



Title of PhD project / theme	<b>Study to examine factors to promote hand hygiene practice in the neonatal period in developing countries.</b>
Supervisory team	<p><b>Dr Val Curtis, Professor</b> Director of the Environmental Health Group London School of Hygiene &amp; Tropical Medicine</p> <p><b>Dr Robert Dreibelbis, Assistant Professor</b> London School of Hygiene &amp; Tropical Medicine</p> <p><b>Dr Mitsuaki Matsui, Associate Professor</b> Nagasaki University, School of Tropical Medicine and Global Health</p>
Brief description of project / theme	<p><u>1. Background</u> Sepsis, neonatal pneumonia, and neonatal diarrhea are three of the leading causes of neonatal mortality in developing countries. Improved handwashing with soap by mothers and other caregivers could be an effective means of improving neonatal survival. Due to many emotional, situational, and social changes, the perinatal period might be one of the best opportunities to change their behaviour. In this study, we aim to assess factors that promote long-lasting hand hygiene practice targeting pregnant women and mothers with newborns, to contribute to the elimination of preventable deaths and disease. The intervention will be developed using the theory and process of Behaviour Centred Design (BCD).</p> <p><u>2. Objectives</u></p> <p><i>1) Understand and document current behaviour related to neonatal care</i> While handwashing remains a key hygiene practice for neonatal care, exposures in the health facility especially during birth (e.g. cord care and handling) might be potential risks. In order to identify the critical moments for intervention during neonatal period, existing practices and infection pathways will be investigated.</p> <p><i>2) Assess potential determinants of hygiene practice amongst mothers and caregivers</i> We will use a variety of techniques to investigate the psychological (cognitive, motivated, habitual) and environmental (infrastructure, props, norms, institutional) determinants of risk behaviors.</p> <p><i>3) Develop specific interventions</i> Once target behaviours and their determinants have been identified we will develop a detailed theory of change and on this basis design and prototype candidate interventions. These may include emotional demonstrations (emo-demos), environmental nudges and institutional tweaks.</p> <p><u>3. Study settings</u> This study could be carried out in any developing country; one of the potential sites is Cambodia, where LSHTM and Nagasaki are already engaged in neonatal health research. It is expected to be conducted at several health centres which offer antenatal care, as antenatal care is considered a viable opportunity for the intervention. However, it may also include household visits or community events when necessary to make intervention or to assess their practice.</p>



	<p><b>4. Study outcome</b> The study results will inform neonatal hygiene policy and provide a platform for future trials of novel, sustainable interventions to improve neonatal health.</p> <p><b>5. References</b> Aunger R, Curtis V. Behaviour Centred Design: towards an applied science of behaviour change. <i>Health Psychol Rev.</i> 2016;10(4):425–46. Blencowe, H., Cousens, S., Mullany, L. C., Lee, A. C., Kerber, K., Wall, S., Lawn, J. E. (2011). Clean birth and postnatal care practices to reduce neonatal deaths from sepsis and tetanus: a systematic review and Delphi estimation of mortality effect. <i>BMC Public Health</i>, 11(Suppl 3), S11. <a href="http://doi.org/10.1186/1471-2458-11-S3-S11">http://doi.org/10.1186/1471-2458-11-S3-S11</a> Biran A, Schmidt WP, Varadharajan KS, Rajaraman D, Kumar R, Greenland K, et al. Effect of a behaviour-change intervention on handwashing with soap in India (SuperAmma): A cluster-randomised trial. <i>Lancet Glob Heal</i> [Internet]. 2014;2(3):145–54. Available from: <a href="http://dx.doi.org/10.1016/S2214-109X(13)70160-8">http://dx.doi.org/10.1016/S2214-109X(13)70160-8</a> Greenland K, Iradati E, Ati A, Maskoen YY, Aunger R. The context and practice of handwashing among new mothers in Serang, Indonesia: A formative research study. <i>BMC Public Health</i> [Internet]. 2013;13(1):1. Available from: <i>BMC Public Health</i> Kamm KB, Vujcic J, Nasreen S, Luby SP, Zaman K, El Arifeen S, et al. Is pregnancy a teachable moment to promote handwashing with soap among primiparous women in rural Bangladesh? Follow-up of a randomised controlled trial. <i>Trop Med Int Heal.</i> 2016;21(12):1562–71. Liu L, Oza S, Hogan D, Perin J, Rudan I, Lawn JE, Cousen S, Colin M, Black RE. Global, regional, and national causes of child mortality in 2000-13, with projections to inform post-2015 priorities: an updated systematic analysis. <i>Lancet.</i> 2015;385:430–40. Sheth AN, Russo ET, Menon M, Wannemuehler K, Weinger M, Kudzala AC, et al. Impact of the integration of water treatment and handwashing incentives with antenatal services on hygiene practices of pregnant women in Malawi. <i>Am J Trop Med Hyg.</i> 2010;83(6):1315–21. White S, Schmidt W, Sahanggamu D, Fatmaningrum D, van Liere M, Curtis V. Can gossip change nutrition behaviour? Results of a mass media and community-based intervention trial in East Java, Indonesia. <i>Trop Med Int Heal.</i> 2016;21(3):348–64.</p>
<p>Particular <i>prior</i> educational requirements for a student undertaking this project</p>	<ul style="list-style-type: none"> <li>• Master’s degree in public health, epidemiology, or social sciences</li> <li>• Practical experience of engagement in handwashing (or WASH) related activities would be an asset</li> <li>• Practical experience of delivering interventions in developing countries would be preferred</li> </ul>
<p>Skills we expect a student to develop/acquire whilst pursuing this project</p>	<p>The student will</p> <ul style="list-style-type: none"> <li>• learn how to assess and understand behaviour</li> <li>• understand how the structures of homes and health care institutions affect behaviour</li> <li>• learn how to design interventions based on theory using a systematic process</li> <li>• learn about evidence-based programming in public health</li> </ul>