

# Yoshika S. Crider

Energy & Resources Group  
Division of Epidemiology & Biostatistics  
University of California, Berkeley

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## EDUCATION

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**PhD** Energy & Resources, University of California, Berkeley 2021  
Advisor: Prof. Isha Ray  
*Dissertation: Pathways for progress toward universal access to safe drinking water*

**MS** Epidemiology, University of California, Berkeley 2021  
Advisor: Prof. John M. Colford  
*Thesis: Finished flooring and diarrhea and enteropathogens among children in rural Bangladesh: a prospective cohort study*

**MS** Environmental Engineering & Science, Stanford University 2013

**BS** (Honors) Environmental Engineering, Stanford University 2013  
Minor in Human Biology  
Advisor: Prof. Jenna Davis  
*Thesis: Community-scale disinfection: A missing approach to safe water provision in developing-world cities*

## RELEVANT POSTIONS

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Graduate Student Researcher | UC Berkeley 8/2020-5/2021  
*Water and Development: A Gender Perspective*, Invited review for Oxford Research Encyclopedia of Environmental Science with Prof. Isha Ray

Research Project Manager (based in Dhaka, Bangladesh) 10/2013-3/2015  
Research collaboration between Stanford University and the International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b)

## PUBLICATIONS

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### Peer-reviewed

Kwong, L, R Wilson, S Kumar, Y Crider, Y Reyes, D Rempel, A Pillariseti. Review of the Breathability and Filtration Efficiency of Common Household Materials for Face Masks. *ACS Nano*. 2021

- Benjamin-Chung, J, YS Crider, A Mertens, A Ercumen, AJ Pickering, A Lin, L Steinbaum, J Swarthout, M Rahman, SM Parvez, R Haque, SM Njenga, J Kihara, C Null, SP Luby, JM Colford, BF Arnold. Household finished flooring and soil-transmitted helminth and Giardia infections among children in rural Bangladesh and Kenya: a prospective cohort study. *The Lancet Global Health*. (preprint available on medRxiv: <https://doi.org/10.1101/2020.06.23.20138578>) 2021
- Powers, JE, C McMurry, S Gannon, A Drolet, J Oremo, L Klein, Y Crider, J Davis, AJ Pickering. Design, technical performance, and demand for a novel in-line Venturi chlorine doser to increase access to safe drinking water in low-income settings. *npj Clean Water*. 2021
- Wu, SL, AN Mertens, YS Crider, A Nguyen, NN Pokpongkiat, S Djajadi, A Seth, MS Hsiang, JM Colford, A Reingold, BF Arnold, A Hubbard, & J Benjamin-Chung (2020). Substantial underestimation of SARS-CoV-2 infection in the United States. *Nature Communications*. <https://doi.org/10.1038/s41467-020-18272-4> 2020
- Fuhrmeister, ER, A Ercumen, AJ Pickering, KM Jeanis, Y Crider, M Ahmed, S Brown, M Alam, D Sen, S Islam, MH Kabir, M Islam, M Rahman, LH Kwong, BF Arnold, SP Luby, JM Colford, & KL Nelson (2020). Effect of Sanitation Improvements on Pathogens and Microbial Source Tracking Markers in the Rural Bangladeshi Household Environment. *Environ Sci Technol*. <https://doi.org/10.1021/acs.est.9b04835> 2020
- Pickering, AJ, Y Crider, S Sultana, J Swarthout, FG Goddard, SA Islam, S Sen, R Ayyagari, SP Luby, SP (2019). Effect of in-line drinking water chlorination at the point of collection on child diarrhoea in urban Bangladesh: a double-blind, cluster-randomised controlled trial. *The Lancet Global Health*, 7(9), e1247–e1256. [https://doi.org/10.1016/S2214-109X\(19\)30315-8](https://doi.org/10.1016/S2214-109X(19)30315-8) 2019
- Hyun, C, Z Burt, Y Crider, KL Nelson, CSS Prasad, SDG Rayasam, W Tarpeh, and I Ray (2019). Sanitation for Low-Income Regions: A Cross-Disciplinary Review. *Annual Review of Environment and Resources*. Vol 44: 287–318. <https://doi.org/10.1146/annurev-environ-101718-033327>. 2019
- Crider, YS, S Sultana, L Unicomb, J Davis, SP Luby, and AJ Pickering (2017). Can You Taste It? Taste Detection and Acceptability Thresholds for Chlorine Residual in Drinking Water in Dhaka, Bangladesh. *Science of The Total Environment*. <https://doi.org/10.1016/j.scitotenv.2017.09.135>. 2017
- Amin, N, Y Crider, L Unicomb, K Das, P Gope, Z Mahmud, M Islam, J Davis, S Luby, AJ Pickering (2016). Field trial of an automated batch chlorinator system at shared water points in an urban community of Dhaka, Bangladesh. *Journal of Water, Sanitation, and Hygiene for Development*. Vol 6, no. 1: 32–41. <https://doi.org/10.2166/washdev.2016.027>. 2016
- Pickering, AJ, Y Crider, N Amin, V Bauza, L Unicomb, J Davis, SP Luby (2015). Differences in field effectiveness and adoption between a novel automated chlorination system and household manual chlorination of drinking water in Dhaka, Bangladesh: a randomized controlled trial. *PLoS ONE*. Vol 10, no. 3 <https://doi.org/10.1371/journal.pone.0118397>. 2015

## Non-peer reviewed and in progress

- Shless, JS, YS Crider, HO Pitchik, AS Qazi, A Styczynski, R LeMesurier, D Haik, et al. 2021. "Physical Integrity of Medical Exam Gloves with Repeated Applications of Disinfecting Agents: Evidence for Extended Use." medRxiv. <https://doi.org/10.1101/2021.05.31.21258129>. 2021
- Crider, YS, and I Ray (2021). Water and Development: A Gender Perspective. Submitted
- Crider, Y, S Sainju, R Shrestha, G Clair-Caliot, A Schertenleib, M Bhatta, SJ Marks, I Ray. (2019) System-level, Automatic Chlorination in Community-managed Water Systems. EAWAG SANDEC News, 26-27. 2019

## GRANTS & AWARDS

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### Individual

- National Science Foundation Graduate Research Fellowship (\$138K) 2016-2021
- UC Berkeley Center for Chinese Studies Pamela and Kenneth Fong Graduate Student Fellow 2019-2020
- USAID Global Development Fellowship (for summer research in Kathmandu, Nepal) (\$7.5K) 2017
- UC Berkeley Hellman Graduate Fellowship (\$35K) 2015-2020
- UC Berkeley Center for Bangladesh Studies Fellowship (\$7.5K) 2015
- Stanford Undergraduate Summer Research Award for summer research in Dhaka, Bangladesh 2011, 2012
- Stanford Haas Center for Public Service Community-Based Research Fellowship for summer research on sustainable agriculture in rural Kansas 2010

### Team

- Stanford Center for Innovation in Global Health Seed Grant: Special COVID-19 call, Research Team External Collaborator 2020
- REED Elsevier Environmental Challenge, 3<sup>rd</sup> place, to Lotus Water clean water project (lotuswater.org) (\$15K) 2014
- ASCE Sustainable Development Award, EPA P3 National Sustainable Design Expo, to Lotus Water clean water project (\$1K) 2013
- EPA P3 Phase 1 Grant & Phase 2 Honorable Mention, to Lotus Water clean water project (\$15K) 2012-2013

## PRESENTATIONS

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### Conference & seminar presentations

<i>In-line chlorination for safe drinking water in community-managed systems in rural Nepal.</i> UNC Water and Health Conference	10/2019
<i>In-line chlorination for safe drinking water in community-managed systems in rural Nepal.</i> Water & Health in Rural China & Appalachia Conference, Virginia Tech	10/2019
<i>Safe drinking water for community-managed systems in rural Nepal.</i> Himalayan Studies Workshop, UC Berkeley	3/2019
<i>Taste detection and acceptance concentration thresholds for sodium hypochlorite and sodium dichloroisocyanurate (NaDCC) in drinking water in Dhaka, Bangladesh.</i> UNC Water and Health Conference	10/2015
<i>Community-scale water disinfection for slums of Dhaka.</i> 2013 Water, Health, and Development Symposium. Stanford University	5/2013
<i>Low-cost automated chlorine dosers in urban Dhaka, Bangladesh (with Dr. Amy Pickering).</i> Berkeley Development Engineering Seminar Series	5/2013

## TEACHING & MENTORSHIP

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### Teaching assistantships

(PH 112) Global Health, A Multidisciplinary Examination Undergraduate requirement for Global Health Minor; Online in 2020 UC Berkeley School of Public Health	Summers 2018-2020
(ENERES W174) Water and Sanitation Justice Requirement for summer Sustainability Minor/Certificate; Online UC Berkeley College of Natural Resources	Summer 2019
(PH C117) Introduction to Global Health Research Seminar for Minority Health and International Research Training Program UC Berkeley School of Public Health	Spring 2018
(PH 252C) Intervention Trials Graduate elective UC Berkeley School of Public Health	Fall 2017
(PH 235) Impact Evaluation for Health Professionals Graduate elective UC Berkeley School of Public Health	Fall 2016
Class/Project Co-leader, Engineers for a Sustainable World Stanford University	Winter/Spring 2012

## Invited guest lectures and workshops

<i>Preparing for International Health Research.</i> PH C117: Minority Health and International Research Training Program	26 Feb 2020
<i>Data collection and analysis.</i> PH C117: Minority Health and International Research Training Program	20 March 2019
Gender and Violence in South Asia Institute for South Asian Studies annual pre-departure orientation session co-leader for undergraduates preparing for summer internships in South Asia	March 2017, 2018, 2019

## Advising & Training

<i>Co-supervisor for MSc Environment and Natural Resources thesis</i> Sanjeena Sainju, Kathmandu University	2018-2019
<i>Field team training and management - icddr,b (Dhaka, Bangladesh)</i> As research project manager, trained and managed a team of enumerators, field staff, and a local engineer at the International Centre for Diarrhoeal Diseases Research	2013-2015

## SERVICE

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**Ad Hoc Reviewer:** World Development, npj Clean Water, Waterlines, Journal of Water Supply: Research and Technology – AQUA

### Department/University

Graduate student representative UC Berkeley climate equity and environmental justice cluster hire faculty search committee	10-12/2020
Conference Organizing Committee Beyond the Crisis Narrative: Rohingya Statelessness and Its Implications for Bangladesh, UC Berkeley Institute for South Asian Studies	2/2020

## OTHER

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N95decon.org, low- and middle-income group core member Team of volunteer scientists and researchers developing PPE guidance for low- and middle-income countries during the COVID-19 pandemic	4/2020-present
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### International fieldwork experience:

Bangladesh (>2.5 years), Nepal (>8 months)