

MICHIGAN STATE UNIVERSITY

An Overview of Michigan State University's Canadian Studies Center One HEALTH Challenge

HEALTH - Human, Environment, Animal Links to Health



Background: The One **HEALTH** Challenge is a model exchange program for creating a global network of early-career problem solvers. The challenge presents a framework for developing possible solutions for health issues that, in a society of worldwide trade and travel, can quickly escalate to a global scale. The framework relies on the underlying principle of the One Health Concept: communication and collaboration across human, animal and environmental networks are critical for the prevention of disease and health management.



Method: First implemented in 2017, the One **HEALTH** Challenge is a cross border partnership between at least two universities with multi-national enrollment. Students across a wide disciplinary spectrum build a volunteer cohort interested in addressing health-related problems at every level of society – local, regional, and global. Graduate students with faculty mentors facilitate the work of cross-border undergraduate interdisciplinary teams while they address a case study focused on a global health issue, such as anti-microbial resistance (2017) and water scarcity (2018). Each team is a mix of students from various majors and each university. Specific research tasks are assigned, such as a literature review, and culminate in a presentation competition. The presentation introduces the problem and explains how it fits into a One Health framework.



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Students spend 20 hours across two months on the Challenge including two four-hour webinars, and weekly team meetings. A webinar at the onset of the Challenge teaches the leading principle of One Health while team building. The second four-hour webinar allows for each team to present their case. During this webinar, a panel of professionals from various sectors aligning with human, animal and environmental health select a winning team. A \$1,000 award toward a selected KIVA project is granted. (KIVA.org provides microloans to projects intended to help alleviate poverty.)



One HEALTH Challenge Development - Timeline Narrative: The Canadian Studies Center recognizes the One Health priority across Canada's research universities as a potential unifier among students and faculty. Since 2014, the center has hosted a One Health theme as an entry point for research and teaching collaboration. Along with the Challenge, we have cohosted a "One Health Networking Event" with campus and community partners every other year. Guest lecturers from Canadian universities and the private and nonprofit sectors have included these and other organizations: U.S. Center for Disease Control and Prevention (CDC), National Oceanic and Atmospheric Administration (NOAA), University of Saskatchewan, Carleton University, Zoetis, and The Delphi Group.

The cross border “One **HEALTH** Challenge” was developed as a strategy for engaging students and faculty in examining how their area of study pertains to a One Health focus. The program design was inspired by case competitions held in MSU’s Broad College of Business.

Two student cohorts (2017, 2018) have completed the challenge. Participating students and faculty have set up One Health student clubs and social media sites. They have traveled to each other’s campus to meet team members while participating in extended One Health focused discussions. One example is the 2018 One World Health Congress where MSU sponsored students from China, Ghana, and the U.S. to present their projects. Team members have presented the OH Challenge as a model cross-border educational exchange at professional conferences, and have enjoyed related internships and overseas study opportunities (ex. Tanzania Food Project, Nepal Education Abroad). Connections have been made between faculty that have furthered teaching and research objectives. The Challenge has provided an opportunity for early career professionals, as well as faculty to collaborate with colleagues from around the world and discover how One Health is integral to their vocation.



Most Recently: The Spring 2018 One HEALTH Challenge cohort hosted 20 MSU and University of Saskatchewan (USASK) students representing 10 countries and 15 disciplines, including business, medicine, engineering, human biology, political science, and psychology. MSU students took initiative to plan for an *International One Health Week* in Fall 2018. The week’s activities aimed at engaging the broader community in learning about One Health principles. Visiting lecturers, a 5K Run, and a campus social alongside a research poster session were on the agenda. A full account of the week was reported to the International One Health Commission. In the following Spring 2019, seven Canadian universities visited MSU to meet with faculty and students from 25 different campus units to build collaboration that continues today through research and education projects.



Moving Forward: MSU’s Canadian Studies Center, the MSU Institute for Global Health (IGH), and the MSU College of Veterinary Medicine are taking the lead in seeking support for continuing the One **HEALTH** Challenge and to further extend its network. Building on existing study opportunities and collaboration with Challenge cofounder - the University of Saskatchewan - a multidisciplinary graduate program is being spearheaded by IGH. A larger grant funding proposal is in the works. IGH is preparing to host universities from both Mexico and Peru at MSU, where One Health will be central to the discussion. With further resources, these partnerships will advance a One Health education and research initiative across the Americas.