

Guidance and ablutions: optimising hand hygiene in public health

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INTRODUCTION

Few public health measures are as simple or effective as public health hygiene.¹ The COVID-19 pandemic brought unprecedented global attention to this practice, driving improvements through increased knowledge, stronger government support, better quality hygiene products and heightened motivation to implement handwashing interventions.^{2–4}

Many societies refer to ‘handwash’ as part of their day-to-day social behaviour related to food preparation, breastfeeding, domestic work and removing dirt or bodily waste. Cleanliness through handwashing is also part of many religious practices often mirroring hand hygiene prescribed in formal instruction.⁵

Normative guidance on hand hygiene is key in promoting healthy societies. Given its importance, we welcome new guidance from WHO and UNICEF on handwashing in community settings that is expected later this year, as well as the publication in *BMJ Global Health* of a supplement covering the evidence used to develop the guidelines.⁶

While guidance is important, it must be coupled with positive social behaviours to increase handwashing, help control infections and ultimately contribute to wider indirect gains. These include easing pressure on health systems and slowing the rise of antimicrobial resistance. However, a well-documented combination of challenges can make it difficult to sustain good hygiene practices.

A view from the edge of the Sahel

Gummi Local Government Area, in the north-west of Zamfara state, Nigeria, illustrates these challenges but also presents some local lessons that may help when applying guidance—insights we draw from our own work in this setting. Situated on the edge of the Sahel, Gummi has a climate defined by distinct wet and dry seasons and proximity to desert terrain. Drinking water comes

SUMMARY BOX

- ⇒ For lower-income countries, equity must be central to hygiene guidelines, recognising disparities in access, knowledge and resources, and tailoring interventions for universal access and support.
- ⇒ Gummi, Nigeria, illustrates the challenges of sustaining handwashing in water-scarce environments, where households often rely on alternatives like ash or sand due to limited access to soap and clean water.
- ⇒ Evidence-based guidance, when implemented in tandem with socially embedded hygiene habits, contributes significantly to improved health outcomes by reinforcing both scientific understanding and culturally supported behaviours.

mainly from hand-dug wells, rivers and rain-water harvesting, but supplies are unreliable. Agriculture is the primary livelihood, with farmers cultivating maize, millet, sorghum and rice, alongside rearing cattle, goats and poultry—activities vulnerable to climate variability, market instability and insecurity. In this environment, communities must constantly prioritise limited water resources, balancing human needs, crop irrigation and animal care.

How do people manage resources limitations in Gummi?

The evidence is clear on the importance of washing hands with soap and water to remove microorganisms.⁷ However, in Gummi, access to soap and water can be a challenge. When soap is either unavailable or too costly, families often turn to alternative handwashing agents such as ash, sand or salt solutions. Inadequate water supply also forces households to adapt, harvesting rain during the rainy season and fetching water from streams during the dry season. This limited supply is typically prioritised for domestic use, such as washing dishes, cooking and ablution before daily prayer.

These coping strategies illustrate the choices people make when resources are constrained. Evidence on the effectiveness



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of alternatives such as ash and sand, however, remains limited and sometimes inconsistent.⁷ A newly published systematic review that supports forthcoming guidance found that while ash and sand demonstrated some efficacy for handwashing in certain conditions, the data were sparse and highly heterogeneous, with only two studies identified for each material. Global handwashing guidelines are conflicting, with 22% recommending use of ash or sand when soap is unavailable, while 6% advise against it.⁷ With options already limited in contexts like Gummi, more research is needed to establish how reliable these alternatives truly are.

In Gummi, social gatherings and community events are often used by community mobilisers to highlight the significance of handwashing with soap and water and encourage behavioural change. Socially embedded strategies are also crucial, such as involving religious and traditional leaders, facilitating discussions among women and educating children through their mothers. However, evidence presented in the supplement on the effectiveness of government-employed community health workers and volunteer structures in driving sustained hand hygiene is mixed, with studies showing highly variable outcomes depending on local context.⁸

While community-based initiatives are important, they cannot be relied on without complementary government support that responds to limited access to essential materials, such as soap. In contexts such as Gummi, practical government support should ideally include ensuring steady access to materials by supporting local soap production and promoting hygiene at the community level, as well as investing in infrastructure to guarantee water supply and quality. In Gummi, however, these measures are currently limited and require stronger implementation.

Additional strategies used in Gummi include school-based programmes that teach children proper handwashing techniques; leveraging technology such as mobile applications and radio stations to inform communities about handwashing and its importance in infection prevention; and partnerships with local organisations to improve access to crucial resources, such as soap and safe water. Regular operational evaluations that include the use of disease surveillance data can also be important to assess the impact of handwashing initiatives on conditions associated with poor hand hygiene.

Sustaining progress

Where long-term support is limited, progress often depends on short-term interventions during crises. As seen during the COVID-19 pandemic, emergencies can trigger improved hygiene behaviours, but whether these habits persist afterwards is uncertain. During emergencies, multisector efforts can reinforce hand hygiene through increased supplies and targeted health promotion campaigns, particularly during outbreaks. However, once the problems subside and investments reduce, sustained change depends on embedding infrastructure,

supply chains and behaviour change strategies into policy.⁶

In many settings, traditional media is still a powerful tool for reaching people with public health information. For example, in Gummi, almost every house has a radio where public health information is shared. Women typically spend most time with young children, instilling foundational values and social norms around hygiene. Their early lessons often guide how individuals engage with their communities later in life. Finally, the indigenous knowledge and influence of traditional and religious leaders remains an important way to share hygiene information.

CONCLUSION

Current guidelines often assume the presence of resources and infrastructure that are not consistently available. Gummi is an instructive example that demonstrates how structural scarcity, environmental pressures, behavioural constraints and insufficient policy support intersect to limit consistent hand hygiene. Even within the same community, access, knowledge and practices are far from equal: some households can afford soap while others cannot; some have nearby water sources while others must walk long distances; some understand the importance of handwashing at key moments while others remain unaware. These disparities mean that those with the least face the greatest barriers and require the most support to overcome them.

The synthesis of the evidence and the gaps uncovered in this new supplement on hand hygiene call for more information and data from low resource settings to help promote interventions that address equity and combine material provision, habit formation, knowledge building and sustained government commitment.

While new guidance is important, it will only be as useful as the public health community's ability to marry practical learnings from the lived reality of the communities they serve with recommendations that are based on sound science.

Social media Mohammed Sani, Facebook @share/14PxihLhLz

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REFERENCES

- 1 Global report on infection prevention and control. Geneva World Health Organization; 2022.
- 2 State of the world's hand hygiene: a global call to action to make hand hygiene a priority in policy and practice. UNICEF, New York United Nations Children's Fund and World Health Organization; 2021.
- 3 Global water, sanitation, and hygiene: improving wash helps prevent disease. CDC; 2024.
- 4 Evaluation of Hygiene and Behaviour Change Coalition for COVID-19 Prevention: Inclusion of Disability and Ageing. LSHTM and PENDA; 2023.
- 5 WHO guidelines on hand hygiene in health care: first global patient safety challenge clean care is safer care. Geneva: World Health Organization, 2009.
- 6 Esteves M. An urgent call for action on hand hygiene in community settings - we have evidence but governments must now lead and strong systems that can deliver. *BMJ Glob Health* 2025.
- 7 Hilton SP, An NH, O'Brien LA, *et al*. Efficacy and effectiveness of hand hygiene-related practices used in community settings for removal of organisms from hands: a systematic review. *BMJ Glob Health* 2025;10:e018925.
- 8 Snyder JS, Canda E, Honeycutt JC, *et al*. Effectiveness of measures taken by governments to support hand hygiene in community settings: a systematic review. *BMJ Glob Health* 2025;10:e018929.