



WaterAid/ Srishti Bharadwaj

# Hand hygiene for COVID-19 and beyond in India



Insights and recommendations from a rapid study

# Introduction

Hand washing with soap is a cost-effective public health intervention, with significant public health benefits<sup>1</sup>. Hand hygiene practices in India, however, have remained low and vary across the important moments for handwashing. The National Sample Survey 76 Round (2018) found that a reported 35.8% household members washed hands with soap before eating, and 74.1% washed hands after defecation<sup>2</sup>. The National Family Health Survey 4 (2015-16) found that 80.3% of urban and 49.4% of rural households had a handwashing space with water and soap<sup>3</sup> highlighting the importance of handwashing facilities to facilitate practice.

The COVID-19 pandemic in India has underscored the disease prevention benefits of hand washing with soap and other protective measures in slowing the spread of Coronavirus. Proactive communication campaigns using television, mobile phone communication (WhatsApp, interactive voice recording, text messages), and inter-personal mediums starting from the lockdown phase (24 March – 17 May 2020) imparted important information on protective measures and on seeking health care for symptoms.

## Scope of the study

To understand whether communication on hand hygiene during this phase of the pandemic and lockdown were received, understood, and translated into action, WaterAid India conducted a rapid study on hand hygiene in six States. The findings have implications for interventions and policy actions for incorporating hygiene promotion into large-scale health, nutrition, and water, sanitation, hygiene (WASH) programs.

## Methodology

WaterAid India conducted a rapid mixed methods study was conducted between 28 May and 12 June 2020 with the aim to:

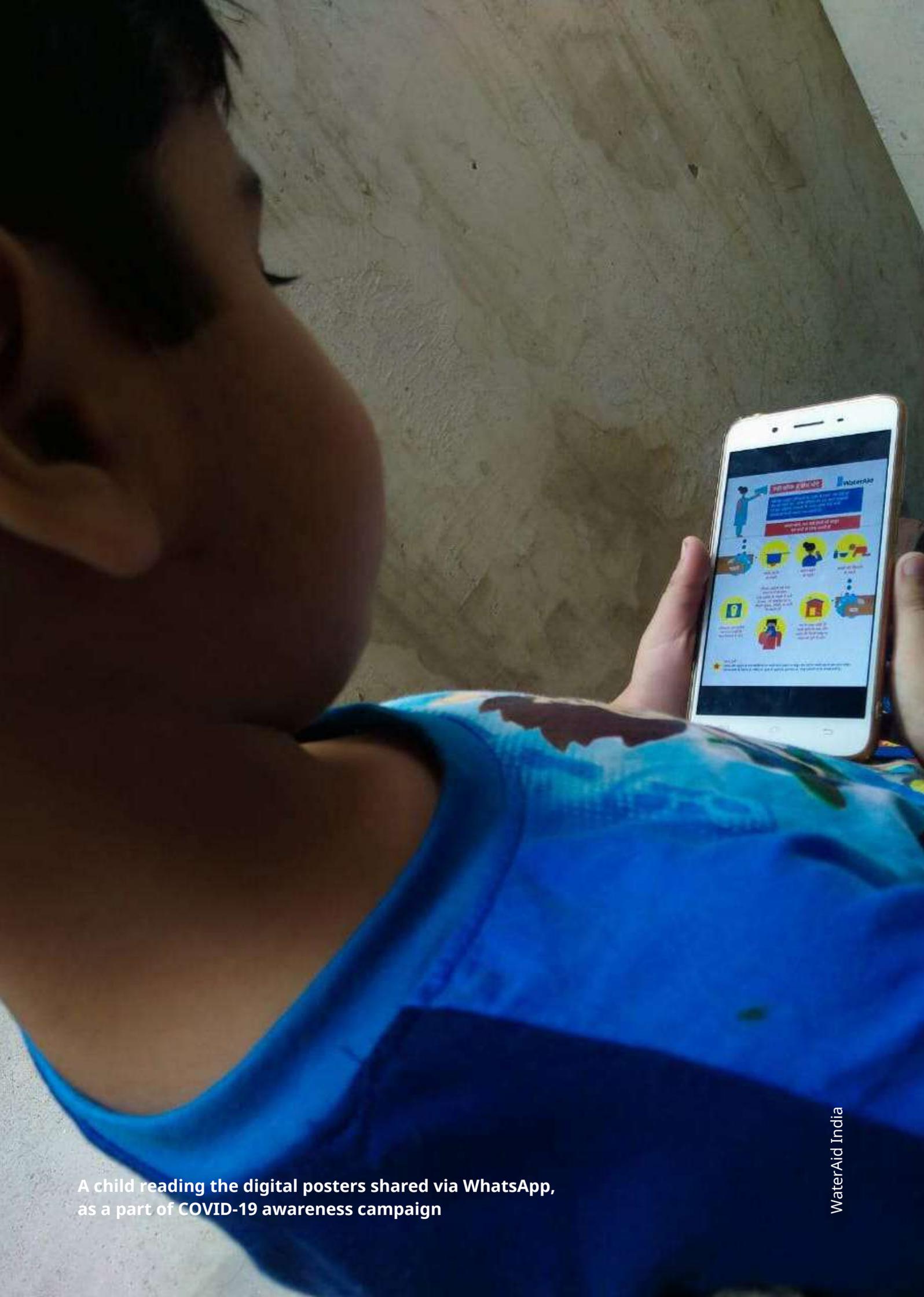
1. Identify the hygiene messages received by households and channels of communication for hygiene promotion
2. Examine the facilitators and barriers to handwashing practices at the household level
3. Strengthen the hygiene promotion and behaviour change approaches in light of the COVID-19 pandemic

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<sup>1</sup> Howard G, Bartram J et al (2020). COVID-19: urgent actions, critical reflections and future relevance of 'WaSH': lessons for the current and future pandemics. *Journal of Water and Health*. Accessed on 6 August 2020. Available at: <https://iwaponline.com/jwh/article/doi/10.2166/wh.2020.162/75581/COVID-19-urgent-actions-critical-reflections-and>

<sup>2</sup> Ministry of Statistics and Program Implementation, National Statistical Office, Government of India (2018). *Drinking Water, Sanitation, Hygiene, and Housing Conditions in India*. Accessed on 10 August 2020, accessible at: [http://mospi.nic.in/sites/default/files/NSS7612dws/Report\\_584\\_final.pdf](http://mospi.nic.in/sites/default/files/NSS7612dws/Report_584_final.pdf)

<sup>3</sup> International Institute for Population Sciences (IIPS) & ICF. (2017). *National Family Health Survey (NFHS-4), 2015-16*. Mumbai, India: IIPS.



A child reading the digital posters shared via WhatsApp, as a part of COVID-19 awareness campaign

## Study Sample

The rapid study comprised a household survey with 790 respondents across 22 gram panchayats (in six States of Uttar Pradesh, Bihar, Madhya Pradesh, Chhattisgarh, Odisha, and Karnataka) and in four slums (two slums each in Bhopal and Lucknow). The States and gram panchayats were selected based on WaterAid India's field presence, safety and ease of access post lock-down. Sampling was purposive<sup>4</sup> at the community level, specifically seeking to interview adults from households with children under six years, elderly above 60 years, and households who were identified as vulnerable or marginalised according to socio-economic criteria (e.g., tribal households, Dalit families, migrant workers).

Two-thirds of survey participants were women, half of the survey respondents had children under 6 years and half had a family member over 60 years in their household. Key informant interviews were held with representatives of 12 NGOs working at the National and State levels on WASH, hygiene, and/or health, to understand approaches to hygiene promotion and behaviour change during the COVID-19 pandemic.

Total survey sample (households)	797
<b>Total Rural Sample</b>	<b>677</b>
Uttar Pradesh	146
Bihar	60
Chhattisgarh	137
Odisha	152
Madhya Pradesh	122
Karnataka	60
<b>Total Urban sample</b>	<b>120</b>
Lucknow	60
Bhopal	60

<sup>4</sup> The purposive sampling enabled coverage of households with individuals who are considered vulnerable to infection due to their development stage, age, and socio-economic status.

# Findings

## KEY FINDING 1

### **Majority of households owned at least one electronic device (TV and/or mobile phone), and almost 90% of smart phone owners used social media or mobile application**

Close to two-thirds of respondents (63%) had a television at home and 90% had a phone, with only 8% not having any electronic device at home. Of those with a phone, 61% had a simple feature phone, 62.5% had a smart phone, and 36% had both a simple and smart phone in the household. Among those with a smart phone, 89.7% used social media or a mobile app WhatsApp was the most popular mobile application used in a household (53%), followed by YouTube (41%) and Facebook (40%).

## KEY FINDING 2

### **Families received messages about Coronavirus and protective measures during the lockdown phase of the pandemic (April – May 2020)**

More respondents recalled exposure over the past month to information on mask use (76%), physical distancing (70%), and handwashing (67%), than any other communication about Coronavirus, including description of Coronavirus (62%), symptoms of COVID-19 (47%), and respiratory hygiene/etiquette (20%) in the month preceding the survey (Table1).

**Table 1 : Proportion reporting exposure to messages**

Exposure to messages in the past month	Proportion
Mask use	76 %
Physical distancing	70 %
Handwashing	67 %
Description of Coronavirus	62 %
Symptoms of COVID-19	47 %
Respiratory hygiene	20 %

Findings suggest that information on important preventive measures – mask use, physical distancing, handwashing, was provided, in line with Government messaging. However, stark differences between the proportion reporting exposure to messages on mask use, and messages on respiratory hygiene (20%) and COVID-19 symptoms (47%) suggests that information on the link between mask use and respiratory transmission of Coronavirus may have been inadequately communicated or poorly understood by households.

### KEY FINDING 3

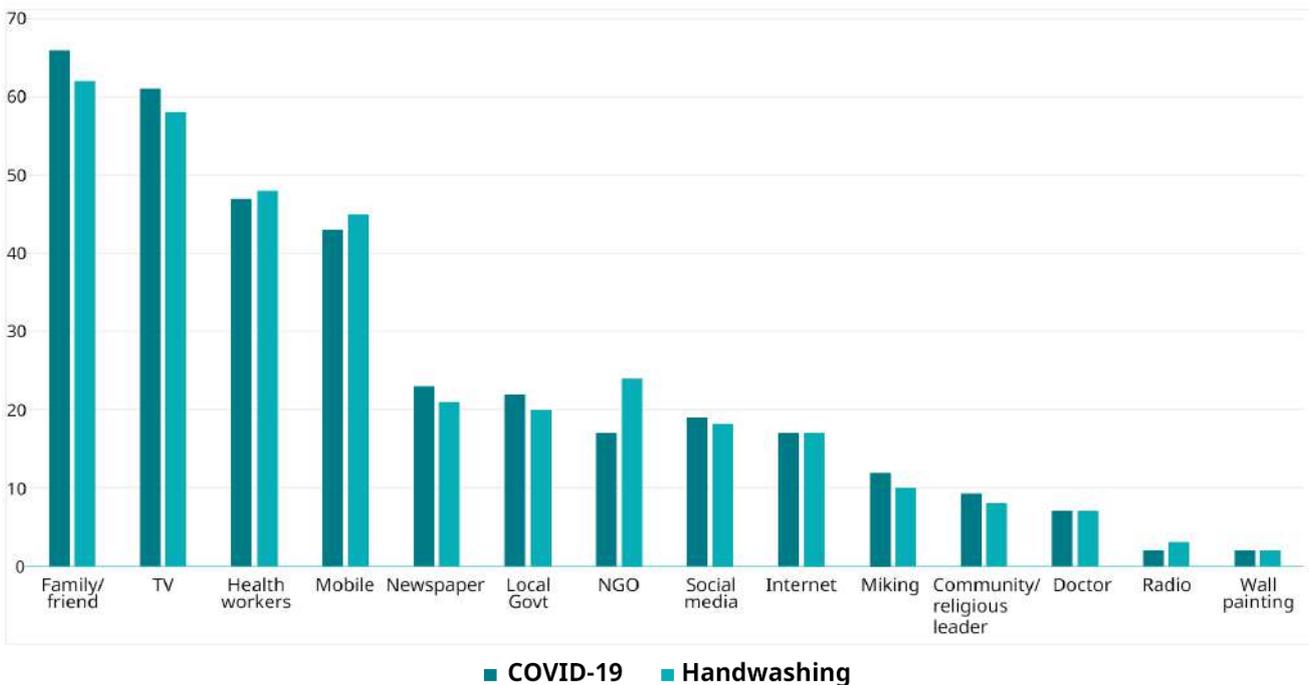
#### Informal community networks, television, frontline workers and mobile phones were the main sources of information on Coronavirus and handwashing

Informal community contacts such as family members, friends, neighbours emerged as a leading source of information on both Coronavirus (66%) and handwashing (62%) in the month preceding the survey.

Households also recalled messages from frontline workers on Coronavirus (47%) and handwashing (48%). Television was the most popular form of mass media communication on Coronavirus (61%) and on handwashing (58%), followed by mobile phone (43% for Coronavirus, 45% on handwashing). A slightly higher proportion of respondents reported receiving information from health workers, NGOs and through their mobile phones on handwashing compared to Coronavirus.

Inter-personal communication through informal community networks as an important channel of communication on both Coronavirus and handwashing may partially explain why the linkage between the disease and protective measures was poorly imparted and understood. Informal networks may themselves have had limited information.

**Figure 1: Sources of information on handwashing and Coronavirus (all data in percentage)**



## KEY FINDING 4

### Exposure to messages on Coronavirus and handwashing was frequent; with a preference for simple, clear messages that are visual and engaging.

Most respondents reported daily exposure to messages on Coronavirus and handwashing, and shared that the whole family received these communications. A vast majority (88%) found the messages to be clear, easily understandable, and expressed a preference for simple language (45%), interactive videos (42%), pictures (35%) and songs (34%).

## KEY FINDING 5

### The perceived benefits of handwashing with soap was slightly higher for Coronavirus than for other diseases, though knowledge was moderate in both contexts. Knowledge that soap is an effective cleansing agent is high.

Slightly more than half (52%) of respondents shared that handwashing protected against diseases in general, while 60% noted that handwashing protected against Coronavirus in the context of the COVID-19 pandemic.

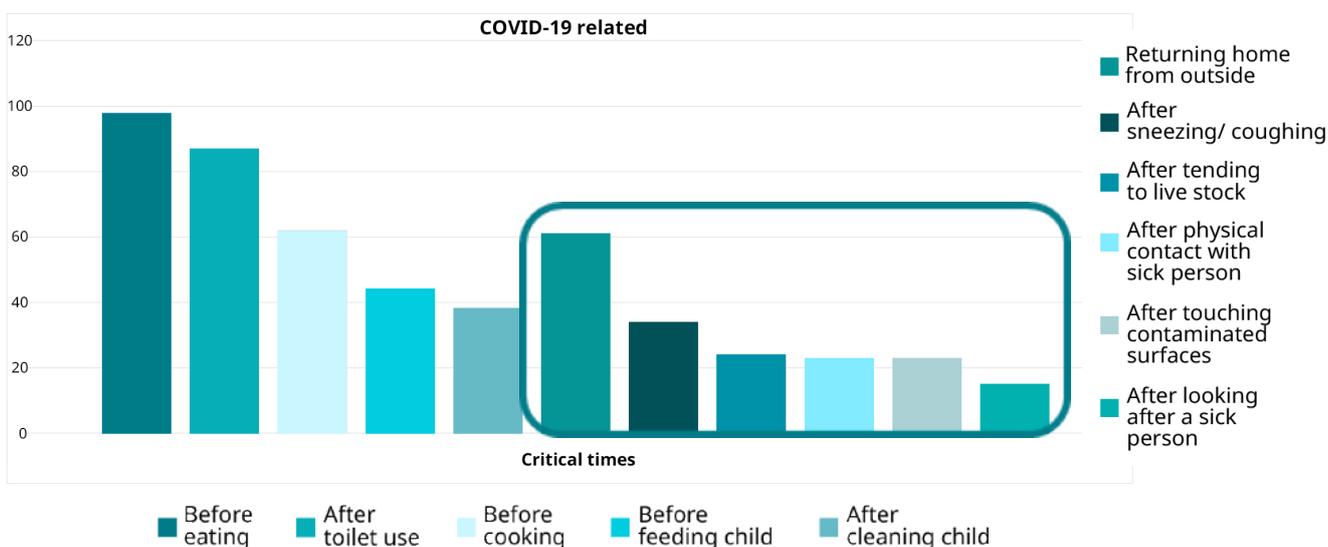
Strikingly, 92% and 87% highlighted soap as the most effective handwashing agent in general and during the pandemic respectively. These findings suggest that while awareness of soap to cleans hands is high, there persists critical gaps in knowledge on how handwashing with soap works to protect against diseases.

## KEY FINDING 6

### Knowledge of critical times for handwashing was high for before meals and after toilet use, but low for all COVID-19 related critical times<sup>5</sup>

Majority of respondents (Figure 2) were aware that hands must be cleaned before eating (98%) and after using the toilet (87%). However, the results show limited understanding of hand washing before feeding children (44%) and after cleaning a child's bottom or disposing child faeces (38%). Knowledge of handwashing for COVID-19 specific times was also low with respect to handwashing after sneezing (34%), after contact with commonly used surfaces and objects (23%), after contact with a sick person (23%) and on returning home from outside (61%)<sup>6</sup>.

Figure 2: Knowledge of critical times for handwashing with soap (all data in percentage)



<sup>5</sup> Knowledge of handwashing is a proxy indicator for handwashing behaviour. Limited knowledge is indicative of poor practice

<sup>6</sup> The practice of washing hands on returning home from outside may be cultural and not reflective of perceived risk of Coronavirus.

## KEY FINDING 7

### **Respondents changed their handwashing practices in response to the pandemic, primarily out of fear of Coronavirus and to protect themselves from the disease**

Approximately three-fourths of the study sample reported making some change to their handwashing practices at home, with a majority noting fear of Coronavirus (77%), and need to protect self from Coronavirus (69%) as driving factors. Notably, changes in handwashing with the intent to protect family from Coronavirus was low (reported by only 39% of respondents).

## KEY FINDING 8

### **Soap was used by the vast majority to wash hands, with 80% washing hands for at least 20 seconds**

Soap was reported to be widely used to clean hands in general (91%) as well as in the context of the COVID-19 pandemic (95%), with 43% washing hands for at least 20 seconds as recommended, 22% washing hands for 30-60 seconds, and 15% washing for more than a minute<sup>7</sup>. The primary reason noted for the duration of handwashing was to remove Coronavirus from the hands.

While knowledge of soap use is high, clear understanding of how diseases, including COVID-19 spread, and how handwashing with soap breaks disease transmission routes appear limited. Further, the perception that handwashing protects the self, but not necessarily others in one's family (persons in close contact) indicates inadequate understanding of disease transmission and protective measures

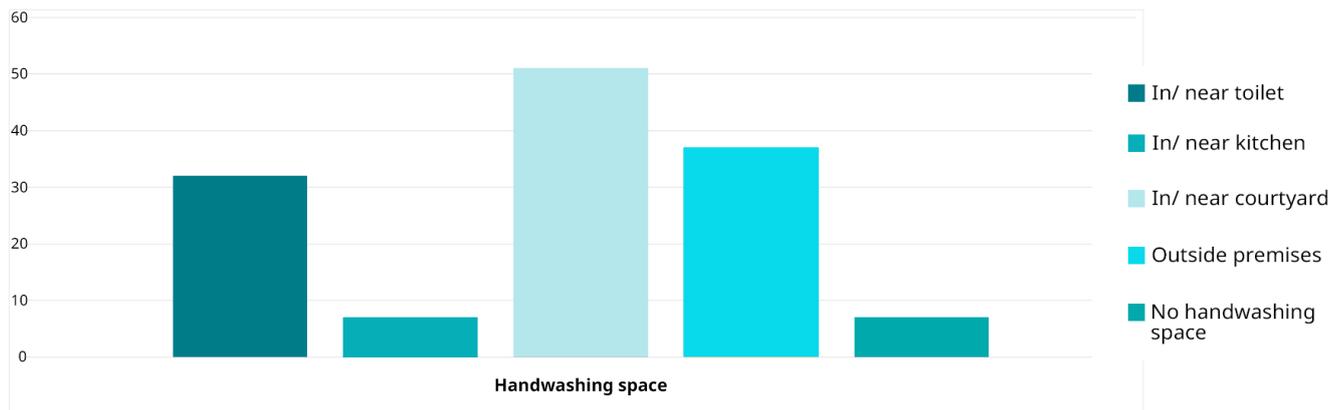
## KEY FINDING 9

### **41% households used piped water or stored water with tap for handwashing, and in 18% households, the handwashing space was outside the home**

To wash hands, one-quarter reported using more than one water source, with 41% households using piped water or stored water with tap for handwashing, and 57% directly using water from a handpump or stored water without a tap (Figure 3). The lack of a tap connection may compromise proper handwashing practices as it makes cleaning both hands together (as per the steps) challenging without additional assistance. Compounding limited access to water for handwashing, was the availability of a handwashing space in the household (Figure 4). While several households reported had more than one handwashing space, in 18% of households, the only handwashing space was outside the home. In approximately half of the households (51%), the handwashing space was in the courtyard and 32% had a handwashing facility in or near the toilet.

<sup>7</sup> Respondents were not asked to demonstrate handwashing with soap, but to report on the perceived duration of handwashing on average

**Figure 3: Knowledge of critical times for handwashing with soap (all data in percentage)**



### KEY FINDING 10

**Challenges to handwashing include lack of designated handwashing space, limited availability of soap and piped water**

Only 15% of households reported facing challenges in washing hands inside the home, and 34% experienced difficulties outside the home<sup>8</sup>. Despite reportedly high rates of handwashing, the challenges noted are in line with access to handwashing space and water with the household premises – the lack of handwashing space in the home, poor availability of soap and lack of piped water supply. Outside the home, inadequate water, lack of soap and handwashing space were major barriers to practice.

Lack of a designated space to wash hands, limited access to piped water and tap connections may make handwashing more cumbersome and undermine its practice. The difference in proportion reporting handwashing with soap, and the proportion reporting access to water and handwashing space in the household suggests that this desirable behaviour may be overreported, and therefore less frequent than stated

<sup>8</sup> The survey was conducted soon after the lockdown was lifted. During the lockdown, mobility outside the home was limited for many in rural and urban areas, and few may have experienced challenges in handwashing due to this limited mobility. However, post lockdown, as people have returned to work and are mobile in the public space, barriers to handwashing outside the home may become more apparent.

## Insights from key informant interviews

### **The key informants from organisations involved in hygiene promotion and behaviour change proposed the following considerations for hygiene programs during and post the COVID-19 pandemic:**

1. Hygiene promotion and behaviour change interventions need to be reimagined to include critical COVID-19 specific hygiene behaviours<sup>9</sup>, while continuing to promote the standard set of hygiene behaviours. Two approaches were proposed by organisations: 1) Promote hygiene behaviours as a set of preventative measures that can slow and prevent the spread of Coronavirus and other infectious diseases among different groups. This approach involves explicitly linking hand hygiene and other hygiene behaviours with the prevention of COVID-19 and other infectious diseases, with a clear understanding of how transmission routes can be broken 2) Categorise hygiene behaviours as COVID-specific or responsive behaviours, and COVID-sensitive behaviours, with their relative importance being emphasised in accordance with a phased response. For instance, during the initial phases of the pandemic or when the pandemic is at its height, COVID-19 specific hygiene behaviours need active promotion. As knowledge of COVID-19 hygiene behaviours increases, and as the prevalence of the disease abates or plateaus, other hygiene behaviours

(e.g., safe water management) must be re-emphasised. Irrespective of the approach taken for hygiene promotion and behaviour change, a lens of equity and inclusion is imperative. Programs need to identify which communities are affected the most or are most vulnerable owing to their socio-economic status, and which hygiene practices can confer the greatest health benefits.

2. Hygiene behaviours must be promoted using several touchpoints - a mix of inter-personal, mass media communication (TV and radio) and telephonic communication (WhatsApp, text, interactive voice response). While digital mediums are widely used and have the potential for scale, certain groups and populations (particularly from disadvantaged socio-economic backgrounds, and girls and women within families) may lack access to these channels of communication. Alternative means to reach these groups must be considered in the selection of communication channels.

Technology should be used in an appropriate manner. But let's not be blind to the digital divide. The digital divide can deepen the social divide

Key informant, NGO

<sup>9</sup> Standard set of hygiene behaviours include handwashing with soap at critical times, toilet use and safe handling of child faeces, safe drinking water management, food hygiene, menstrual hygiene management, and environmental hygiene.

3. Messaging must be aligned with Government messaging to complement and reinforce these messages. Alignment with Government messaging may facilitate uptake of communication materials by the Government, especially at a local level, having important implications for dissemination at scale.

4. Communication materials (whether for mass media dissemination, or inter-personal communication) must have simple language, appealing and interactive visuals, and move towards positive messaging.

5. During emergencies, when direct interface with communities may be limited, informal community networks can play a vital role in promoting hygiene. Organisations must invest in strengthening the capacity of peer networks in the community to promote hygiene.

Organisations that invested in strengthening local institutions and community engagement are seeing the results now. The efforts paid off during the pandemic response

Key informant, NGO

6. Sufficient financial investments must be made to support the timely development of effective communication materials, their implementation to reach intended audiences, and their monitoring for sustained adoption of hygiene behaviours.



WaterAid India

**A volunteer demonstrating the steps of handwashing in Odisha**

## Limitations of the study

The study has a few limitations owing to the rapid nature of evidence generation, the timing of data collection (soon after lockdown was officially lifted, and as COVID-19 cases were rising), the nature of data collection (face-to-face surveys). A larger sample from States and cities would have provided greater insights and highlighted differences between socio-economic groups. The face-to-face survey questionnaire was designed so as to be completed within 15 minutes, and as consequence, detailed questions on knowledge, attitudes and practices related to handwashing with soap were not included.

Observations of the handwashing space and facilities within the household premises was limited given physical distancing protocols that survey teams followed. In addition to key informant interviews with NGOs, interviews with frontline workers (ANMs, ASHAs and anganwadi workers) would have enabled deeper understanding of how communities were receiving and incorporating messages from different sources.



WaterAid/ Anindito Mukherjee

**A girl washing hands at home in Chhattisgarh, following the ideal steps of handwashing**

# Recommendations

## Channels for hygiene promotion and behaviour change

### Develop and implement an evidence-based hygiene promotion or behaviour change intervention that is responsive to the context in which it will be implemented:

- Collate and generate evidence on knowledge of and practices related to hygiene behaviours, access to and status of hygiene facilities, barriers and facilitators to practice, exposure to communication channels, presence of community networks (youth groups, women's groups, adolescent groups) and availability of frontline workers who can promote hygiene among community stakeholders.
- Reinforce hygiene behaviours through multiple touchpoints, using a mix of inter-personal, community level, mass media, and digital channels. When selecting appropriate and effective communication channels, the needs of all groups, including marginalised and vulnerable communities should be considered, particularly in terms of their access to information sources.
- Design hygiene promotion and behaviour change communication considering community's access to communication channels (particularly TV and mobile phones), literacy status (to understand written messaging), language (in areas with migrants who may not speak the regional language), and other socio-cultural considerations relevant for the context.

- Identify or create, and strengthen cadres of community volunteers or peer networks to promote, reinforce, and help sustain hygiene behaviours with different community groups during and beyond emergency contexts. Ensure that community networks represent and can reach out to the diverse groups present in a community.

## Messaging for sustained hand washing behaviours:

- Position handwashing with soap as an important behaviour in a suite of health promoting hygiene behaviours<sup>10</sup>.
- Explain diseases transmission routes, with clear messages on how hand washing with soap (and other protective measures) disrupts the transmission of diseases.
- Promote handwashing with soap and other hygiene behaviours as protective for self and for the family, community, and those with whom one has close and long contact (e.g., worksites)
- Expand the critical times for handwashing with soap to include COVID-19 related critical times.
- Continue to emphasise non-COVID-related critical times, especially washing hands with soap before cooking, engaging in child care tasks (particularly feeding children, and after handling and disposing child faeces).

<sup>10</sup> Other hygiene behaviours to be promoted alongside handwashing with soap: respiratory hygiene/etiquette, physical distancing, self-care and health care seeking, toilet use, safe management of drinking water, food hygiene, menstrual hygiene.

- Phase out fear-based messaging, transitioning to positive and emotive messaging on hand washing and related hygiene behaviours to sustain these healthful practices.
- Explore how hygiene promotion interventions (i.e., creating awareness on hygiene practices and ensuring essential hygiene facilities) can transition into hygiene behaviour change interventions, with the added component of identifying and addressing the underlying psychosocial drivers, barriers and facilitators to the desired behaviours. Such an approach can bring about sustained or long lasting change in behaviours.

### Handwashing spaces, with water and soap at home and outside the home

#### Within homes:

- Create dedicated handwashing space in convenient locations within the home, with adequate water and soap kept aside for handwashing to facilitate frequent cleaning.
- Facilitate easy access to water for handwashing in the home, exploring convenient storage and dispensing of water for hygiene purposes while lowering the risk of contamination to the water storage container and mug. (e.g., use of container with tap).
- Consider adding soap to public distribution services, along with information on simple solutions to make soapy water with soap powder and water.

#### Outside the home:

- Create durable handwashing spaces that are well equipped with sufficient water and

soap in frequently used public spaces such as community toilet complexes, public toilets, markets, transport hubs, tourist areas, as well as worksites.

- Ensure operations and maintenance of these handwashing facilities over time

### Monitoring and measuring hygiene practices

At the very minimum, indicators to monitor and assess hygiene should include the following:

- Handwashing hardware:
  - o Presence of a designated handwashing space or station on premise<sup>11</sup>
  - o Presence of water and soap at this designated handwashing space/station on premises<sup>12</sup>
  - o Undertake observations of the handwashing facility where possible as well to verify presence of such a space, and the presence of water and soap at the facility
- Knowledge of handwashing:
  - o Knowledge of critical times for handwashing with soap (include COVID-19 related times as well)
  - o Knowledge of ideal cleansing agent for hands
  - o Knowledge of handwashing steps (accompanied by demonstration, where possible)
- Handwashing practices:
  - o Where possible, a more detailed knowledge, attitudes, practices assessment can be carried out to understand actual hand hygiene behaviours, along with facilitators and barriers.

<sup>11</sup>As per JMP, designated handwashing facility can be fixed or mobile, can be a sink with tap water, buckets with tap, tippy taps, jugs, basins designated for handwashing

<sup>12</sup>As per JMP, soap includes, bar soap, liquid soap, soapy water, and powder detergent

## **Investing in hygiene behaviours (for Donors, Governments, and implementing organisations)**

- For donors, Governments, and implementing organisations, investments in hygiene should include budgetary allocations to the following in response to COVID-19 and beyond:
  - Affordable, functional, accessible hygiene/handwashing hardware (handwashing stations, soap, water provisioning, and operations and maintenance)
  - Evidence-based hygiene software (e.g., strategic evidence-based interventions, hand washing campaign)
- Capacity building of cadres that can promote hygiene directly, with a focus on frontline workers and existing community networks
- Evidence generation (e.g., formative research, assessments, monitoring of programs)
- Donors and Governments to consider how ongoing health and nutrition interventions with women, children, adolescents, and interventions in educational institutions and worksites can be expanded to include attention to hygiene, with appropriate budgetary allocations.



## हाथ धोने की सही विधि

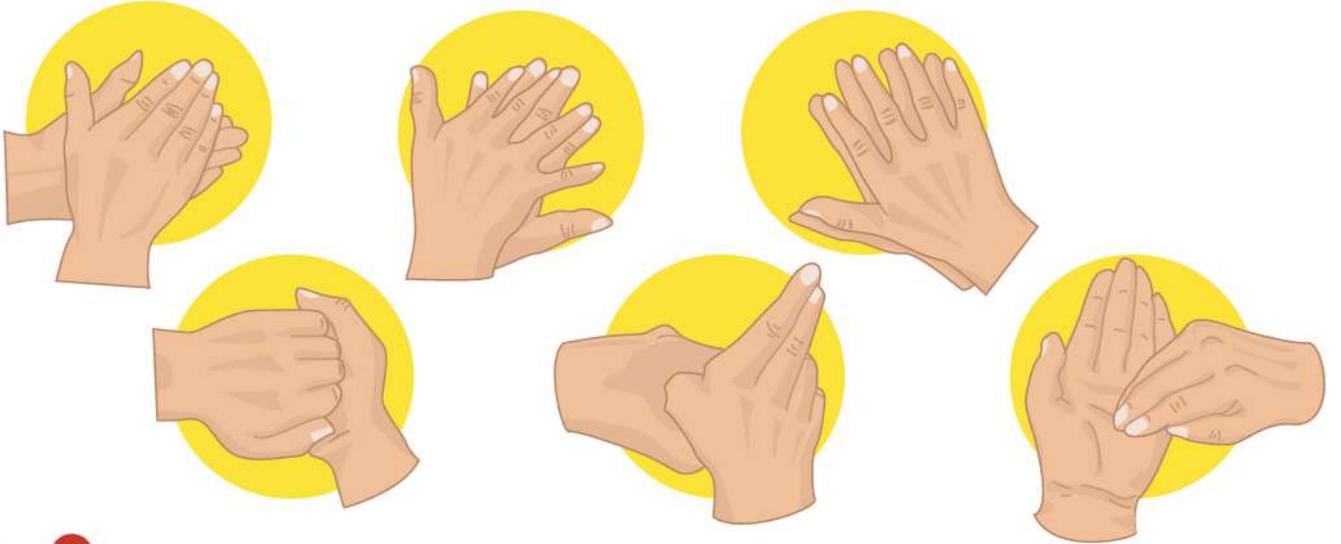
कोरोना-वायरस व अन्य बीमारियों से हम स्वयं को, अपने परिवार को एवं अपने समुदाय को स्वस्थ और सुरक्षित रख सकते हैं, अगर हम अपने हाथों को साबुन एवं पानी से चरणबद्ध तरीके से धोएं। ऐसा करने से, हमारे हाथ का हर हिस्सा साफ होता है।

आइए जाने इन सरल चरणों को:

**1** सबसे पहले अपने हाथों को साफ पानी से गीला करें, और हथेलियों में साबुन लगाएं।

**2** अब अपने हथेलियों को आपस में मलें, ताकि झाग बन सके।

**3** पहले हथेलियों के धारियों के ऊपर, उसके बाद पीछे, उँगलियों के बीच में, अँगूठों के चारों ओर एवं नाखूनों के नीचे व अंदर के हिस्से को, कम से कम 20 सेकेंड तक अच्छे से मलें।



**4** इसके बाद साफ पानी से अपने हाथों को अच्छी तरह से धो लें। अंत में, एक साफ तौलिया या हवा का उपयोग करके अपने हाथों को सूखा लें।

### याद रखें



अगली बार आप जब भी हाथ धोएँ, साबुन का प्रयोग करें एवं इन सरल तरीके व चरणों का जरूर पालन करें। ऐसा कर, आप अपने और अपने परिवार को कोरोना वायरस से सुरक्षित रख सकते हैं।

One of the posters disseminated with community members to create awareness about handwashing steps

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