Contact Tracing: A Clarion Call for National Training Standards

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As of late May 2020, more than 1.5 million people had tested positive for coronavirus infection in the United States; however, only 3% of Americans had been tested. However, testing is only one of the key elements in the effort to control communicable diseases. There is a need to investigate others who may have been exposed to the virus; this can be accomplished through a foundational public health strategy – contact tracing. Most public health students and professionals have been introduced to the concept of contact tracing; however, competency in this area is undetermined. The purpose of this perspective is to call for national standards for contact tracing training programs that lead to a widely recognized certification process. *Ethn Dis*. 2020;30(3):437-440; doi:10.18865/ed.30.3.437

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Introduction

In April 2020, coronavirus disease 2019 (COVID-19) became the second leading cause of death in the United States. More than 100,000 deaths are attributed to this novel coronavirus, a total that is greater than the populations of at least 95% of all incorporated places in the United States.[1] More than 1.5 million people have tested positive for coronavirus infection in the United States; however, only 3% of Americans have been tested.[2] The large number of confirmed cases coupled with relatively low testing levels makes it difficult to determine the actual spread and public health impact of this virus. As new testing technologies become available, the likelihood of identifying infected persons will also increase. However, testing is only one of the key elements in the effort to control communicable diseases.

There is a need to investigate others who may have been exposed to the virus and this can be accomplished through a foundational public health strategy – contact tracing. Most public health students and professionals have been introduced to the concept of contact tracing; however, competency in this area is undetermined. The purpose of this perspective is to call for national standards for contact tracing training programs that lead to a widely recognized certification process.

Contact Tracing

Contact tracing has been a valuable tool in the public health arsenal for dozens of years; it has been used for managing sexually transmitted diseases, tuberculosis, and other communicable diseases. The

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general concept of contact tracing is straightforward; however, the challenges and complexity of this investigative work cannot be overstated. Identifying individuals who may have come in contact with an infected person and collecting information about their whereabouts for the past 14 days are essential skills needed in outbreak management.[3]

Public health professionals equipped with a range of well-developed skills, including contact tracing, are needed to complement a robust testing strategy to manage the current pandemic. Unfortunately, years of underfunding the public health system has resulted in a dearth of a workforce available for contact tracing. More than 50,000 public health positions were eliminated during the 2008 recession, further depleting the workforce and severely limiting the capacity of most state and local health departments.[4] Recent estimates from esteemed institutions like Johns Hopkins University and organizations such as the National Association of County and City Health Officials (NACCHO) indicate that 100,000-300,000 new contact tracers are required to meet the current number of positive COVID-19 cases.[5,6]

Contact Tracing Training

Never has the preparation of a new public health workforce been more urgent. The rapid spread of the coronavirus, coupled with the lack of a reliable treatment or vaccine, have compelled state and local governments to hire new contact tracers. The training available for contact tracing can vary considerably. Individual states, cities and counties have created individual, and largely uncoordinated contact tracing programs with a few noted exceptions. The California Public Health Department collaborated with the University of California at San Francisco (UCSF) to develop a training program for individuals hired by the state's 58 county and three city health departments.[7] More than 10,000 individuals across the state of California have been trained to date.

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Three institutions in Houston, Texas, the new College of Medicine at the University of Houston, Houston Health Department and Harris County Public Health Department, established a partnership to bolster the contact tracing workforce by creating and launching a free, online contact tracing course for undergraduate and graduate students, faculty and staff. The response was immediate as more than 1500 enrolled in the course during the first two days of registration. With support from the Bloomberg Foundation, Johns Hopkins University (JHU) developed a Coursera course initially to supply contact tracers needed in New York, New Jersey, and Connecticut. More than 70,000 individuals registered for this course during the first few weeks of availability.

Call for National Standards for Contact Tracing Training

The demand for training in contact tracing is encouraging and presents an opportunity for health professionals and policymakers to reassert the importance of competent public health practice. Knowledge of the steps associated with contact tracing is not sufficient for competency. Effective contact tracing draws from skills in several areas including health communication, cultural sensitivity, and active listening. Currently, no guidelines or widely accepted, evidence-based best practices exist to guide the critical knowledge domains, training modalities, and assessments that should be included for training contact tracers. Establishing national standards for contact tracing training can prevent an over-reliance on technology and automation, instead emphasizing the importance of interpersonal relationships in obtaining accurate, comprehensive data and guiding in-

dividuals to appropriate resources.

Current electronic tools using smartphone operating systems can permit public health organizations to use Bluetooth signals to track the location of individuals exposed to COVID-19-infected persons. This technology has been successfully used in other countries; however, its utility is questionable in the United States. A recent Oxford study indicates that 60% of the population would have to utilize tracking apps to significantly impact the pandemic.[8] This level of participation is unlikely to occur in the United States due to privacy concerns, government mistrust, medical mistrust, and our nation's considerable socioeconomic and cultural diversity. These and other potential technology-related barriers indicate the continued need for a large cohort of skilled individuals to conduct contact tracing.

The importance of maintaining and strengthening a highly trained governmental public health workforce has been noted in several national reports and calls to action. The Division of Scientific Education and Professional Development of the Centers for Disease Control and Prevention (CDC) developed an action plan to require the utilization of quality learning standards for training that meets the needs of all members of the public health workforce. Similarly, the National Consortium for Public Health Workforce Development urged the prioritization of working with academic institutions and other partners to develop effective and engaging training programs to support the development of strategic skills that complement specific skills and knowledge currently present in the governmental public health workforce.[9] Lastly, as an increasing number of state and local health departments seek national accreditation through the Public Health Accreditation Board (PHAB), the critical need for quality workforce development that is responsive to evolving health issues has been prioritized through PHAB standards 8.1 and 8.2.[9] These standards require the provision of training and professional development to develop a sufficient number of qualified public health workers to ensure a competent workforce through the assessment of skills and the provision of a supportive work environment.[10]

Conclusion

Businesses, schools, and public gathering places are re-opening, and it may be numerous months before reliable vaccines or therapeutic agents are widely available. Contact tracing will be a major focus of state and local health departments until pharmaceutical tools are effectively deployed to mitigate the spread of COVID-19. Expanding the workforce of contact tracers across the nation dictates the immediate need for uniform learning standards and approaches to training that will ensure a skilled workforce who can function as "disease detectives" in the effort to mitigate current and future pandemics.

Conflict of Interest

No conflicts of interest to report.

Author Contributions

Research concept and design: Beech; Acquisition of data: Beech, Woodard; Data analysis and interpretation: Beech, Woodard; Manuscript draft: Beech, Woodard; Administrative: Beech, Woodard; Supervision: Beech

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