Tuberculosis Surveillance, Republics of Armenia and Georgia, 2003-2004

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OBJECTIVE

To enhance its effectiveness and efficiency, we evaluated tuberculosis (TB) surveillance in the former Soviet Union (FSU) Republics of Armenia and Georgia.

BACKGROUND

The FSU—through the Sanitary-Epidemiologic Service (SES)—developed an extensive system of disease surveillance that was effective, yet centrally planned in Moscow [1]. Even after the fall of the FSU in 1991, most newly independent states maintained all or parts of the SES structure. However, even 15 years later, the loss of economic and technical assistance from Moscow has negatively impacted the effectiveness and efficiency of disease surveillance in these republics [2], including Armenia and Georgia. In 2005, Armenia and Georgia reported TB incidences of 71 and 83, respectively, per 100,000 [3].

METHODS

To evaluate TB surveillance in Armenia and Georgia, we used a public health, action-led conceptual framework that categorized surveillance and action into eight core and four support activities [4]. In Armenia, stakeholders identified indicators for the public health action model and gathered data from reports produced by regional epidemiologists. In Armenia, data were collected in 2003 from four marzs (districts), the Hospital of Convicts, and the capital city of Yerevan. In Georgia, the National TB Program (NTP) stakeholders identified indicators and collected 2003 and 2004 data from the Shida Kartli region.

RESULTS

Armenia—Death rates from TB varied from 0% to 23%. Notification rates of new TB cases ranged from 44.6 to 1,123 per 100,000. The proportion of new smear negative cases properly diagnosed ranged from 83% to 100%. Between 0% and 37% of new TB cases were registered with no smear conversion result. Treatment failure ranged from 5% to 17%. Only two public health facilities used directly observed therapy. No feedback activities and only basic data analysis were identified, and the annual TB report was not disseminated. Each TB microscopy unit had ≥1 technician trained in acid-fast bacilli (AFB) microscopy.

Georgia—Twenty five percent of new TB cases were classified as extra-pulmonary. The new case notification rate was 81 per 100,000 (31 smear positive new cases per 100,000). All four TB microscopy units participated in Quality Assurance. Lab distribution and lab technician workloads were adequate. Sixty-nine percent of new TB cases and 44% of re-treatment cases successfully completed treatment; 15% of new TB cases and 12% of re-treatment cases defaulted on their treatment regimens. Each TB microscopy unit had ≥1 technician trained in AFB microscopy. Central TB staff provided direct supervision with regular visits (at least 1-2 times per year) to each of the TB clinics and hospitals.

CONCLUSIONS

We found areas of TB public health practice in need of improvement in both countries. While limited to a number of locations in Armenia and one political region in Georgia, this study highlighted the strengths and weaknesses of TB surveillance and provided the impetus for the respective programs to identify key indicators, collect and analyze data, and utilize that data to change policy. For example, in January 2007, the Armenian NTP stopped charging for services. Both republics would benefit from additional support, namely academic and field-based training for epidemiologists. In addition, both countries could improve their surveillance indicators if they were able to create more versatile data collection, management, and analysis systems that that would allow for readily-available data, on which program and policy decisions could be made in a timely fashion.

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