

## The time delay between when patients present with symptoms of tuberculosis at TC Newman Hospital, Paarl and the start of their treatment

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**To the Editor:** Tuberculosis (TB) is a major health problem in South Africa. The early detection and treatment of TB cases are essential. The impression of senior staff working at the TC Newman Community Health Centre (TCN), Paarl was that there often is an unnecessary time delay between the presentation of TB symptoms and the diagnosis. A study conducted in The Gambia found that the median time delay was 8.6 weeks (range 5–17).<sup>1</sup> The aim of this study was to determine whether there is a time delay between when patients present with symptoms of TB and the start of their treatment at TCN.

Many adult patients with suspected TB are seen at the general outpatient department (GOPD) at TCN. The diagnosis of TB by means of a positive sputum smear takes a minimum of three days. Pleural aspirate diagnosis takes a week. TB culture can take 36 days for a positive result.

All new cases of TB must be entered in the Notification of Medical Conditions (GW 17/5) books kept at the GOPD. To determine the time delay in 2005, all TB cases formally notified from 1 January 2005 to 31 December 2005 were extracted and the files were perused.

A total of 38 TB notifications were identified. The folders of six patients could not be traced. The following information was recorded: date of first presentation with possible TB symptoms, special investigations performed, date of TB notification, date of referral to a TB clinic, as well as any cited reasons for a possible time delay between first presentation and notification.

Of the 32 files gathered, only 31 were used due to insufficient information pertaining to the date of the first visit in one of the patients' files. The population studied consisted of 23 adult males and eight adult females. Two of the patients were diagnosed on their TB culture results. Paediatric patients are managed separately at the hospital.

The time period from first visit to treatment varied from one day to 452 days, with a median of 15 days and a calculated average of 41.1 days. If the one patient with the time delay of 452 days is omitted, the recalculated mean is 27.4 days.

The causes of this significant time delay of on average nearly four weeks were classified as being due to the doc-

tor (24%), due to the patient (21%) or due to laboratory system (55%).

### Contributing factors by the doctors

- The requested appointment date to review the results is often more than the required one week later.
- Doctors may fail to check the results on follow-up, or not realise the purpose of the visit.
- Doctors often misdiagnose the patient as having a bacterial lower respiratory tract infection.

### Contributing factors by the patients

- Patients often do not hand in sputum samples or miss follow-up appointments. This may be due to a lack of insight into the possible complications of their disease, transport problems, family commitments or finances.
- Some patients avoid diagnosis and treatment in order to become chronically ill and qualify for a disability grant.
- Others present with atypical or minor symptoms and delay coming back when they do not get better on symptomatic treatment.

### Contributing factors by the laboratory system

- Problems associated with the quality control of the specimens, such as leakage, unlabelled containers and contaminated contents.
- Courier and administrative problems often cause a considerable delay in getting the results to the various clinics and hospitals from the laboratory.
- One administrative problem identified is that the patients are given a follow-up appointment by the clerk that is later than that requested by the treating doctor. This is usually due to clinics being fully booked.

We do not think this is a problem unique to one facility. We would like to suggest a few possible solutions in order to decrease this time delay.

- Patients should be asked to come back within three to five working days for their results.
- A register of patients awaiting TB investigations should be kept. Patients who do not return for follow-up can then be traced.
- Alternatively, the folders of all suspected TB patients can be kept apart while awaiting follow-up.

- Contact details on the folders should be verified in order to be able to trace the patient.

- All laboratory results should be checked daily. Patients with positive results should be notified by telephone, if possible.
- A computer system should link the laboratory with the various outpatient departments and TB clinics for easier access to results.
- Doctors generally did not do a chest X-ray (CXR) routinely as part of their TB work-up, despite the fact that previous studies have shown that a CXR can reduce the time delay.<sup>2</sup>
- Interviews with the TB clinic staff made it clear that the standard diagnostic protocol is not a prerequisite for TB treatment. A CXR highly suggestive of pulmonary tuberculosis (PTB) is sufficient for the commencement of treatment.

In conclusion, the communication between the various role players needs to be improved by those responsible for supportive supervision of the service. Given the importance of early diagnosis and treatment, we believe this study does serve to emphasise an important area where relatively little effort could mean significant improvement in TB control.

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