Epi Series

Morgan Hyatt

Follow this and additional works at: https://dsc.duq.edu/duquark

Recommended Citation

This Staff Piece is brought to you for free and open access by Duquesne Scholarship Collection. It has been accepted for inclusion in D.U.Quark by an authorized editor of Duquesne Scholarship Collection.
For researchers to connect with the public about epidemiological studies, there must be a mutual understanding between the scientists and members of the public. Epidemiology is the study of the distribution and determinants of health-related states among specified populations. Health-related states pertain to anything that would affect the well-being of a population including determinants such as genetic marker of disease risk. Epidemiological studies can be applied to control health problems. This field is multifaceted and must resonate within the community in order for it to improve health equity. There are three questions that must be answered about epidemiology.

1. How can we communicate information more efficiently through epidemiological efforts?
2. If we are to improve technology for the betterment of developing countries through public health, what does that look like?
3. Are social determinants of health the proper way to address health disparities?

Question 1: How can we communicate information more efficiently through epidemiological efforts?

Epidemiology is a field that lies underneath the vast umbrella of public health. Efforts to improve communication rely heavily on the way information is delivered. A sense of interconnectedness for better outcomes in public health start with how researchers in epidemiology methodize complex information for the average reader to understand and comprehend. Systematic reviews, which rank lower in evidence-based observational studies, were once used as target research questions to assess epidemiological impacts. It was through a scoping review, an overview of available research evidence without producing a summarized answer to a discrete research question, that provided the five principles which were introduced to deliver visual explanations for translational epidemiology.
1. Scientific engagement that links impact and methods for which information is relayed.

2. Using public health as a tool for communication to prioritize relationships within a network of researchers.

3. Education and engagement tools to solidify any gaps in knowledge.

4. Conducting epidemiological studies through inquiry in order to consider necessary interventions for monitoring and evaluation.

5. Maintaining community involvement to meet any omitted health needs.

This design could easily be applied to the national pandemic, COVID-19, which started earlier this year. Epidemiologists around the world are working to find ways to release public health information that fall in line with this methodology. The five-principle method is an applicable way of keeping everyone informed and implementing better ways to stay safe. This design continues to be used to explain translational epidemiology.


Question 2: If we are to improve technology for the betterment of developing countries through public health, what does that look like?

Effective and sustainable solutions to health-related challenges in developing countries can be attributed to the design, development and implementation of technology. By focusing on these
methods, gaps in research can be minimized for developing countries. Evaluating the framework for this technology requires a focus on mapping, investigating data sources and synthesizing.

MomConnect was established in South Africa as a Health Platform and was designed to match the framework laid out by epidemiologists. It includes three evaluations based on the five essential concepts in the framework. The overarching aspects of the technological framework included platform care, ecosystem and environmental influence, governance for strategy design, management and operation from a health standpoint, along with innovation and feedback. Each stage in the three-part evaluation included these measures. The first evaluation was a case study. The second evaluation was conducted at the local and international level to review any mistakes. Finally, the third evaluation was used as a managerial tool. MomConnect is an essential tool used to deliver health-information to pregnant and postpartum women in South Africa. A feedback loop was used along with a service to keep in touch with the community of women. This model specifically highlighted the need for more technology developed in this fashion.


Question 3: Are social determinants of health the proper way to address health disparities?

Minority groups, including Black, Hispanic and Asian ethnic groups experience severe health disparities which contribute to health inequality. In order to obtain health equity, there must be a way to decrease outlying factors of health disparities present in many communities. It is even more important to establish a proper way to address health disparities regardless of the scale. The use of social determinants of health through health policy interventions was a suggested route of
measure to assess this public health need. Making policy decisions on an evidentiary basis relies heavily on social determinants when assessing health disparities. These disparities include environmental factors within the household, sexual orientation, socio-economic status, and location. On a global scale, these disparities can be assessed through quality adjusted life-years or disability adjusted life-years. Quality adjusted life-years includes the generic measure of disease burden within the quality and quantity of life. Disability adjusted life years includes the burden of associated disability with a disease or disorder to be measured. These tests use parameters to measure the influence of each factor on social determinants. For example, neighborhood quality indices measure environmental factors that affect households. From a public health perspective, this social determinant would qualify as an evidence-based social indicator for a wide variety of disparities within a community. For all intents and purposes, the use of social determinants of health is a proper way to assess health equity.
