An aerial photograph of a university campus. The buildings are multi-story with prominent orange-tiled roofs and white or light-colored facades. Some buildings have solar panels on their roofs. The campus is situated on a coastline with clear, turquoise water. Several small boats are visible in the water, and a small pier extends into the sea. The background shows a residential area with smaller houses and greenery under a clear blue sky.

Institutional readiness for Interprofessional Education (IPE) that familiarizes MD & DVM students with the principles of One Health(OH)



Professor Rohini R. Roopnarine

Presentation for Future Africa Webinar Series, Dec 2, 2020.

THE SETTING OF THE RESEARCH: ST. GEORGE'S UNIVERSITY, GRENADA, WEST INDIES

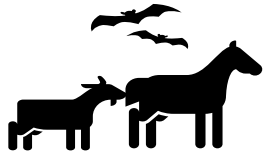


- Caribbean Based Offshore Institution
- Students Return To USA To Practice
 - Medical Program (NCFMEA: US Agency that accredits Offshore Medical Schools)
 - Veterinary Program- US American Veterinary Medical Association (AVMA) Accreditation & as of September 2019, Accreditation By The UK Royal College Of Veterinary Surgeons (RCVS)
 - Public Health Programs-US Council On Education For Public Health (CEPH) Accredited

Positioning the Research & the Researcher



Caribbean Medical University
Programs



Veterinary Medicine (DVM)



Master of Public Health (MPH)

OR

Medicine (MD)



AND

AND



The Researcher and Faculty in the DVM &
DVM MPH programs

Inter-Professional Education (IPE)

Global Relevance of the Research

- Emergence of zoonoses (diseases of animal & environmental origin impacting human health) such as Ebola, SARS, SARS CoV-2.
- Need for collaboration by health professionals across the animal-human-environmental divide



As frontline responders in a pandemic, vets & MDs must be equipped to operationalize OH practices?

- Curricula delivery occurs within disciplinary siloes.
- Identify gaps & strengthen capacity: Requires future physicians & vets to be knowledgeable about the social, cultural, environmental, public health, economic, political factors that influence disease emergence.
- IPE to foster collaboration, promoting cultural change to execute a OH approach to optimize human, animal & environmental health outcomes.

Research Problem

*Make no mistake, they are connected, these disease outbreaks coming one after another.
... They reflect the convergence of two forms of crisis on our planet. The first crisis is
ecological, the second is medical.”*

— David Quammen

Are our Medical & Vet. students ready for IPE?

Do they understand the concept of OH & its relevance to their future practice?



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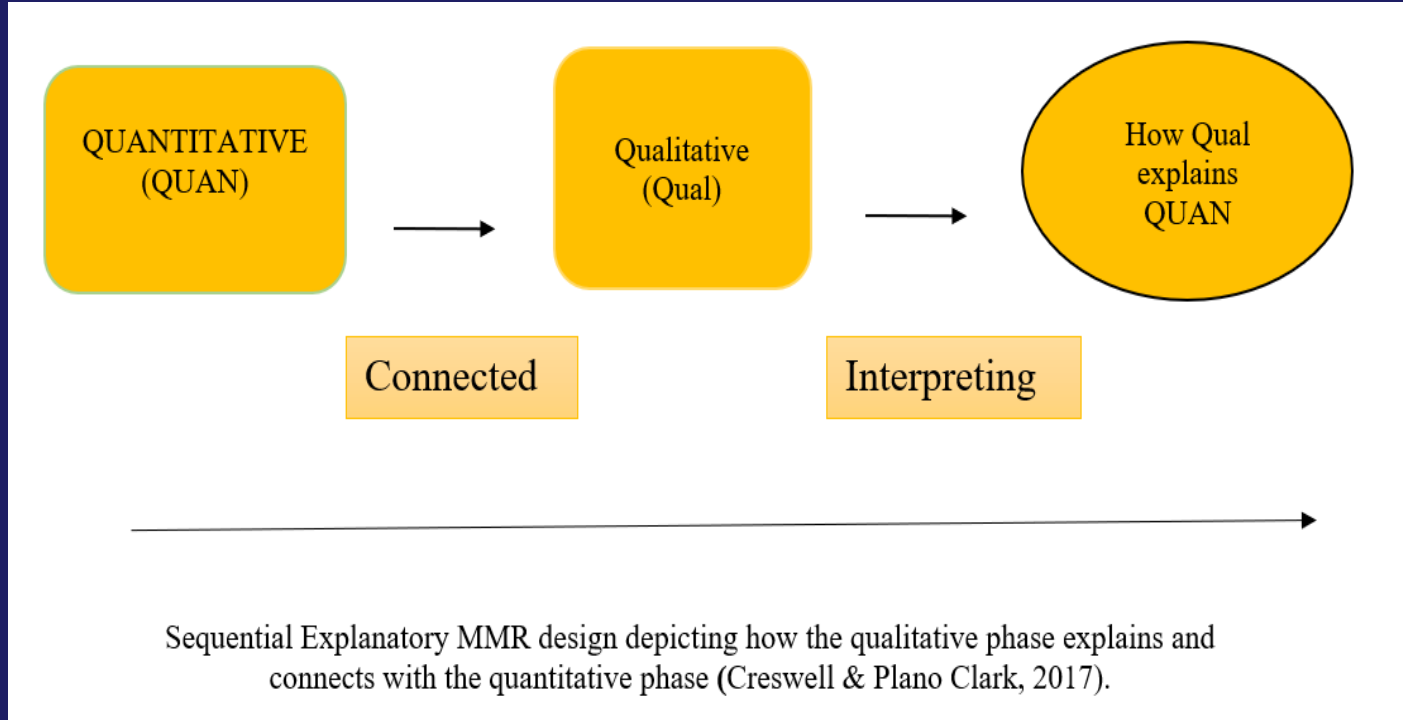
Study Aims

- To explore the readiness of MD & DVM students for IPE that incorporates the principles of OH.
- To explore the effects of prior IPE & OH exposure on the readiness of Master of Public Health (MPH) students for IPE incorporating OH.
- To explore the perspectives of the faculty & administrators on the opportunities/challenges for developing IPE /OH for the core MD & DVM programmes.
- Use the information gleaned in this study to inform the future development of IPE that promotes the concept of OH at this institution.

What Research Approach do you perceive may have been the most appropriate to be used to achieve the study aims?

1. A Survey-based study
2. Interviews with students and faculty
3. A Mixed-Methods Approach combining (1) and (2)

Methodology: Sequential Explanatory Mixed Methods Research Design



Results

1. The analysis of the survey data indicated comparative differences in readiness for interprofessional education across the programs. The lens of **Role theory and Social Identity theory** was used to explain these differences.
2. A number of themes emerged from evaluating the student responses to OH that showed a clear omission of various components of definitions of the concept across the programs.
3. This research also contributes to broader discussions pertaining to the development of IPE and OH by including students within the dual degree MPH program that demonstrate how gaps in the curriculum of the MD and DVM programs pertaining to IPE and OH can be bridged.
4. 5 themes emerged from the faculty focus groups including the impact of the Program of enrolment & accreditation requirements for the programs, as dictating the perceived relevance of OH to practice and student readiness for IPE across the programs

Interprofessional Collaboration & Zoonoses prevention

- **DVM** : Veterinarians are an important resource for pet owners, farmers,...to receive information regarding zoonoses..vet may also be a useful resource for medical practitioners in quickly identifying infectious diseases with which the practitioner may be less familiar.
- **MD MPH** One health is an approach to implementing policies and legislation in which multiple sectors work together to achieve a better health outcome. These may include preventing spread of infectious diseases and combating antibiotic resistance

Human-Animal-Environmental Health

- **MD MPH** “ ... Furthermore, human activities have caused significant damage to the environment and natural ecosystems, which in turn could have devastating consequences to human, animal, and plant healthpublic health challenges we face include pollution of the atmosphere, deforestation, urban expansion and poor land management,, loss of biodiversity and, and climate change/global warming.

Human Health

- **MD** : the integration of medical aspects, and various professions that focus on the wellbeing and health of the public
- **MD MPH**:As a global health professional One Health implies that there is a higher coordination between countries to establish a set of standards for minimum health care and policies for addressing existing and emerging diseases.

Recommendations

The zoonotic and environmental origins of deadly disease threats such as C-19 adds significant weight to the argument for inclusion of OH in MD programmes.

A. Curriculum change to address specific nature of existing gaps:

- Curriculum mapping to identify where OH is already occurring
- MD Curricula: antimicrobial resistance, foodborne diseases, climate change impacts on patient health, role of the human-animal bond
- DVM: impact of environmental health and climate change on patient health & zoonoses occurrence.
- **the role that social, behavioral, economic, cultural factors play in disease occurrence, critical to address tropical zoonoses now occurring because of global travel.**
- **Epidemiological principles of population health focus (not individual)+policy formation to respond to threats**

Recommendations cont'd.....

B. Opportunities for incorporating OH in the curricula & Overcoming challenges:

1. Introduce OH lectures and short courses on OH , case-based IPE initiatives involving OH topics and joint research opportunities., MSc in OH....
2. Leadership: IPE & OH Communities of Practice for facilitating collaboration across the programs through research and short seminars and courses on OH (Lave & Wenger, 1991). Use IPE champions!

C. Vision To Realize the institutional claim to support OH.

Publications arising from the study

1. Roopnarine R. Factors That Influence the Development of Interprofessional Education and One Health for Medical, Veterinary and Dual Degree Public Health Students at an Offshore Medical School. Doctor of Education thesis, University of Liverpool. 2020. Available from <http://livrepository.liverpool.ac.uk/id/eprint/3073226> <https://doi.org/10.17638/03073226>
2. Roopnarine, R., & Boeren, E. (2020). Applying the Readiness for Interprofessional Learning Scale (RIPLS) to medical, veterinary and dual degree Master of Public Health (MPH) students at a private medical institution. *Plos One*, 15(6), e0234462.
3. Roopnarine, R. & Regan, J.A. (In Press November 2020). Faculty Perceptions on the Perceived Need for incorporating “One Health” into the Curricula of Medicine and Veterinary Medicine. *Journal of Continuing Education in the Health Professions*.
4. Roopnarine, R.R., Boeren, E.B., Regan, JAR. (2020, October 30-November 3). The missing professional perspective: Medical, Veterinary and dual degree Public Health student perceptions of One Health.[Poster Presentation]. *The 6th World One Health Congress, Edinburgh, Scotland*.

Thank you!

