## POH 116: WATER, SANITATION AND HYGIENE IN PANDEMICS

**Module Overview**

One Health definitions and Concepts, application of One Health in promoting water Quantity, Quality and Accessibility and its use in preventing the spread of water sanitation related diseases

Role of the One Health approach in promoting safe water, sanitation and personal hygiene, community water hygiene and environment health; Role of One Health in ensuring food safety and hygiene, human health, animal health and environmental health, and prevention of poor WASH related diseases**.** Application of One Health in managing water resources and wastes

Definitions and Concepts: water; water sources; water treatment; Water quality and quantity in preparing and responding to pandemics; Water sanitation, supply, application of WASH in promoting water Quantity, Quality and Accessibility, sanitation; the importance of sanitation in preventing the spread of water-borne diseases; hygiene and promotion; hygiene and gender; hygiene and households; the impact of efficient water hygiene in promoting community and environmental health; Role of WASH in ensuring food safety, hygiene and prevention of poor WASH-related diseases. Application of WASH principles; Hygiene promotion; water supply, excreta management; vector control; solid waste management; WASH in pandemic preparedness; managing water resources and wastes, promoting good hygiene and practices, ways of managing the water chain and sanitation in an integrated manner.

**Mode of Delivery**

Interactive lectures, problem-based learning using interactive tutorials, small group discussions, written assignments, plenary presentations, and case studies; *experiential learning* through independent study and field visits, field works and placements, and online peer discussions using video clips and conferencing. For experiential learning learners will visit water treatment plants, water bodies, abattoirs, livestock farms and sanitation facilities in schools, hospitals and other public places to learn about WASH and how those sites prepare and respond to pandemics.

**Instructional Materials**

*Materials:* Lecture notes and slides, video clips, handouts, case studies, reference materials (textbooks, journals, policy document guidelines), institutional placements and field visits

*Equipment:* LCD projectors, laptops, whiteboard, markers and flipcharts, printers, internet access for e-resources, mobile phones.

**Core Reference Materials**

1. Sphere Association. (Ed.). (2018). *Sphere handbook: humanitarian charter and minimum standards in humanitarian response*. Practical Actionwww.spherestandards.org/handbook
2. Bartram, J., & Cairncross, S. (2010). Hygiene, sanitation, and water: forgotten foundations of health. *PLoS medicine*, *7*(11), e1000367.
3. Blanchet, K., Sistenich, V., Ramesh, A., Frison, S., Warren, E., Hossain, M., ... & Roberts, B. (2013). An evidence review of research on health interventions in humanitarian crises. *London: London School of Hygiene & Tropical Medicine*, 22.
4. Campbell, O. M., Benova, L., Gon, G., Afsana, K., & Cumming, O. (2015). Getting the basic rights–the role of water, sanitation and hygiene in maternal and reproductive health: a conceptual framework. *Tropical medicine & international health*, *20*(3), 252-267
5. Fewtrell, L., Kaufmann, R. B., Kay, D., Enanoria, W., Haller, L., & Colford, J. M. (2005). Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: a systematic review and meta-analysis. *The Lancet infectious diseases*, *5*(1), 42-52.

**Recommended Reference Materials**

1. Curtis, V., & Cairncross, S. (2003). Effect of washing hands with soap on diarrhoea risk in the community: a systematic review. *The Lancet infectious diseases*, *3*(5), 275-281.
2. Watson, J. A., Ensink, J. H., Ramos, M., Benelli, P., Holdsworth, E., Dreibelbis, R., & Cumming, O. (2017). Does targeting children with hygiene promotion messages work? The effect of handwashing promotion targeted at children, on diarrhoea, soil‐transmitted helminth infections and behaviour change, in low‐and middle‐income countries. *Tropical medicine & international health*, *22*(5), 526-538.
3. Branz, A., Levine, M., Lehmann, L., Bastable, A., Ali, S. I., Kadir, K., ... & Lantagne, D. (2017). Chlorination of drinking water in emergencies: a review of knowledge to develop recommendations for implementation and research needed. *Waterlines*, 4-39.
4. World Health Organization. (2016). *Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level*. World Health Organization.
5. World Health Organization, International Pharmaceutical Association, & International Solid Waste Association. (1999). *Guidelines for safe disposal of unwanted pharmaceuticals in and after emergencies* (No. WHO/EDM/PAR/99.2). World Health Organization.
6. World Health Organization. (2020). Global progress report on water, sanitation and hygiene in health care facilities: Fundamentals first.
7. Coughlin, L. L., Schurer, J. M., Umubyeyi, C., Sijenyi, S., Arif, K., Niyonkuru, V. U., ... & Amuguni, H. J. (2022). A one health evaluation of water, sanitation, and hygiene (WASH) services in Butaro Sector, Rwanda. *Journal of Water, Sanitation and Hygiene for Development*, *12*(3), 286-301.
8. USAID. (2018, October). Multisectoral Coordination That Works: Building Effective, Sustainable Mechanisms to Prevent,Detect, and Respond to Public Health Threats. Retrieved from https://assetify-dai.com/resource-library/pandr-multisectoral-coordination.pdf