

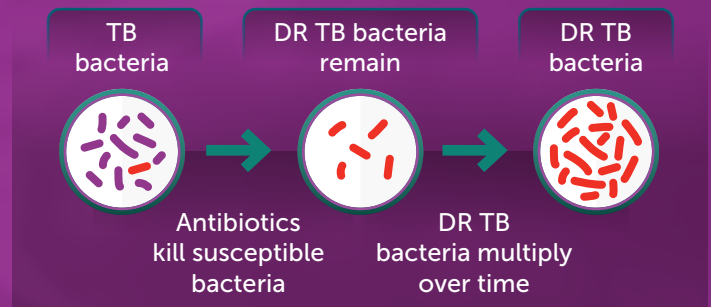
CDC's Molecular Detection of Drug Resistance Service: Rapid Test Results for Real-Time Patient Care

Glossary

- DR:** Drug resistance/resistant
- MDDR:** Molecular detection of drug resistance
- MDR:** Multidrug resistance/resistant
- TB:** Tuberculosis

How Drug Resistance Develops

Changes in DNA can cause TB bacteria to become resistant to treatments. Even one change in the right location in a DNA sequence can lead to DR.



CDC's MDDR service tests TB samples from across the country to rapidly detect MDR TB and other types of resistance by looking for genetic changes.

Why is CDC's MDDR Service Important?

The *Mycobacterium tuberculosis* organism grows slowly, which means it can take weeks to months to get test results when growing a sample in the lab. The MDDR service can provide molecular test results in days. These results are used to decide the best treatment regimens for patients.

Rapid detection of DR TB saves lives and money.



Earlier initiation of effective therapy:



Improves patient outcomes.

Can reduce periods of infectiousness of MDR TB cases.

CDC Assists TB Programs

with their most complicated drug resistant cases that can be difficult to treat or with difficult-to-test samples, such as those that are contaminated or do not grow.

MDDR is the only national service available **free of charge** to all U.S. TB programs. It is housed at CDC.

Since 2009, **6,500+** samples have been tested through this service including testing for almost all MDR TB cases reported each year.



Case Study

