor hygiene and lack of sanitation lead to the transmission of pathogens through faecal-oral pathway. Diseases transmitted via the faecal pathway are diarrheal disease, enteric infection, hepatitis A and E, poliomyelitis, helminthes, trachoma, and adenoviruses (conjunctivitis).[14] Lack of sanitation contributes to approximately 700,000 child deaths every year due to diarrhoea. Chronic diarrhoea can have a negative effect on child development (both physical and cognitive).[15]

In addition, lack of WASH facilities can prevent students from attending school, impose a burden on women and diminish productivity.[16] Poor personal hygiene causes fungal skin infections, such as ringworm (tinea) and scabies. Lack of hand washing is associated with respiratory infections [17],while inadequate hand hygiene during childbirth is linked to infection [18] and neonatal mortality.[19,20] Poor water and sanitation is also linked to maternal mortality.[21] Exposure to harmful levels of arsenic in groundwater is estimated to impact 226 million people in more than 100 countries [22] causing skin lesions and long-term illnesses such as cancer, neurological disorders, cardiovascular diseases, diabetes, and cognitive deficits among children. [23]

Studies revealed in Tamil Nadu that 50% of the surveyed population found defecating in the open area is cleaner than using a toilet with more than 11% reporting that it is unhygienic to have toilets near the dwelling. Almost 90% reported that they were habituated‟ to open defecation and 5% reported that it was not in our culture‟ to use toilets. A further 4% were dissuaded by household elders not to use toilets.[24]

According to the Public Health Association, only 53 per cent of the population wash hands with soap after defecation, 38 per cent wash hands with soap before eating and only 30 per cent wash hands with soap before preparing food. Only 11 per cent of the Indian rural families dispose child stools safely. 80 per cent children's stools are left in the open or thrown into the garbage. Only 6 per cent of rural children less than five years of age use toilets.[25] A study conducted in Odisha revealed that 50% of households surveyed knew that water contamination causes diseases, however 64% of these households continued to draw water from storage vessels by inserting a hand. Although 92% of respondents considered washing hands to be important for personal hygiene, only in 29% households kept soap/ash at the washing area. About 56% of respondents associated health problems with open defecation, but nearly 36% did not think it important enough to build a toilet at home. Among the model Gram Vikas villages, 83% of households had toilets but only 48% were reportedly using them.[26]

Preventive WASH measures:

Water availability for drinking and household uses can affect the quantity of water consumed and the time available to care for children in the household. Reducing the distance required to fetch water is associated with lower prevalence of diarrhoea, improved nutrition, as well as reductions in under-five child mortality [27], possibly because it enables better

hygiene practices [28]and frees up time for child care or income generating activities[29] , resulting in healthier children. Furthermore, to increase safety, drinking water can be treated at the source or at the point of use through a process of filtration and/or disinfection. The largest health effects for improved water treatment technologies are for piped water supply, with a greater benefit associated with higher quality piped water (water that is safe and continuously available). Among household-level studies, filter interventions that also provided safe storage (for example, ceramic filters) were associated with a large reduction in diarrhoeal disease[30]. Although an earlier systematic review and meta-analysis of water quality interventions found household level treatment was more effective than source treatment[31].

Sanitation technologies isolate, transport, and treat faecal waste to reduce the transmission of pathogens to provide users with a dignified and comfortable experience. Evidence shows that facilities shared by more than one household are associated with increased risk of diarrheal disease[32]. Public facilities are often poorly maintained and are less likely to be used by women, children and persons who are disabled or infirm. Distance also decreases usage of communal toilets[33].

Hygiene technologies enable users to perform basic personal hygiene functions. Epidemiological studies have typically used the presence of a place for hand washing with soap and water present as a proxy for hand washing practice. A meta-analysis of hygiene interventions found an average risk ratio for diarrhea of 0.60 for promotion of hand washing with soap (95% CI: 0.53–0.68) and an average risk ratio of 0.76 in the risk of diarrhea for general hygiene education alone[34]

Programmes:

1. **The Swachh Bharat Mission** - Urban (SBM-U), launched on 2nd October 2014 aims at making urban India free from open defecation and achieving 100% scientific management of municipal solid waste in 4,041 statutory towns in the country. The objectives of the mission are Elimination of open defecation, Eradication of Manual Scavenging, Modern and Scientific Municipal Solid Waste Management, To effect behavioural change regarding healthy sanitation practices, Generate awareness about sanitation and its linkage with public health, Capacity Augmentation for ULB's(urban local bodies), To create an enabling environment for private sector participation in capital expenditure and operation and maintenance. The Mission has the following components Household toilets, including conversion of insanitary latrines into pour-flush latrines; Community toilets, Public toilets, Solid waste management, IEC & Public Awareness, Capacity building and Administrative & Office Expenses . The targets set for the Mission, which have to be achieved by 2nd October 2019 include: Construction of 66.42 Lakh individual household toilets (IHHL); Construction of 2.52 lakh community toilet (CT) seats; Construction of 2.56 lakh public toilet (PT) seats; and Achieving 100% door-to-door collection and scientific management of municipal solid waste (MSW). To ensure a continuous engagement and higher awareness among the citizens, a participatory approach for implementation of the Swachh Bharat Mission is being planned in form of theme-based Cleanliness drives on regular intervals, which are specific to a sector.[35]

2. Swachh Bharat: Swachh Vidyalaya is the national campaign driving 'Clean India: Clean Schools'. A key feature of the campaign is to ensure that every school in India has a set of functioning and well maintained water, sanitation and hygiene facilities. Water, sanitation and hygiene in schools refers to a combination of technical and human development components that are necessary to produce a healthy school environment and to develop or support appropriate health and hygiene behaviours. The technical components include drinking water, handwashing, toilet and soap facilities in the school compound for use by children and teachers. The human development components are the activities that promote conditions within the school and the practices of children that help to prevent water, hygiene and sanitation related diseases.

3. **Swachh Bharat Kosh (SBK)** has been set up to attract Corporate Social Responsibility (CSR) funds from Corporate Sector and contributions from individuals and philanthropists in response to the call given by Hon'ble Prime Minister on 15th August, 2014 to achieve the objective of Clean India (Swachh Bharat) by the year 2019, the 150th year of the birth anniversary of Mahatma Gandhi

through Swachh Bharat Mission. A nation-wide effort started on Gandhi Jayanti 2nd October, 2014 to mobilize resources for improving sanitation facilities in the rural and urban areas, particularly, school premises.

4. **Sarva Shiksha Abhiyan (SSA),** is Government of India's flagship programme for achievement of Universalisation of Elementary Education (UEE) in a time bound manner. Water, sanitation and hygiene infrastructure facilities are provided in all new schools. The mid day meal Programme is a nutrition programme which reaches almost 10 crore children daily, in 12 lakh schools. Group hand washing with soap before mid day meal is promoted across the country in order to enhance the nutritional outcomes.

5. **Rashtriya Madhyamik Shiksha Abhiyan (RMSA),** launched by Ministry of Human Resource Development, March, 2009, to enhance access to secondary education and to improve its quality. Besides it also lays emphasis on secondary schools to conform to prescribed norms of providing access to quality physical infrastructure like good classrooms, quality toilet infrastructure and drinking water provisions, and norms of removing gender, socio-economic and disability barriers.

6. **Kasturba Gandhi Balika Vidyalaya (KGBV),** aims at ensuring access and quality education to girls from disadvantaged groups belonging to SC and ST population, by setting up residential schools at upper primary level. Infrastructure support to these centres includes safe drinking water and toilet facilities.

CONCLUSION:

According to UNICEF, turning hand washing with soap before eating and after using the toilet into an ingrained habit can save more lives than any single vaccine or medical intervention, cutting deaths from diarrhea by almost half and deaths from acute respiratory infections by one-quarter. Hand washing is usually integrated together with other sanitation interventions as part of water, sanitation and hygiene (WASH) programmes. A behavioural change is needed among public to achieve the target of clean India. Clean India mission succeeds by providing safe drinking water, good sanitation and hygiene in all round rural and urban areas including households, schools, health care sector etc. It is a principle challenge for any country to provide basic sanitation, safe drinking water and safe disposal of excreta.

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