

Better tests needed to improve patient care, public health

7 November 2013

Despite advances in diagnostic technology, there is an urgent need for tests that are easy to use, identify the bug causing an infection and provide results faster than current tests, according to a report from the Infectious Diseases Society of America (IDSA) published today in a special supplement to *Clinical Infectious Diseases*.

The report, "Better Tests, Better Care: Improved Diagnostics for Infectious Diseases," outlines specific recommendations to spur research and development of new diagnostics, and to encourage their use in patient care and public health. Better tests would help protect our dwindling supply of effective antibiotics by reducing their misuse, ensure that patients are receiving the best treatment for a variety of [infectious diseases](#) and improve the tracking of outbreaks.

"With the current state of diagnostic testing, we are handicapped, making decisions based on limited or nonspecific information – in situations ranging from helping individual patients to identifying broader public health threats," said Angela M. Caliendo, MD, PhD, an infectious diseases physician, lead author of the paper and executive vice chairman of the Department of Medicine at the Warren Alpert Medical School of Brown University, Providence, R.I. "It is critical that we not only invest in the development of new diagnostic tests, but that we also work to ensure these new tests are fully integrated into [patient care](#)."

Specifically, IDSA is calling for:

- fiscal incentives and streamlined regulatory pathways to make it financially and logistically viable for companies to perform diagnostics research and development in areas of greatest unmet need,
- improved clinical research infrastructure to accelerate diagnostics development – for example providing critically needed specimens that researchers and companies

can use to make sure their tests provide accurate results,

- funding for outcomes research to demonstrate the clinical value of diagnostic tests, increasing the likelihood they will be used by doctors and hospitals, and
- appropriate reimbursement, additional supporting infrastructure (such as information technology) and education for those who would utilize the diagnostics.

The Need for New Tests

Currently, some of the most important [diagnostic tests](#) available can take days or even weeks to return a result, a timeframe that could be shortened to an hour in some cases, experts say.

"Delayed diagnosis puts us at an immediate disadvantage against infections," said Dr. Caliendo. "Not only is this detrimental for patients and their doctors, it also contributes to unnecessary healthcare costs through unneeded treatments, hospitalizations and isolation of patients."

For example, half of patients who see their doctors for acute upper respiratory infections receive antibiotics – even though most of those infections are viral and do not benefit from such treatment. Currently, there is no test that can easily, accurately and inexpensively help physicians determine the cause of such an infection. Better, faster tests could guide doctors to the correct treatment more quickly and significantly reduce the number of patients receiving antibiotics erroneously, which contributes to antibiotic resistance. Such tests also would ensure patients are getting the best treatment for viral diseases – including HIV, hepatitis C and the human papillomavirus (HPV) – and quickly identify the cause of widespread problems such as community acquired pneumonia, which can be viral or bacterial.

Improved diagnostics would also help doctors and [public health](#) experts to quickly identify emerging infections, such as MERS coronavirus or new strains of influenza; assess the spread of already-prevalent diseases like malaria, measles and dengue; detect and track foodborne illnesses; and respond more effectively to outbreaks, pandemics and potential acts of bioterrorism.

Infectious diseases physicians, the experts in this field of care, can serve as a bridge between the laboratory and the health care provider to ensure the proper use and interpretation of diagnostic testing.

Provided by Infectious Diseases Society of America

APA citation: Better tests needed to improve patient care, public health (2013, November 7) retrieved 11 April 2021 from <https://medicalxpress.com/news/2013-11-patient-health.html>

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