

Editorial

Methanol Poisoning in Bangladesh: Bridging the Gap Between Policy and Practice

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Methanol poisoning is a recurrent, yet hidden, public health disaster in Bangladesh. Hidden by stigma, fragmented health systems, and a profound disconnect between national policy and bedside practice, it has claimed hundreds of lives over nearly three decades—lives that could be saved with timely, appropriate care.¹ Within the global landscape of toxic alcohol exposure, Bangladesh ranks fourth globally by total burden, with 151 documented incidents.² The tragedy is not new, yet the cycle of preventable deaths continues unabated.

In April 1998, 65 people died in Gaibandha after consuming methanol-contaminated liquor during the Bangla New Year celebration.³ One year later, 113 died in Narsingdi in one of the world's deadliest single outbreaks.⁴ Between 2008 and 2014, 17 incidents caused 79 deaths with a 75.9% case fatality rate, including the largest documented outbreak in Sylhet in August 2010, which killed 10 of 23 victims.⁵ From July 2025 to June 2026, 25 methanol poisoning incidents occurred in different districts, impacting 213 individuals.² These figures likely represent the tip of an iceberg, as no national surveillance system exists and many outbreaks go unreported due to legal and social prohibitions.¹ The persistence of these outbreaks across three decades underscores a systemic failure in prevention and response.

In response to repeated outbreaks, the Non-Communicable Disease Control (NCDC) Programme of the Directorate General of Health Services (DGHS) published a 'National Protocol on Methanol Poisoning' in 2021, providing a clear clinical pathway: early recognition, sodium bicarbonate therapy, antidotes (fomepizole first-line, ethanol second-line), and hemodialysis.⁶ However, a recent qualitative study found that only one of 50 health professionals across six districts was aware of the guidelines, and not a single facility even had a copy.⁷ Methanol poisoning was routinely conflated with ethanol intoxication. Fomepizole is unavailable nationwide, and ethanol is not stocked due to moral and religious concerns. The same delays that cost lives

in 1998 persist today. A protocol that exists only on paper offers no salvation to patients arriving at district hospitals with metabolic acidosis and impending blindness.

The National Institute for Health and Care Research (NIHR) Research and Innovation for Global Health Transformation (RIGHT) 4, Work Package (WP) 1 Methanol Point of Care (POC) clinical trial (NIHR203140), led by Professor Michael Eddleston (University of Edinburgh), is evaluating a bedside formate point-of-care assay developed by Orphan Diagnostics.⁸ The device detects formate from a single drop of blood in minutes, with preliminary sensitivity of 100% and specificity of 97%.⁹ This trial includes 6 sites in Bangladesh (Dhaka Medical College Hospital, Chattogram Medical College Hospital, Rajshahi Medical College Hospital, Sylhet MAG Osmani Medical College Hospital, Shaheed Ziaur Rahman Medical College Hospital, and Cox's Bazar Medical College Hospital) and 3 sites in India.⁸ If validated, the POC assay could enable rapid diagnosis, early antidote therapy, and prioritization of dialysis referral—transforming practice at the district level.¹ This innovation represents a potential turning point, but technology alone cannot compensate for systemic deficiencies in training, antidote availability, and clinical awareness.

After nearly three decades of recurring tragedies, the National Protocol must be operationalized. We propose five urgent actions.

- First, disseminate and train—print pocket guides and wall posters for every facility and roll out nationwide simulation-based training.^{6,7} Knowledge must reach the bedside.
- Second, stock antidotes—procure fomepizole for divisional hospitals. Where unavailable, repurpose ethanol as a legitimate medical therapy, packaged and labeled as a medicine, not a beverage.⁷ Moral concerns must not supersede clinical necessity. Sodium bicarbonate and folic or folinic acid must also be consistently available.

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- Third, support the NIHR WP1 trial—prioritize rapid validation and regulatory approval; distribute the POC device to high-risk hospitals if successful.⁸ Evidence-based innovation must be translated into practice.
- Fourth, mandate outbreak reporting—require immediate notification of suspected clusters, especially during festival seasons, and establish a national registry.¹ Surveillance is the cornerstone of prevention.
- Fifth, launch public awareness campaigns—emphasize that 10 mL of methanol can cause blindness and 30 mL – 2 tablespoons can be fatal; destigmatize hospital presentation.^{7,10} Communities must recognize the danger and seek care without fear.

Methanol poisoning is not a rare tourist tragedy—it is a “diffuse disaster” affecting the poorest communities.¹ Bangladesh has a national protocol and a promising point-of-care test under trial.^{6,8} Yet guidelines that sit on shelves save no one.⁷ The gap between policy and practice must be closed. Every clinician must know the signs. Every district hospital must have the tools. Every patient deserves the chance to walk out alive and with sight intact. After nearly three decades of recurring tragedies, the silent epidemic can be silenced—but only with implementation, not just intention.

References

1. Cousins S. Methanol poisoning: a diffuse health disaster. *The Lancet* 2025; 406: 1326-1327. doi:10.1016/S0140-6736(25)01863-X.
2. Médecins Sans Frontières. Suspected methanol poisoning incidents: global surveillance data [Internet]. 2026 [cited 2026 Jul 18]. Available from: <https://methanolpoisoning.msf.org/en/>
3. Washington Post. Death toll rises from tainted liquor [Internet]. 1998 Apr 18 [cited 2026 Jul 19]. Available from: <https://www.washingtonpost.com/archive/national/1998/04/18/death-toll-rises-from-tainted-liquor/4c28d812-9915-474e-a9b7-de75bfb01865/>
4. BBC News. Deadly whisky claims 113 lives [Internet]. 1999 May 9 [cited 2026 Jul 19]. Available from: http://news.bbc.co.uk/2/hi/south_asia/339223.stm
5. Chowdhury FR, Bari MS, Alam J. Epidemiological profile of methanol poisoning in Bangladesh (2008-2014) and clinical experience of a single outbreak. *Asia Pac J Med Toxicol* 2014;3(Suppl 1):6. doi:10.22038/apjmt.2014.2876
6. Ministry of Health and Family Welfare (MOHFW). National Protocol on Methanol Poisoning. Dhaka, Bangladesh: Directorate General of Health Services, Non-Communicable Disease Control Programme; 2021.
7. Perkins JE, Sorensen JB, Islam MS, Hovda KE, Chowdhury FR, Ghose A, Rahman ASMM, Eddleston M, Street A. Missed opportunities in methanol poisoning: a qualitative exploration of the socio-material practices of health professionals responding to acute methanol poisoning in Bangladesh. *BMJ Open* 2026;16(4):e114864. doi: 10.1136/bmjopen-2025-114864.
8. KE Hovda, S Suvodip, H Hassanian-Moghaddam, C Weir, A Street, A Bhalla, M Eddleston. Sensitivity, specificity, and acceptability of a bedside formate assay as a diagnostic tool in methanol poisoning: prospective observational and randomised studies (Methanol POC studies). Study Protocol v2.0. Edinburgh: University of Edinburgh; 2024. (NIHR grant NIHR203140). *ClinicalTrials.gov* [Internet]. [cited 2026 Jul 19]. Available from: <https://clinicaltrials.gov/ct2/show/NCT06881641>
9. Lao YE, Heyerdahl F, Jacobsen D, Hovda KE. An enzymatic assay with formate oxidase for point-of-care diagnosis of methanol poisoning. *Basic Clin Pharmacol Toxicol* 2022 Dec;131(6):547-554. doi: 10.1111/bcpt.13789.
10. Jones AW. Clinical and forensic toxicology of methanol. *Forensic Sci Rev* 2021;33(2):117-143. PMID: 34247144.