Summary brief

High success with shorter treatment for multidrug-resistant tuberculosis patients in Nepal

Key Messages

- Patients with multidrug-resistant tuberculosis (MDR-TB) in Nepal treated with a shorter treatment regimen (STR) of 9-11 months have a higher treatment success (~80%) compared to a long regimen of 18-24 months (~70%).

- Despite excellent treatment results, only about one half of MDR-TB patients benefited from STR.
  - Some patients (38%) had additional resistance to fluoroquinolones and second-line injectables, making them ineligible to receive STR. Such patients will need shorter treatment regimens involving newer drugs, such as bedaquiline and delamanid.
  - Some patients (14%) did not have access to STR during the initial phase of scale-up.

- Among patients treated with STR, 15% had serious adverse events such as jaundice, liver damage, hearing problem, but were managed well.

What is the problem and why is it important?

- The treatment of MDR-TB is often long (18-24 months) and costly, and the drugs have several side effects.
- STR was initiated in Nepal in 2018 to shorten the duration of treatment (9-11 months) among eligible MDR-TB patients to increase the chances of cure, stop the transmission of MDR-TB in the community and save costs.
- The study aimed to evaluate the uptake, safety and effectiveness of STR under programmatic conditions in Nepal.

How did we measure it?

- We conducted a cohort study of MDR-TB patients enrolled in 2018-19 and received STR in nine MDR-TB treatment centres which


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register around 80% of MDR-TB patients in the country, under the supervision of the National Tuberculosis Programme.

- Data were extracted from patient records, double-entered and validated using EpiData software.
- Associations of demographic, clinical factors with treatment outcomes and severe adverse events (SAEs) were analysed using EpiData and Stata software.
- There is a data quality assurance system that verifies data entered from programmatic tools of the national health information system through frequent field supervisions.

What did we find?

- Of 631 patients, only 48% received STR, because the rest either had additional resistance to core drugs (fluoroquinolones and second-line injectables), making them ineligible (38%), or did not have access to STR during the initial phase of scale-up.
- Of those who continued on STR, ~80% were successfully treated.
- HIV co-infected persons and people older than 55 years had twice the risk of unfavourable outcomes.
- About 15% reported serious adverse events, including liver damage and deafness. Most of these were managed well.
- There were challenges in post-treatment follow-up and only half of all patients were followed-up at 12 months after treatment. Among those who were followed-up post-treatment, the risk of TB recurrence was low (0.5% at 6 months and 2.4% at 12 months).
- Overall, the patient records were maintained well, but some data were missing (such as height, adverse events).

Implications

- STR is one of the important regimens to treat MDR-TB in Nepal.
- Patients with additional resistance needed a longer regimen (18 months) to cure. The National Tuberculosis Programme (NTP) and partners need to implement a shorter regimen using newer drugs to treat such patients.
- Focal points of DR-TB centres need to improve systems for monitoring of adverse events during supervisory visits and data validation.
- Post-treatment follow-up surveillance needs to be strengthened for early detection of recurrence by the DR-TB centres under the supervision of the National Tuberculosis Programme.
- Clinicians should systematically record clinical data such as weight and height, to calculate BMI for clinical follow-up. Also, the NTP needs to ensure availability of stadiometers at DR-TB centres for measuring height.