



# Northeastern University

## Global Health

### Health Systems Resiliency

*Richard Wamai, Associate Professor, Department of Cultures, Societies, and Global Studies*

How do pandemic diseases expose health systems vulnerabilities around the world and what can be done to build their resiliency to improve population health? We review six common “building blocks” of health systems to understand their performance across countries and existing gaps in face of health disparities and pandemics. We learn that pandemics, like COVID-19, reveal the weaknesses and disparities across national health systems, and that their geographical spread and impact demand a global health approach through cooperative actions. For the projects, students pick a country from among 20 country-case studies by the WHO’s Alliance for Health Policy and Systems Research and develop a package of proposals for reforms to be presented to policy makers.

### Bacterial Antibiotic Resistance

*Veronica Godoy-Carter, Associate Professor, Department of Biology*

Bacterial infections have been treated with antibiotics, compounds that specifically kill bacteria, for many years. These compounds are key to maintain individuals healthy after injury, surgery, or whenever individuals are immunocompromised due to viral infections, and chronic diseases. However, the misuse and overuse of antibiotics have resulted in selection of bacterial antibiotic resistance. Furthermore, pharmaceutical companies have closed their platforms for discovery and production of new antibiotics. Bacterial infections caused by antibiotic resistant bacteria result in unwanted deaths and cost the US health system billions of dollars every year. This problem is critical to solve as our way of life depends on maintaining bacterial infections at bay. For the project, students will draft a proposal to the World Health Organization indicating who should be involved in funding and production of safe and effective novel antibiotics to overcome bacterial drug resistance, and to ensure the health of the population is equitably protected from infections over time.

### Music and Health

*Rebekah Moore, Assistant Professor, Department of Music and Psyche Loui, Assistant Professor, Department of Music*

This project course will explore the effects of music on health and wellbeing in diverse communities and using interdisciplinary approaches. We begin with an overview of the tools and methods for qualitative and quantitative research. For the project, students will combine ethnography and experimental methods to conduct a receptive music-based intervention. This mixed-methods approach will enable students to better understand the study population (both shared perspectives and individual preferences and behaviors) and to articulate the effects of music on health and wellbeing.