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Antibiotic-resistance 'nightmare' looming

US report classifies three bugs as 'urgent' threats

WASHINGTON – The United States faces "potentially catastrophic consequences" if it does not act quickly to combat the growing threat of antibiotic resistance, which kills an estimated 23,000 Americans each year, the Centres for Disease Control and Prevention (CDC) has warned.

In a new 114-page report released on Monday, the agency classified three bacteria, including drug-resistant gonorrhoea, as "urgent" threats with the potential to become widespread. Another 11 bacteria and a fungus were referred to as "serious" perils in the CDC report. There were also some classified as "concerning".

"If we're not careful, the medicine chest will be empty when we go there to look for a life-saving antibiotic," CDC director Thomas Frieden said. "Without urgent action now, more patients will be thrust back to a time before we had effective drugs."

Bacterial resistance was identified shortly after antibiotics were first used in the 1940s, said Dr Steve Solomon, acting director for the epidemiology and analysis programme office at the Atlanta-based centre.

In the past, there were always more antibiotics in development. Now, the antibiotic pipeline has largely dried up, leaving doctors without new weapons against the illnesses – a "nightmare", Dr Solomon said.

The three most serious threats are *Clostridium difficile*, which causes life-threatening diarrhoea, carbapenem-resistant *Enterobacteriaceae*, which includes E.coli and affects mostly people in health-care settings, and gonorrhoea, a sexually transmitted infection, according to the report.

These three bacteria have the biggest clinical and economic impact, and the greatest current and projected incidence, according to the report.

They are also among the easiest to transmit and have few treatment options.

C. difficile alone causes 250,000 infections and 14,000 deaths at a cost of US$1 billion (S$1.26 billion) each year, according to the report.

The CDC said as much as half of all antibiotics that are prescribed are either unnecessary or used inappropriately.

Many farmers routinely use antibiotics for healthy livestock, in order to promote growth and prevent illness.

But the CDC report said that the use of antibiotics in animals for promoting growth is not necessary and the practice should be "phased out".

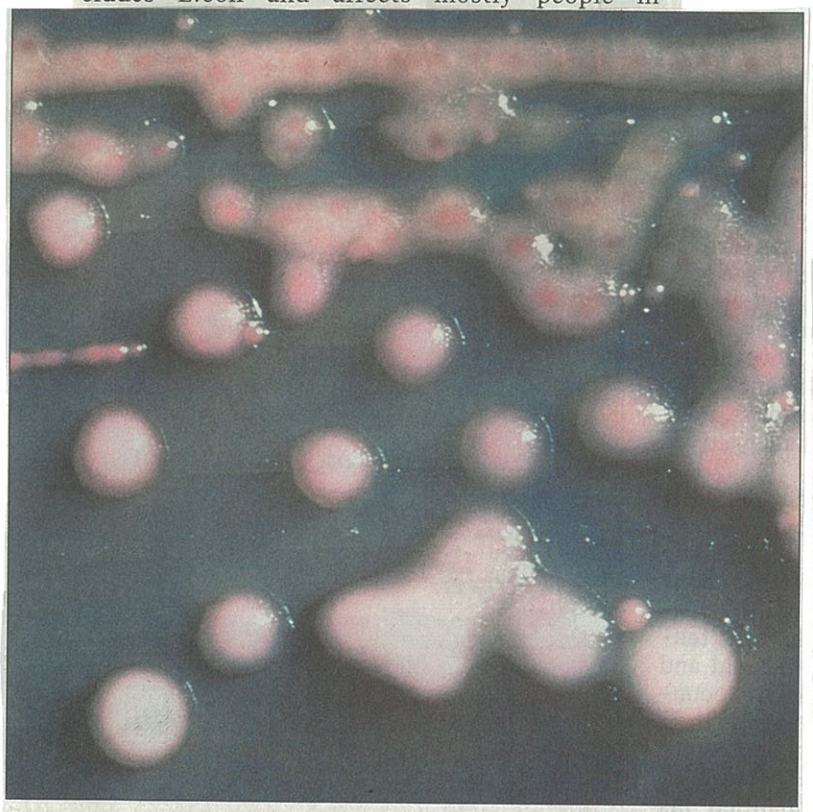
Researchers noted that the "use of antibiotics is the single most important factor leading to antibiotic resistance around the world".

The CDC estimated that more than two million people in the United States are sickened each year by antibiotic-resistant infections.

While Monday's report detailed growing threats in the United States, the CDC reiterated that the problem is not defined by borders.

"New forms of antibiotic resistance can cross international boundaries and spread between continents with ease," Monday's report stated. "Many forms of resistance spread with remarkable speed."

WASHINGTON POST, BLOOMBERG



One of the biggest threats is carbapenem-resistant Enterobacteriaceae (above), which affects mostly people in health-care settings. PHOTO: ASSOCIATED PRESS

Dangerous bugs

THE types of bacteria highlighted in the report:

URGENT THREATS

- Clostridium difficile
- Drug-resistant Neisseria gonorrhoeae
- Carbapenem-resistant Enterobacteriaceae (CRE)

SERIOUS THREATS

- Drug-resistant Streptococcus pneumoniae
- Drug-resistant Campylobacter
- Drug-resistant Non-typhoidal Salmonella
- Methicillin-resistant Staphylococcus aureus
- Drug-resistant Shigella
- Extended spectrum beta-lactamase producing Enterobacteriaceae
- Vancomycin-resistant Enterococcus
- Multidrug-resistant Acinetobacter
- Multidrug-resistant Pseudomonas aeruginosa
- Drug-resistant Salmonella Typhi
- Fluconazole-resistant Candida (a fungus)
- Drug-resistant tuberculosis

CONCERNING THREATS

- Vancomycin-resistant Staphylococcus aureus
- Erythromycin-resistant Streptococcus Group A
- Clindamycin-resistant Streptococcus Group B