© FIND / Ben Phillips

FIND
Because diagnosis matters

# Antimicrobial resistance and diagnostics

## FAST FACTS

**The inappropriate use of antibiotics and other medicines is fueling the emergence of antimicrobial resistance (AMR) globally.** AMR is reducing the effectiveness of the few therapeutic options we have left to treat severe bacterial illnesses and, if left unaddressed, will undermine our ability to achieve the United Nations Sustainable Development Goals (SDGs).

**Currently, 700,000 deaths every year are due to drug-resistant strains of HIV, malaria and TB.** Sepsis, a major cause of neonatal deaths worldwide, is often caused by resistant bacteria. It is estimated that by 2050, 10 million deaths per year will be caused by AMR, with a loss of over 100 trillion USD in economic output.[1]

**Diagnostics are a key tool in addressing the spread of AMR.** Accurate diagnosis allows us to protect the efficacy of critical drugs and save the lives of patients who are under threat from resistant pathogens. A simple test flagging the presence or absence of bacterial infections can dramatically cut antibiotic overuse. Rapid tests can reduce the time to pathogen identification and facilitate faster, optimized antimicrobial treatment. Diagnostics also allow for active surveillance of drug resistance, data that can be used to effectively target health interventions and save costs.

1. O'Neill J. "Tackling Drug-Resistant Infections Globally: Final Report and Recommendations". May 2016; https://amr-review.org/sites/default/files/160518_Final%20paper_with%20cover.pdf

> This is a global problem requiring multiple solutions – and accessible, accurate, and affordable diagnostics play a vital role in protecting our antibiotics and for surveillance in humans, animals, and the environment. I am pleased that organisations such as FIND are not only focusing on developing new diagnostics but also implementing existing ones in all parts of the world. Global leaders have recognised the importance of addressing antimicrobial resistance – but now it is time to act.
>
> – Professor Dame Sally Davies, UK Chief Medical Officer, IACG on AMR co-convener

## FIND AMR STRATEGY

### Optimize use of antimicrobials

The overuse of antibiotics is often linked to their use in non-bacterial infections, for example in patients presenting with acute fever, lower respiratory tract infections, urinary tract infections, sexually transmitted infections or diarrhoea. Diagnosis enables the selection of the most appropriate therapy and reduces the inappropriate use of antibiotics.

### Preserve new drugs

Stewardship of current and new antibiotics is critical to ensure they retain their efficacy for as long as possible. Early introduction of a gating diagnostic will ensure that these drugs are used in the most appropriate cases, shielding them from rapid overuse and early emergence of resistance.

### Empower surveillance efforts

Screening and isolation of infected patients helps prevent the spread of resistant pathogens in community and hospital settings. Connected surveillance tools track and map the emergence of resistance, form the basis of national surveillance programs, and enable control measures and improved treatment strategies.

For more information please contact media@finddx.org
www.finddx.org