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Lack of patient registration in the electronic TB register for sputum smear-positive patients in KwaZulu-Natal, South Africa

Claire C. Bristow^{a,*}, Athmanundh Dilraj^b, Bruce Margot^c, and Laura Jean Podewils^d

^aGlobal AIDS Program, Centers for Disease Control and Prevention, South Africa

^bTB Research Unit, Clinical and Biomedical, South African Medical Research Council, South Africa

^cTuberculosis Control and Management, Republic of South Africa Provincial Department of Health, KwaZulu-Natal, South Africa

^dDivision of TB Elimination, Centers for Disease Control and Prevention, USA

SUMMARY

Analysis of diagnostic smear positive records from the laboratory from KwaZulu-Natal in South Africa shows that not all patients are counted in surveillance efforts. However, review of paper-based patient records suggests the majority of identified TB patients are being treated. Directly linking laboratory and clinical records would enhance surveillance information.

Keywords

Tuberculosis; Surveillance; Case finding; Sputum smear

In order to control tuberculosis (TB), it is important to rapidly diagnose and effectively treat TB patients. In South Africa, TB diagnosis is confirmed by detection of acid-fast bacilli (AFB) by sputum smear microscopy.¹ However, information from the primary public health laboratory, the National Health Laboratory Service (NHLS), is not directly linked to the public health clinics or to the national electronic TB surveillance system, the electronic TB register (ETR).

We have conducted two previous evaluations that have demonstrated that not all TB patients identified at health clinics are registered in the ETR,² and that sputum results recorded in the ETR for diagnosis, monitoring, and determining treatment outcomes of TB patients often cannot be verified in the laboratory database.³ As a complement to our other work, we carried out an evaluation to examine whether all persons who were bacteriologically

*Corresponding author. Tel.: +1 415 250 2681. ccbristow@gmail.com (C.C. Bristow).

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Conflict of interest: None.

confirmed as TB cases by a positive sputum smear in the laboratory database were registered in the ETR. We also aimed to locate health facility medical records and establish whether individuals whose records were not identified in the ETR were being managed for TB disease.

A retrospective evaluation was conducted using laboratory registers from NHLS peripheral laboratories for 24 health facilities in KwaZulu-Natal province, South Africa. All records with a sputum smear-positive result during Quarter 4 of 2009 were selected for inclusion. Information on patient and facility names, gender, clinic numbers and dates were extracted from the NHLS database and used to query the ETR. If a patient record was not found in the ETR, the information was used to locate and review paper-based patient records at the referring health facility. Each patient missing a record in the ETR but with a patient record at the health facility was categorized as having started treatment, moved, died, or missing follow-up information.

The NHLS database registered 794 sputum smear-positive TB patients from the 24 health facilities (range 0–36 patients per facility) during Quarter 4 of 2009. Of these patients, 158 (19.9%) were not registered in the ETR. However, 110 (69.6%) un-registered patients had records located at the health facilities. Review of the 110 patient records revealed that 65 (59.1%) had started treatment, 8 (7.3%) had moved, 4 (3.6%) had died, and 33 (30.0%) were missing follow-up information.

In conclusion, analysis of TB laboratory records showed that one-fifth of the sputum smear positive patients were not registered in the ETR TB surveillance system. Further, some of the unregistered patients (48/158; 30.4%) with a laboratory record for smear positivity could not be matched with paper records at the health facilities. Among those with matching records, information was missing on follow-up beyond the initial diagnosis for almost one-third of patients. The lack of patient information within health facilities for some patients with laboratory confirmed TB disease raises concerns that patients may not be informed about their disease status and also may not be receiving treatment. Lack of treatment among these patients may lead to morbidity and mortality, and propagation of community transmission.

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