



Academic papers

Relationships between domestic animals and human health

- Penakalapati G et al. [Exposure to Animal Feces and Human Health: A Systematic Review and Proposed Research Priorities](#). *Environ Sci & Technol*. 2017; 51:11537-11552.
- Zambrano LD et al. Human diarrhea infections associated with domestic animal husbandry: a systematic review and meta-analysis. *Trans R Soc Trop Med Hyg*. 2014; 108: 313–325.
- Kaur, M., Graham, J.P. & Eisenberg, J.N.S., 2017. [Livestock Ownership among Rural Households and Child Morbidity and Mortality: An Analysis of Demographic Health Survey Data from 30 Sub-Saharan African Countries](#) (2005–2015). *The American Journal of Tropical Medicine and Hygiene*, pp.16–0664. Available at: <http://www.ajtmh.org/lookup/doi/10.4269/ajtmh.16-0664>.
- Delahoy MJ, Wodnik, B, McAliley L, Penakalapati G, Swarthout J, Freeman MC, Levy K, 2018. [Pathogens transmitted in animal feces in low- and middle-income countries](#). *Int J Hyg Environ Health* 221: 661–676.
- Headey D et al. Is Exposure to Animal Feces Harmful to Child Nutrition and Health Outcomes? A Multicountry Observational Analysis. *Am. J. Trop. Med. Hyg*. 2017; 96(4): 961–969.
- Ercumen A, Prottas C, Harris A, Dioguardi A, Dowd G, Guiteras R. [Poultry Ownership Associated with Increased Risk of Child Diarrhea: Cross-Sectional Evidence from Uganda](#). Ercumen A, Prottas C, Harris A, Dioguardi A, Dowd G, Guiteras R. *Am J Trop Med Hyg*. 2020 Mar;102(3):526-533. doi: 10.4269/ajtmh.19-0012.
- Budge S, Hutchings P, Parker A, Tyrrel S, Tulu T, Gizaw M, Garbutt C. J. [Do domestic animals contribute to bacterial contamination of infant transmission pathways? Formative evidence from Ethiopia](#). *Water Health*. 2019 Oct;17(5):655-669. doi: 10.2166/wh.2019.224.
- Gelli A et al. [Poultry husbandry, water, sanitation, and hygiene practices, and child anthropometry in rural Burkina Faso](#). *Mat Child Nutr* 2018; e12818.
- Ngure F et al. [Exposure to Livestock Feces and Water Quality, Sanitation, and Hygiene \(WASH\) Conditions among Caregivers and Young Children: Formative Research in Rural Burkina Faso](#). *Am. J. Trop. Med. Hyg*. 2019; 100(4): 998–1004.
- [Risk of multi-drug resistant *Campylobacter* spp. and residual antimicrobials at poultry farms and live bird markets in Bangladesh](#). Neogi SB, Islam MM, Islam SKS, Akhter AHMT, Sikder MMH, Yamasaki S, Kabir SML. *BMC Infect Dis*. 2020 Apr 15;20(1):278. doi: 10.1186/s12879-020-05006-6.
- [Identification and characterization of *Salmonella* spp. from samples of broiler farms in selected districts of Bangladesh](#). Mridha D, Uddin MN, Alam B, Akhter AHMT, Islam SS, Islam MS, Khan MSR, Lutful Kabir SM. *Vet World*. 2020 Feb;13(2):275-283. doi: 10.14202/vetworld.2020.275-283. Epub 2020 Feb 13

Pathogens from domestic animals and child health

- Rogawski et al. 2018. Use of quantitative molecular diagnostic methods to investigate the effect of enteropathogen infections on linear growth in children in low-resource settings: longitudinal



- analysis of results from the MALE-ED cohort study. *Lancet global health*. Available online at: [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(18\)30351-6/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30351-6/fulltext)
- Soller et al. 2010. Estimated human health risks from exposure to recreational waters impacted by human and non-human sources of faecal contamination. *Water research*. Available online at: <https://www.ncbi.nlm.nih.gov/pubmed/20656314>
 - Checkley et al . 1998. Effects of Cryptosporidium parvum Infection in Peruvian Children: Growth Faltering and Subsequent Catch-up Growth *Am. J. Epidemiology*. Available online at: <https://academic.oup.com/aje/article/148/5/497/77036>
 - Schnee et al. 2018. Identification of Etiology-Specific Diarrhea Associated With Linear Growth Faltering in Bangladeshi Infants, *Am. J. Epidemiology*. Available online at: <https://academic.oup.com/aje/article/187/10/2210/4996079>
 - Korpe et al. 2018. Epidemiology and Risk Factors for Cryptosporidiosis in Children From 8 Low-income Sites: Results From the MAL-ED Study *Clin. Inf. Dis.* Available online at: <https://academic.oup.com/cid/article/67/11/1660/4986460>
 - Berendes D, Capone D, Knee J, Holcomb D, Sultana S, Pickering AJ, Brown J. 2020. [Associations between enteric pathogen carriage and height-for-age, weight-for-age and weight-for-height in children under 5 years old in urban Dhaka, Bangladesh](https://doi.org/10.1017/S0950268820000369). *Epidemiology and Infection* 148, e39, 1–10. <https://doi.org/10.1017/S0950268820000369>

Child mouthing and soil ingestion

- Kwong et al. 2019. Soil ingestion among young children in rural Bangladesh. Available online at: <https://www.nature.com/articles/s41370-019-0177-7>
- George et al. 2015. Geophagy is Associated with Environmental Enteropathy and Stunting in Children in Rural Bangladesh. Available online at: <https://www.ajtmh.org/content/journals/10.4269/ajtmh.14-0672>
- Kwong et al. 2019. Age-related changes to environmental exposure: variation in the frequency that young children place hands and objects in their mouths. Available online at: <https://www.nature.com/articles/s41370-019-0115-8>
- Morita et al. 2018. Mouthing of Soil Contaminated Objects is Associated with Environmental Enteropathy in Young Children. Available online at: <https://onlinelibrary.wiley.com/doi/full/10.1111/tmi.12869>
- Teunis et al. 2016. Quantifying Contact with the Environment: Behaviors of Young Children in Accra, Ghana. Available online at: <https://www.ajtmh.org/content/journals/10.4269/ajtmh.15-0417>
- Wang et al. 2018. Multipathway Quantitative Assessment of Exposure to Fecal Contamination for Young Children in Low-Income Urban Environments in Accra, Ghana: The SaniPath Analytical Approach. Available online at: <https://www.ajtmh.org/content/journals/10.4269/ajtmh.16-0408>

‘Transformative’ WASH and OneHealth

- Cumming O et al. 2019. [The implications of three major new trials for the effect of water, sanitation and hygiene on childhood diarrhea and stunting: a consensus statement](https://doi.org/10.1186/s12916-019-1473-3). *BMC Med* 2018; 17:73.
- Pickering AJ et al. 2019. [The WASH Benefits and SHINE trials: interpretation of WASH intervention effects on linear growth and diarrhoea](https://doi.org/10.1016/S2468-2667(19)30001-9). *Lancet Glob Health*; 7 e1139–46.



- Prendergast AJ et al. 2019. [Putting the “A” into WaSH: a call for integrated management of water, animals, sanitation, and hygiene](#). *Lancet Planetary Health*; 8(3):e336-e337.
- Hussein M et al. 2018. [Thresholds of socio-economic and environmental conditions necessary to escape from childhood malnutrition: a natural experiment in rural Gambia](#). *BMC Med*; 16(1):199.
- Thumbi SM et al. 2015. [Linking Human Health and Livestock Health: A “One-Health” Platform for Integrated Analysis of Human Health, Livestock Health, and Economic Welfare in Livestock Dependent Communities](#). *PLoS ONE*; 10(3):e0120761.

Implementer reports / guidance documents

BabyWASH

- Action Against Hunger. 2017. [BabyWASH and the first 1000 days. A practical package for stunting reduction](#).
- FDR Ethiopia Ministry of Health, UNICEF 2017. Baby and Mother WASH Implementation Guideline.
- [Practices and Perspectives on Latrine Use, Child Feces Disposal, and Clean Play Environments in Western Kenya](#). Ellis A, McClintic EE, Awino EO, Caruso BA, Arriola KRJ, Ventura SG, Kowalski AJ, Linabarger M, Wodnik BK, Webb-Girard A, Muga R, Freeman MC. *Am J Trop Med Hyg*. 2020 Mar 2. doi: 10.4269/ajtmh.19-0389. [Epub ahead of print]
- Household flooring associated with reduced infant diarrhoeal illness in Zimbabwe in households with and without WASH interventions. Koyuncu A, Kang Dufour MS, Watadzaushe C, Dirawo J, Mushavi A, Padian N, Cowan F, McCoy SI. *Trop Med Int Health*. 2020 Feb 21. doi: 10.1111/tmi.13385. [Epub ahead of print]
- [Summarizing the Child Growth and Diarrhea Findings of the Water, Sanitation, and Hygiene Benefits and Sanitation Hygiene Infant Nutrition Efficacy Trials](#). Makasi RR, Humphrey JH. *Nestle Nutr Inst Workshop Ser*. 2020;93:153-166. doi: 10.1159/000503350. Epub 2020 Jan 28.
- [Do domestic animals contribute to bacterial contamination of infant transmission pathways? Formative evidence from Ethiopia](#). Budge S, Hutchings P, Parker A, Tyrrel S, Tulu T, Gizaw M, Garbutt C. *J Water Health*. 2019 Oct;17(5):655-669. doi: 10.2166/wh.2019.224.
- [Child-Sensitive WASH Composite Score and the Nutritional Status in Cambodian Children](#). Manzoni G, Lailou A, Samnang C, Hong R, Wieringa FT, Berger J, Poirot E, Checchi F. *Nutrients*. 2019 Sep 7;11(9). pii: E2142. doi: 10.3390/nu11092142.
- [The WASH Benefits and SHINE trials: interpretation of WASH intervention effects on linear growth and diarrhoea](#). Pickering AJ, Null C, Winch PJ, Mangwadu G, Arnold BF, Prendergast AJ, Njenga SM, Rahman M, Ntozini R, Benjamin-Chung J, Stewart CP, Huda TMN, Moulton LH, Colford JM Jr, Luby SP, Humphrey JH. *Lancet Glob Health*. 2019 Aug;7(8):e1139-e1146. doi: 10.1016/S2214-109X(19)30268-2.
- [Toward Complementary Food Hygiene Practices among Child Caregivers in Rural Malawi](#). Chidziwisano K, Slekiene J, Kumwenda S, Mosler HJ, Morse T. *Am J Trop Med Hyg*. 2019 Aug;101(2):294-303. doi: 10.4269/ajtmh.18-0639.



WASH-Nutrition (including EED)

- USAID, 2018. [Toward a Hygienic Environment for Infants and Young Children: A Review of the Literature](#). Washington, DC., USAID Water, Sanitation, and Hygiene Partnerships and Sustainability (WASHPaLS) Project.
- Action Against Hunger, UNICEF 2017. A practical guidebook on increasing nutritional impact through integration of wash and nutrition programmes.
- Integrating Safe Water, Sanitation, and Hygiene into Infant and Child Nutrition Programmes: A Training and Resource Pack
<http://washplus.org/resources/tools/2015/10/12/integrating-safe-water-sanitation-and-hygiene-infant-and-child-nutrition.html>
- WASH and Nutrition Compendium of Resources
<http://washplus.org/resources/tools/2016/07/15/wash-nutrition-integration-compendium-resources.html>

WASH & Enteric Infection Trials

- WHO/UNICEF 2019 Position paper: Implications of recent WASH and nutrition studies for WASH policy and practice. Online at: www.who.int/water_sanitation_health/news-events/who-unicef-position-paper-on-wash-and-nutrition-studies-20191125.pdf?ua=1
- Berendes et al. 2017. Household sanitation is associated with lower risk of bacterial and protozoal enteric infections, but not viral infections and diarrhoea, in a cohort study in a low-income urban neighborhood in Vellore, India”. Available online at: <https://onlinelibrary.wiley.com/doi/full/10.1111/tmi.12915>
- Berendes et al. 2019 . Associations between open drain flooding and pediatric enteric infections in the MAL-ED cohort in a low-income, urban neighborhood in Vellore, India”. Available online at: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-7268-1>
- Lin et al . 2020. Effects of Water, Sanitation, Handwashing, and Nutritional Interventions on Environmental Enteric Dysfunction in Young Children: A Cluster-randomized, Controlled Trial in Rural Bangladesh, *Clinical Infectious Diseases*, Volume 70, Issue 5, Pages 738–747, <https://doi.org/10.1093/cid/ciz291>
- Campbell, R. K., Schulze, K. J., Shaikh, S., Mehra, S., Ali, H., Wu, L., Raqib, R., Baker, S., Labrique, A., West, K. P., Jr, & Christian, P. 2017. Biomarkers of Environmental Enteric Dysfunction Among Children in Rural Bangladesh. *Journal of pediatric gastroenterology and nutrition*, 65(1), 40–46. <https://doi.org/10.1097/MPG.0000000000001557>
- Jimenez, L., & Duggan, C. P. 2017. Biomarkers of Environmental Enteric Dysfunction: The Good, the Bad, and the Ugly. *Journal of pediatric gastroenterology and nutrition*, 65(1), 4–5. <https://doi.org/10.1097/MPG.0000000000001591>

Sanipath Resources

- Robb et. Al. 2017 “Assessment of Fecal Exposure Pathways in Low-Income Urban Neighborhoods in Accra, Ghana: Rationale, Design, Methods, and Key Findings of the SaniPath Study” <http://www.ajtmh.org/docserver/fulltext/14761645/97/4/tpmd160508.pdf?expires=1590528359&id=id&accname=guest&checksum=7ABEA1091399179A11A3116549CC88E3>



- Wang et al. 2017 “Multipathway Quantitative Assessment of Exposure to Fecal Contamination for Young Children in Low-Income Urban Environments in Accra, Ghana: The SaniPath Analytical Approach” <http://www.ajtmh.org/docserver/fulltext/14761645/97/4/tpmd160408.pdf?expires=1590528581&id=id&accname=guest&checksum=B2F3A1700D5BAF37304886033E1C1165>
- Raj et. al 2020 “ The SaniPath Exposure Assessment Tool: A Quantitative Approach for Assessing Exposure to Fecal Contamination through Multiple Pathways in Low Resources Urban Settlements” *(NOTE: This resource should be available soon and it could be a good resources as it details the development of the SaniPath Tool as well as piloting/validation)*