



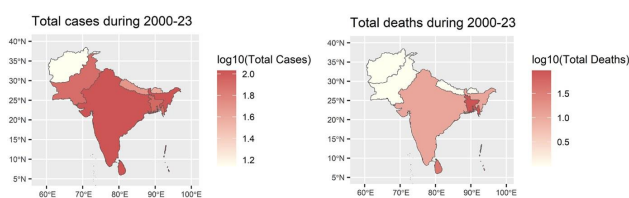
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July 2026 Newsletter

Dengue in South Asia: a growing regional public health challenge - *Dr Najmul Haider*

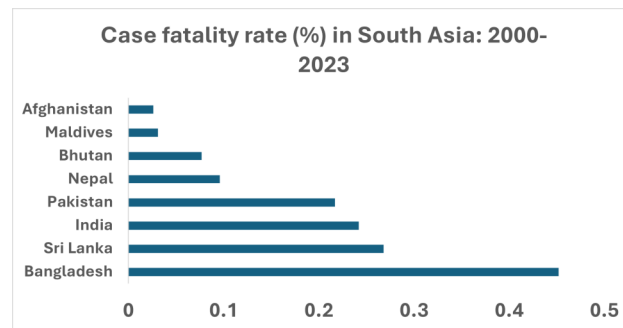
Dengue has become a significant cause of morbidity and mortality across South Asian countries. A recent study published in *Epidemiology and Infection* (DOI: [10.1017/S0950268826101095](https://doi.org/10.1017/S0950268826101095)) provides one of the most comprehensive assessments of dengue trends in the region over the past two decades. The study was led by Dr Najmul Haider, Senior Author and Lecturer in Epidemiology at Keele University, with Dr Priya Paudyal, Coauthor and Director of the Institute for Global Health and Wellbeing at Keele, contributing to the work. The findings are particularly concerning, with projections suggesting that total dengue cases in the region could increase by approximately 40% and deaths by 61% by 2033 if current trends continue. Together, these results highlight both the scale of the problem and the urgency for coordinated regional action.

Between 2000 and 2023, South Asia reported more than 3.5 million dengue cases and nearly 10,000 deaths, with an overall case fatality rate of approximately 0.27%. South Asia accounts for approximately 3% of the world's land area and about 21% of the global population. However, the region contributes around 6% of global dengue cases and nearly 11% of dengue related deaths (**Fig 1**). These figures highlight a disproportionate mortality burden, suggesting gaps in prevention, early detection, and clinical management.



1 - Fig 1: Maps of South Asia showing total dengue cases and deaths in South Asian countries over 2000–2023. A logarithmic scale of 10 is used for data visualization (Asaduzzaman et. al. 2026: <https://doi.org/10.1017/S0950268826101095>)

When adjusted for population size, important differences emerge across countries. The Maldives reports the highest number of dengue cases per million population, followed by Sri Lanka, with approximately 2,595 and 1,850 cases per million, respectively. In terms of mortality per million population, Sri Lanka ranks highest, with an estimated 5.09 deaths per million. However, when considering case-fatality rate (CFR), Bangladesh records the highest proportion of deaths among reported cases, with a CFR of 0.45%, followed by Sri Lanka at 0.27% and India at 0.24% (**Fig 2**). These variations point to differences in surveillance systems, healthcare access, outbreak response capacity, and potentially underlying population vulnerabilities. Most South Asian countries recorded a CFR above the World Health Organization target of keeping dengue related mortality below 0.05%



2 - **Figure 2.** Case-fatality rate (%) of dengue across South Asian countries, 2000–2023. Bangladesh records the highest case fatality rate, followed by Sri Lanka and India, with most countries exceeding the World Health Organization target of maintaining dengue case fatality rates below 0.05%. (Asaduzzaman et. al. 2026: <https://doi.org/10.1017/S0950268826101095>)

The rise of dengue in South Asia is not random. It reflects a combination of environmental, demographic, and systemic changes. Rapid and often unplanned urbanisation has created densely populated settings with inadequate water management and waste disposal systems, ideal conditions for mosquito breeding. At the same time, climate variability, particularly rising temperatures and shifting rainfall patterns, has extended transmission seasons and enabled the spread of mosquito vectors into new geographic areas, including regions that were previously unaffected.

Despite these concerning trends, surveillance systems across South Asia remain fragmented. Under reporting of cases, inconsistent diagnostic practices, and delays in data sharing limit the effectiveness of early warning systems. There is also limited integration between climate data and health surveillance, which restricts the ability to anticipate outbreaks and implement timely interventions. Strengthening surveillance, including the use of genomic tools and climate informed predictive models, will be critical for improving preparedness and response.

Looking ahead, dengue in South Asia is likely to intensify rather than stabilise. Population growth, continued urban expansion, and climate change are expected to further increase transmission potential. Without sustained investment in public health infrastructure, vector control, and community engagement, the region risks facing more frequent and more severe outbreaks in the coming years.

The study also highlights the complex circulation of dengue virus serotypes across South Asia. All four serotypes of dengue virus (DENV1-DENV4) are present in the region, with DENV1, DENV2, and DENV3 accounting for most infections, and frequent shifts in dominant serotypes observed across countries over time. This co-circulation, combined with evidence of cross border viral movement and shared lineages, suggests that dengue transmission is increasingly interconnected across the region, reinforcing the need for coordinated surveillance and joint intervention strategies through regional platforms such as the South Asian Association for Regional Cooperation (SAARC).

Addressing dengue in South Asia will require moving beyond country specific responses towards a coordinated regional strategy. This includes strengthening cross border surveillance, harmonising reporting systems, investing in early warning mechanisms, and fostering collaboration between public health, environmental, and research sectors. Dengue is no longer just a national issue. It is a shared regional challenge that demands a collective response.

The lead author of the article Dr Haider said: “Our research shows substantial variation in dengue burden and mortality across countries in South Asia. Without coordinated action across South Asian countries, it will be extremely difficult to control this growing epidemic through isolated national efforts alone. Regional collaboration, data sharing, joint surveillance systems, and integrated public health strategies are now urgently needed.”

Tizaa Bini “Owned by all” Project in Northern Ghana

Project at a glance

The **Tizaa Bini** project seeks to reduce diarrhoeal disease, particularly among young children, by addressing the transmission of pathogens during mealtimes in rural communities in Northern Ghana. The project focuses on understanding and reducing the risks associated with communal-bowl hand rinsing (CB-HR), a culturally embedded practice in which multiple people wash their hands in the same container of water without soap before eating. Through community-led formative research and a cluster randomised controlled trial conducted across 20 villages in the Tolon and Kumbungu districts, the project aims to generate and test sustainable, community-driven strategies that promote safer handwashing behaviours, improve food hygiene, and ultimately reduce exposure to disease-causing germs.

Communal Bowl-Hand Rinsing (CB-HR)



3 - Figure 1. Household members rinsing hands simultaneously without soap, premeal

Our progress

We have just completed the first of three interlinked work packages. Within the first work package, we carried out formative research (FR) among 36 households in 3 communities. Seventy-two interviews and 6 focus group discussions were carried out with mothers and household heads in 36 households with children under 5. We also observed mealtime routines within the households for one day.

Key Findings

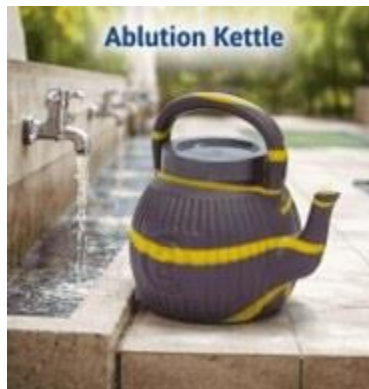
Quantitative Findings

- 63% of all observed families washed their hands in the communal bowl without soap
- 98% of all handwashing moments observed by the team used no soap at all
- 67% of all shared water looked visibly dirty at the time it was used
- 80% of all households observed kept and reused the same bowl of water for the next person and for the next premeal handwashing occasion.
- Households were clear about the lack of basic facilities in their communities, for example, 86% had no source of clean water nearby, 92% of households have no dedicated handwashing stations, and 64% do not keep soap near the kitchen.

Observations showed that what people reported during the qualitative phase was not what we observed in the field, 33% of household reported using soap to wash their hands before meals, but only 2% of households used soap at the time of washing.

Qualitative Findings

- Households have mixed feelings about the health risks associated with shared handwashing
- Respondents value soap but only 2% of households were observed using soap to handwash premeal times
- Households have experience with alternatives to CB-HR, though none have been fully adopted.
- Communal-Bowl Hand-Rinsing carried a deep cultural significance as it fostered unity and belonging among households





4 - Fig 2. Alternative devices to CB-HR as reported during formative research (from l-r, ablution kettle, Veronica buckets, tippy tap).

Who shapes the practice in the household?

- Mothers
- Children
- Elders and Community Leaders
- Household heads
- Religious Leaders

Our next steps

We have analysed and written a comprehensive FR report, which has been presented to and discussed with our Community Engagement and Involvement (CEI) group. The insights of the FR report and discussions with CEI group have served the basis for the next phase of this project, which is to co-develop a culturally sensitive intervention to reduce CB-HR within the intervention communities. This next phase will involve an interactive process of co-developing and testing alternative options and campaign messages that are culturally appropriate and low cost to drive sustainable behaviour change within the communities.

Further to co-development, our next step will be to implement the co-developed intervention in a 20- cluster trial with evaluations at baseline, 3 months and 12 months post intervention.



5 - Fig 3. Participants and project team at the just completed FR results sharing and co-development workshop held on 1st and 2nd July 2026

Team members

Keele University: Dr Evans Atiah Asamane, Dr. Lena Acolatse, Dr Opeyemi Babatunde, Prof Monica Magadi and Prof Priya Paudyal.

University of Birmingham: Prof Semira Manaseki-Holland, Prof Nicola Gale, Dr James Martin, Dr Marco Bardus.

University of Allied and Health Sciences (Ghana): Prof Harry Tagbor, Dr Gifty Ampofo, Ms. Janet Biije, Mr. Nawaf Saeed, Mr. Solomon Yambire

Project Partners

UNICEF, World Vision and WaterAid

We are always open to collaboration and welcome opportunities to work with WASH partners, stakeholders, and industry actors across Ghana and Africa. Together, we can co-develop innovative, culturally sensitive, and scalable solutions that improve health, nutrition, and wellbeing. If you or your organisation would like to collaborate, please get in touch with us.

For further information contact: e.a.asamane@keele.ac.uk

CONTROL Project National Policy Dialogue - Scaling Up Mental Health Support Within Tuberculosis Care in Pakistan

The CONTROL Project brought together national and provincial tuberculosis (TB) leaders, policymakers, health professionals, and researchers at its fourth Theory of Change workshop in Nathia Gali, Pakistan, on 7 May 2026. The event focused on developing a practical roadmap for integrating mental health services into routine TB care.

Participants reviewed emerging evidence from the CONTROL trial, which demonstrates the feasibility of identifying and supporting TB patients experiencing depression through existing healthcare structures. Strong consensus emerged that addressing depression is essential to improving TB treatment adherence, recovery, and overall patient outcomes.

Discussions highlighted the need to embed mental health support within national and provincial TB strategies, strengthen workforce training and supervision, integrate mental health indicators into routine monitoring systems, and secure sustainable financing through existing health and TB funding mechanisms. Stakeholders agreed that the CONTROL intervention offers a realistic and scalable model for transforming TB care in Pakistan by addressing both physical and mental health needs.



TRANSLATE Project Annual Meeting - Advancing Early Intervention in Psychosis Across Pakistan

The TRANSLATE Study held its first Annual Meeting on 6 June 2026 in Nathia Gali, bringing together clinicians, researchers, site leads, and project teams from across Pakistan to review progress and plan the next phase of the programme. The NIHR-funded study focuses on improving early intervention services for people experiencing first-episode psychosis.

Project leaders reported that 175 patients had been enrolled across participating sites, with presentations showcasing emerging clinical findings, postpartum psychosis research, training innovations, development of a national First Episode Psychosis registry, and updates to clinical guidelines.

A dedicated discussion session explored recruitment challenges, patient follow-up, workforce training, data quality, and opportunities to expand services to additional sites. Agreed actions included strengthening care coordinator roles, enhancing professional training opportunities, improving patient engagement, and expanding community involvement activities. The meeting concluded with a shared commitment to scaling up evidence-based Early Intervention in Psychosis services and improving outcomes for patients across Pakistan.



"Spotlight on"...Theo Grace

Theo is a Public Health Registrar, his placement in Keele started in May 2026 and will last for 3 months. He will be working with Professor Priya Paudyal in the Institute for Global Health and Wellbeing and across other areas of public health across Keele. Theo has been a Public Health Registrar for 2 years, with placements in Stoke-on-Trent City Council, the UK Health Security Agency and the NHS Stoke and Staffordshire Integrated Care Board. He has a BSc in neuroscience and an MSc in Health Policy Planning and Finance, jointly from the London School of Tropical Medicine and the London School of Economics. Prior to joining the NHS Public Health Training Scheme, Theo has worked in a range of roles nationally and internationally. His most recent role was at Walsall Council where he was the Public Health Senior Manager for Health Inequalities and Exclusions, where amongst other roles he was responsible for the councils alcohol and drug substance misuse support. Prior to this he had supported their Covid-19 Response in the Health protection team and as lead for their diagnostics programme. Before working in a local Authority, Theo was the Clinical Compliance Manager for Reckitt Benckiser globally, where Theo was responsible for the compliance of all clinical studies, ranging from Gaviscon and Nurofen trials to Durex, Scholl and Dettol amongst many other product lines. Theo's international work, first at the World Health Organisation, where he was a Technical Officer in the Geneva Headquarters, started as a placement working with the University of Yorks Global Health Histories department. Initially working on the history of Universal Healthcare and the drivers and enablers of it, and supporting the WHO in the development of leadership tools to help leaders in Health bring Universal Healthcare to more populations. During this time Theo joined the WHO response to the 2014 Ebola outbreak, as part of the R&D response team, ultimately deploying to Sierra Leone to be the national research coordinator for WHO during the outbreak. Following this he continued to work with this team as it transitioned to the R&D Blueprint, a program to prepare research for future outbreaks. In his role he worked across many teams and contributed to the development of guidance on the proper, safe and ethical conduct of research in outbreaks, development of common standards for pre-clinical study of filovirus interventions, supporting the response to Zika, the prioritization of pathogens of concern, collaborative work to address mosquito-borne viruses, and work to ensure the vaccine and therapeutic regulatory pathways which had been expedited for Ebola could inform faster approvals in future outbreaks. Subsequent to his work at WHO, Theo joined the Coalition for Epidemic Preparedness and Innovation where he supported their second call for proposals, developing platform technologies to advance vaccines for future outbreaks, including platforms that subsequently allowed rapid development of Covid-19 vaccines. While supporting this work Theo took on responsibility as the lead for Diagnostics, and Coordinator for Biological Standards and Assays. Included in his roles at CEPI was technical support to the investment team, and representation to the Global Health Security Initiative, where Theo advised on approaches to

manage sharing of biological samples in the face of a future potential epidemic, these pathways subsequently informed sample sharing during Covid 19. Theo will be a Public Health Registrar for two more years, with placements in a range of settings and is excited to explore opportunities at Keele and a side of Public Health that is new to him.



Global Health Research equity and inclusion toolkit

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New IGHW website and call for publications

Our new website is now live! Please take a look [HERE](#)

We have seven key research themes for which we would like to invite you to share your publications underneath. The themes are:

- Mental Health and Wellbeing
- Infectious Diseases
- Maternal, Child and Adolescence Health

- Climate and Health
- Non-communicable Diseases
- Primary Care
- Health Policy and Systems

Please forward your publications to: IGHW@keele.ac.uk

About the Institute for Global Health and Wellbeing

The Institute for Global Health and Wellbeing is one of Keele University's flagship institutes. Our aim is to address global health disparities and improve the health and well-being of the most vulnerable populations in resource poor settings. We conduct high quality interdisciplinary and innovative research in number of global health areas including mental health, infectious diseases, primary care, maternal child and adolescent health, non-communicable diseases, and climate and health. Our current research projects are supported by funding from GCRF, AHRC, MRC and NIHR. We are currently working on a number of global health projects with interdisciplinary teams in Pakistan, Sri Lanka, Brazil, Ethiopia, Malawi and India.

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