

### 3. Rapid state-of-the-art diagnosis and treatment of drug-resistant tuberculosis in the Pacific

In October 2015, a 41-year-old man named Christopher visited a health clinic in Tarawa, Kiribati, complaining of a persistent cough and weight loss. He did not know it, but Christopher had multidrug-resistant tuberculosis (MDR-TB) – a type of TB resistant to the two most powerful drugs, rifampicin and isoniazid.

Great distances and limited resources often make it difficult to treat TB in remote islands in the Pacific. MDR-TB poses an even greater challenge: diagnosis and care are complex and costly. Drug resistance cannot be detected through traditional methods using microscopes, and doctors lack experience providing the complex treatment required. In addition, the high cost and short shelf life of drugs can make it impractical to keep supplies on hand.

Christopher was saved, thanks to several key initiatives in the Pacific designed to support patients like him. His diagnosis of drug-resistant TB was made in a matter of hours by a state-of-the-art rapid test.

To support his treating physician, WHO organized a teleconference with the regional treatment group – connected remotely via computer – of experienced TB clinicians, laboratory experts and public health consultants from Adelaide in Australia, Honolulu in the United States of America and WHO. The group provided the local health team with detailed clinical advice on treatment, management of

side effects and prevention of the spread of the disease.

WHO sent drugs from the Pacific TB drug stockpile at the Philippine Department of Health, so Christopher was able to start treatment just 17 days later. Additional drug susceptibility testing was carried out by a laboratory in Adelaide under the Pacific TB Laboratory Initiative (PATLAB). The results of these tests were used to adjust Christopher's drug regimen to make it more effective.

Since 2011, the regional MDR-TB group, PATLAB and the Pacific TB drug stockpile have been meeting the needs of individual patients and TB programmes in Pacific island countries and areas. WHO manages these initiatives with financial support from donors, including the Global Fund to Fight AIDS, Tuberculosis and Malaria. MDR-TB diagnosis and care in the Pacific presents major challenges for patients and health workers alike. These practical initiatives help overcome the challenges in providing the quality TB care each patient deserves. ■



Christopher, a patient with multidrug-resistant TB, receives health care in Kiribati as WHO staff consult.