

Project Title: Development of the Center for Emerging and Infectious Diseases to Promote Training, Research, and Community Health

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Topic Category: Research

Background:

The coronavirus disease 2019 (COVID-19) pandemic is a prime example of our lack of public health preparedness threats, but it was not the first and will not be the last threat that we will be exposed to over the next several decades. Pandemic preparedness will be key for clinicians, scientists, and investigators. The Center for Emerging and Infectious Diseases (CEID) has built on experiences with COVID-19 and will act as a resource in preparing to address current and future infectious diseases, including future pandemic diseases. This is the first such center in an urban setting for the state of Michigan. CEID efforts focus on training, research, service and community engagement to address serious public health issues. It also will serve as a source of generating revenue through other laboratory services for area clinics, hospitals, and skilled nursing facilities.

Purpose/Objectives:

The Center's mission is to promote health by reducing the burden of diseases of public health importance through addressing health disparities. Our mission is to create equity and inclusion in health systems and provide of opportunities for professional training, research and service for high priority emerging infectious disease threats and public service to vulnerable populations. CEID will be a source of credible and targeted information for the general public and for continuing education. Covid-19 has demonstrated that public understanding of emerging infectious diseases and mitigation strategies is essential to population disease control and prevention. Misinformation has increased mortality and morbidity and extended the duration of the pandemic. Some communities have less direct access to information than others and this has exacerbated health disparities. Public education campaigns need to be targeted to specific audiences, delivered through trusted and familiar channels, consistent and sustained.

Methods:

CEID received \$4.3 million in December 2021, in federal funding (MI-SAPPHIRE) to expand sequencing for COVID-19 and other infectious diseases. Additionally, CEID used the funding to build a Clinical Laboratory Improvement Amendments (CLIA) certified state-of-the-art laboratory with a highly trained staff capable of creating in house testing during infectious Diseases outbreaks. The CEID laboratory located in the SOM Lande building is equipped to handle organisms of public health importance. This lab will allow Wayne State to generate thousands of in house tests a day to meet with the needs of any disease of epidemic or pandemic potential. The benefits to the public we serve include the development and growth of future public health, clinical and other healthcare workers how best to manage, prevent and control acute and chronic diseases due to infectious pathogens.

Outcomes:

CEID has been successfully established at Wayne State University. Under the umbrella of CEID, we have conducted extensive community education, research and teaching. The CEID lab renovations have been completed and will begin its first testing in May 2023

Discussion:

The pandemic has not only revealed a broken public health infrastructure but also reminded us of the constant looming threat of future pandemics. Through the CEID, WSU is developing a model for pandemic preparedness excellence in an urban setting and internationally.