

Rwanda is training health workers for an interconnected world

By [Phaedra Henley](#)

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Growing scientific evidence shows that environmental transformations such as climate change and pollution are linked to people's health. The number of extreme events is [increasing](#), often driven by [human activities](#), and they often pose an immediate threat as well as having long-term health impacts. This is a future for which health professionals must be prepared. The outbreak of the novel coronavirus disease, [COVID-19](#), is just the most recent example of the links between the environment, animals and the activities and health of people. The virus is suspected to have originated from a bat and been transmitted through an animal market in Wuhan, China. The 2002-2003 [Severe Acute Respiratory Syndrome](#) pandemic was another global outbreak that was attributed to human interaction with wildlife.



The links between people, animals and the environment call for a new approach to health. Shutterstock

The interdependency between humans, animals and the environment is becoming more pronounced. It's time to approach health problems in a broad, interdisciplinary way. The attitudes and practices of the health workforce will have to change.

There is already a conceptual framework in place for this. It just needs to be adopted more widely and urgently, supported by policy and education.

The [One Health](#) approach recognises the links between humans and their biophysical, social and economic environments. It sees these links reflected in the population's state of health. One Health differs from other approaches to health as it considers the integrative effort of multiple disciplines working locally, nationally and globally to achieve optimal health for animals, the environment and humans.

Many international institutions, such as the World Health Organisation and the Centres for Disease Control and Prevention, have adopted One Health in principle. And it's being integrated into academic programming, including medical and veterinary schools, to some extent.

The One Health approach emphasises the development of students who analyse, interpret and create plans for both the present and future worlds. It takes disciplinary strengths and their best practices and compels them to work together.

It challenges existing barriers and provides a platform to consider innovative solutions. One Health embraces complexity and looks at the whole picture to identify changes that will have a health impact. It also looks for points where intervention creates change.

One Health in Rwanda

Rwanda is one country, among others in East Africa such as Kenya and Uganda, that is embedding One Health into its way of doing [things](#). The country adopted the One Health approach in 2011. This was prompted by emerging and re-emerging infectious diseases and their potential impact on socio-economic growth.

One Health in Rwanda provides a formal, institutionalised, multi-sectoral and coordinated approach to detecting and responding to outbreaks and other health threats. Rwanda has the second highest population [density](#) in sub-Saharan Africa and borders countries where disease outbreaks such as [Ebola](#) and [Marburg](#) have occurred. This puts it at risk of health challenges at the human-animal-environment interface. It also has a strong network of community health workers, rapid response teams, and academic partnerships who champion the One Health approach.

Education of professionals is part of the plan. At the [University of Global Health Equity](#), located in rural Rwanda, medical and Global Health graduate students are introduced to One Health through field-based learning. Site visits include a local pig farm, wetlands surrounding the campus, homesteads in the community and a model village where displaced people have been resettled. These visits allow students to see the links between animals, the environment and the health of humans.

For example, at the pig farm, students observe the direct interactions between the farmers, the pigs and the environmental setting the farm is located in. They learn about protective measures used to prevent zoonotic disease transmission from the pigs to humans and vice versa. They are able to ask the farm's veterinarian questions about how they interact with health professionals around emerging diseases.

At the end of the programme, students will have acquired a diverse skill set and the management and communication training needed to respond to complex health challenges. For example, a medical doctor who participated in the site visits would ask patients more questions to determine patient history, such as whether they interact with animals. This more holistic approach to health may provide the clue to determine the cause of the patient's condition.

[Results](#) of these efforts in Kenya suggest that training the next generation of professionals to use the lens of One Health will help solve complex health challenges like global disease outbreaks.

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