Multi-drug resistant tuberculosis (TB) is considered a **global priority** for investment in new drugs.⁴

TB is one of the **top 10 causes** of death globally.⁵

In 2017, a study found **600,000 cases** worldwide were **resistant** to the most effective first-line drug, **Rifampicin**.⁵

**TUBERCULOSIS**

Infectious, airborne disease.⁸

Results in necrosis in lungs.⁸

Only active TB can spread to other areas.⁸

Primarily caused by a bacteria called **Mycobacterium tuberculosis**.⁸

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CAUSES OF RESISTANCE

Overuse of drugs on illnesses that cannot be treated with antibiotics.¹

Extensive agricultural use for supplementation of livestock.²

Lack of economic incentives has led to fewer studies and advances in drug development.³

ANTIMICROBIAL RESISTANCE

• Bacterial cells acquire advantageous mutations that increase survival through natural selection.⁶

• These mutations can arise from random genetic changes and can be shared with neighbouring bacteria through horizontal gene transfer or passed down during budding.⁶

• When antibiotics are introduced, bacterial cells without this advantage die, while remaining resistant cells proliferate.⁶

ANTIBIOTIC STEWARDSHIP

List antibiotics in use in hospitals.⁷

Develop standard treatment methods.⁷

Monitor antibiotic prescriptions and track use.⁷

Educate the public on antibiotic resistance and proper drug use.⁷

References