

Public Health and Its Relationship to Interdisciplinary Studies

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Defining Public Health and Its Population-Level Focus

Public health can be defined as the science and practice of protecting and improving the health of populations through education, research, prevention, and policy development. Unlike traditional medical practices, whose primary focus is to diagnose and treat individual patients, public health on the other hand addresses health outcomes at the community and societal level. Its main goal is to prevent disease, prolong life, and promote health by providing information about societies, organizations, communities, and individuals. Public health is comprised of a wide range of categories, including disease surveillance, health promotion campaigns, environmental regulation, emergency preparedness, and policy advocacy. Due to its complexity, public health is inherently interdisciplinary, drawing from knowledge and methods from multiple academic fields.

The Three Core Functions of Public Health Practice

To sum it up, public health consists of three essential functions: assessment, policy development, and assurance. Assessment includes observing health statuses and identifying health problems in the community through data collection and epidemiological analysis. Policy development includes creating evidence-based policies to manage identified health risks. Assurance ensures that essential health services are accessible and that public health interventions are effectively implemented (Centers for Disease Control and Prevention [CDC], 2022). These are functions that require a professional with diverse expertise, illustrating why interdisciplinary studies are fundamental to public health practices.

Prevention as the Foundation of Public Health

One of the main features of public health is its focus on prevention rather than treatment. These prevention measures can be categorized into primary, secondary, and tertiary levels. The primary goal of prevention is to stop the disease before it occurs. A good example of that would be immunization programs or health education campaigns. Secondary prevention involves early detection and intervention, such as cancer screenings or education on lifestyle changes to prevent diabetes. Tertiary prevention involves managing existing conditions to reduce any further complications and improve quality of life. Each prevention strategy benefits from other interrelated disciplines. For example, vaccination campaigns are dependent on medical research, logistical planning, behavioral psychology, and communication strategies to reach a wide range of diverse populations.

Identifying a Systems Gap: The Chickenpox Case

When I served in the Air Force as a Medical Services technician, my role aside from being a supervisor was centered around patient care and clinic operations. I routinely scrubbed my provider's schedule, sometimes a week in advance to order labs, coordinate diagnostic testing, call patients, and identify complex cases that might require additional time or earlier appointments. Attention to detail and anticipation were critical to ensuring both efficiency and quality of care. One day, while reviewing the schedule, I noticed a patient was coming in for chickenpox. I immediately became concerned. Chickenpox is highly contagious, and I questioned how I would safely check the patient in without exposing other patients, staff, or providers. Following my training, I located the Pediatrics Operating Instructions Manual to

review the protocol. To my surprise, there were no procedures outlined for handling a chickenpox cases.

Leadership Beyond Rank: Responding to Institutional Gaps

Recognizing the potential risk, I brought the issue to the physician I worked for, a Colonel. I explained that there were no instructions addressing chickenpox intake procedures and asked how I should proceed. Her response was direct: “Create one.” My initial reaction was that this task is far beyond my pay grade. Technically, developing and maintaining operating instructions was an officer’s responsibility, not that of a Staff Sergeant. However, I understood that patient safety was of the utmost priority, and if the gap existed, it needed to be addressed.

Applying Evidence-Based Practice and Interdepartmental Coordination

With no additional guidance, I turned to the Centers for Disease Control and Prevention (CDC) website to research proper infection control procedures. Using evidence-based guidelines, I developed a protocol outlining isolation precautions, check-in procedures, and communication steps. I then coordinated with the Emergency Room and the Public Health clinic within our hospital to ensure alignment with broader infection control standards. Finally, I briefed my clinic staff on the new procedure, especially since previous chickenpox patients had been seen without any precautions which unknowingly put others at risk.

Developing an Interdisciplinary Mindset Through Practice

Looking back, that experience strengthened my confidence and leadership abilities. I identified a systems gap, sought credible research, collaborated across departments, and implemented a solution that improved patient and staff safety. I was proud not only because I

completed the task, but because I stepped into responsibility when it mattered most. Before I even realized it, I was already operating with the mindset of an interdisciplinary scholar. Taking initiative to think critically, conduct evidence-based research, communicate across departments, and solving complex problems in ways that directly align with public health practices.

The Essential Role of Interdisciplinary Collaboration in Public Health

In conclusion, public health is a prevention focused field committed to improving population health through assessment, policy development, and assurance. Its success is dependent on integrating knowledge and skills from numerous disciplines, to include but not limited to medicine, environmental science, communication, and public policy just to name a few. The complex nature of modern health challenges makes interdisciplinary collaboration not only beneficial but essential. By combining various perspectives and expertise across all spectrums, public health professionals can develop more effective, and sustainable solutions to protect and promote the health of not just the people in their communities but across the world.

References

Centers for Disease Control and Prevention. (2014). *Introduction to public health* [PDF].

Public Health 101 Series. U.S. Department of Health and Human Services.

[Introduction To Public Health](#)