Tuberculosis infection control in health facilities in Lithuania: lessons learnt from a capacity support project

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Tuberculosis (TB) infection control (IC) is key in controlling TB transmission in health facilities in Lithuania. This article presents a project that aimed at supporting health care facilities in Lithuania in implementing TB-IC. The project consisted of 1) facility TB-IC assessments, 2) development of facility TB-IC plans, 3) TB-IC training and 4) site visits. We assessed the impact of these activities through a self-assessment questionnaire. The project resulted in limited improvements. Most progress was seen in administrative and managerial activities. Possible reasons for the limited improvements are challenges with funding and the lack of supportive legislation and a national TB-IC plan.

Despite the decline in tuberculosis (TB) incidence in Lithuania, the epidemiological situation for TB is still complex, with 1705 TB cases notified in 2013, corresponding to an incidence rate of 57 per 100 000 population.¹ During the same period, 256 cases of multidrug-resistant (MDR) TB were diagnosed, i.e., 19% of all tested cases. These figures rank Lithuania among the World Health Organization's (WHO's) five high-priority countries in the European Union (EU).

As TB patients are frequently hospitalised in Lithuania and the climate is cold, restricting natural ventilation, TB infection control (IC) is important to prevent nosocomial infection. The limited activities available to support TB-IC are not complemented by regular, supportive supervision of the TB facilities by the Ministry of Health. The regular surveillance provided by the Central TB Registry includes surveillance of TB in health care workers.

At the request of the Lithuanian National TB Programme, the European Centre for Disease Prevention and Control (ECDC) commissioned a project that provided tailor-made technical assistance to Lithuania to support TB facilities in implementing IC measures following a TB-IC plan. The project was implemented by TBC Consult, Drachten, The Netherlands.

ASPECTS OF INTEREST

The project included five main activities targeting all eight TB facilities in Lithuania: 1) development of a TB-IC plan template for use by each TB facility; 2) a meeting with experts (27 participants) to finalise the template for the facility TB-IC plans: the draft template was discussed in detail during this meeting with

key experts in Lithuania (TB facilities, Ministry of Health, public health agency, penitentiary and one non-governmental organisation); 3) facility TB-IC assessments: the project team conducted assessment visits of three out of the eight TB facilities in Lithuania using a supportive supervision approach; 4) TB-IC training (34 participants) to facilitate the implementation of the TB-IC plan: key staff from the above-mentioned institutions in Lithuania were trained in the application of evidence-based TB infection prevention and control systems and tools, as well as in facility assessments, prioritisation, planning, advocacy, implementation and evaluation of WHO-recommended airborne precautions for TB transmission risk reduction; and 5) site visits to the facilities: the project team conducted visits to five of eight TB facilities to discuss the adoption of the TB-IC plan template and broader matters related to TB-IC (Figure).¹

The project built on the results of work performed in Romania. For the project in Romania, a template TB-IC facility plan was developed according to the guidelines of the WHO² and the US Centers for Disease Prevention and Control (CDC).³ We adjusted the template and other materials to the needs identified in Lithuania.

To assess the impact of the project, the following aspects were assessed pre- and post-project using a self-assessment questionnaire (Table): 1) availability of a TB-IC plan; 2) funding for TB-IC; 3) performance of risk assessment; 4) triage of patients; and 5) staff training in TB-IC. In addition, findings from the site visits were analysed.

Half of the facilities (4/8) reported having TB-IC plans in place at the beginning of the project. On comparing the facility TB-IC plans with the TB-IC plan template, it was observed that the plans did not cover all the information recommended by the template. In most cases, the plans had limited utility in controlling airborne transmission, as they were restricted to a description of different (surface) disinfectants to be used, the specification of respirators and, at times, technical specifications of the air cleaners to be used in TB wards. The four facilities without a TB-IC plan reported that their general IC plans did not include a specific TB-IC component. Six months after the start of the project, only one facility had developed a TB-IC plan in accordance with the project template. According to the answers from the follow-up questionnaire, the other facilities had not succeeded in introducing TB-IC into the general IC plans or in developing a separate TB-IC plan due to the non-exis-

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KEY WORDS

training; site visit; facility plan; tuberculosis; infection control

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FIGURE Project activities. TB = tuberculosis; IC = infection control.

TABLE Results of the self-assessment questionnaire before and after the intervention

Facility number	TB-IC plan available		Sufficient budget for TB-IC		Risk assessment performed		Triage in ambulatory department		Staff trained in IC in past year	
	Before	After	Before	After	Before	After	Before	After	Before	After
1	Yes	No	No	Partially	No	Planned	No	Yes	Yes	Yes
2	Yes	Yes	No	No	No	No	N/A	N/A	Yes	Yes
3	No	No	Yes	No	No	Yes	No	Yes	Yes	Yes
4	Yes	No	Yes	No	No	No	Yes	Yes	Yes	Yes
5	No	No	No	No	No	No	No	No	Yes	Yes
6	No	Yes	No	Partially	No	No	Yes	Yes	Yes	Yes
7	Yes	No	Yes	Yes	Yes	Partially	Yes	Yes	Yes	Yes
8	No	No	Yes	Yes	No	No	No	No	Yes	Yes

TB = tuberculosis; IC = infection control; N/A = not applicable.

tence of a regulatory framework for TB-IC, e.g., a national plan or guidelines.

According to the responses given, the TB-IC activities were fully funded in two facilities, partially funded in four and not funded in the remaining two facilities. At the end of the project there was a change in reported adequacy of available funding, partly explained by fluctuations in funding throughout the year, with fewer funds available at the beginning of the year. It was apparent that funding was not regular, and that if the facilities had undertaken to develop adequate TB-IC plans, the funding would probably have been insufficient to cover all the needs.

At the beginning of the project, seven of the eight facilities indicated that a risk assessment for prioritisation of interventions to reduce TB transmission had not been conducted. One facility assessed adherence to the existing IC regulations. The reasons for not conducting a risk assessment were a lack of a facility policy regarding risk assessment, the absence of a TB-IC plan, no person responsible and lack of funding. At the end of the project, five facilities had not conducted a risk assessment, two others were planning to do so and one had conducted it partially.

Four of seven facilities with an ambulatory TB department reported implementing triage. In the other three facilities, triage was not possible due to lack of space. After 6 months, two of these facilities had succeeded in organising patient triage.

At the end of the project, the staff in all the facilities had been trained by the staff members who had attended the project's training in TB-IC.

CONCLUSION

The project resulted in limited improvements in TB-IC in Lithuania. Most improvement was seen in administrative and managerial activities, such as triage. These activities can be implemented at low cost. Possible reasons for limited improvements are the challenges in obtaining funding as well as a lack of supportive legislation and a national TB-IC plan. The project had an implementation and evaluation phase of only 10 months; with appropriate funding, changes can still occur.

References

- 1 European Centre for Disease Prevention and Control and World Health Organization Regional Office for Europe. Tuberculosis surveillance and monitoring in Europe 2015. Stockholm, Sweden: ECDC, 2015.
- 2 World Health Organization. WHO policy on TB infection control in health-care facilities, congregate settings and households. WHO/HTM/TB/2009.419. Geneva, Switzerland: WHO, 2009.
- 3 Jensen P A, Lambert L A, Iademarco M F, Ridzon R, US Centers for Disease Control. Guidelines for preventing the transmission of *Mycobacterium tuberculosis* in health-care settings. MMWR Recomm Rep 2005; 54: 1–141.

La lutte contre l'infection tuberculeuse (TB-IC) est la clé du contrôle de la transmission de la TB dans les structures de santé de Lituanie. Cet article présente un projet qui a visé à soutenir les structures de soins de santé de Lituanie dans la mise en œuvre de la TB-IC. Le projet a consisté en : 1) l'évaluation des structures de TB-IC, 2) l'élaboration de plans pour ces structures de TB-IC, 3) la formation à la TB-IC et 4) visites de sites. Nous avons évalué l'impact de ces

activités par un questionnaire d'autoévaluation. Le projet a abouti à des améliorations limitées. Les progrès les plus importants ont été vus dans les activités d'administration et de gestion. Les raisons possibles de ces améliorations limitées sont des problèmes relatifs au financement et au manque de soutien légal, ainsi qu'à l'absence d'un plan national de TB-IC.

El control de la infección tuberculosa (TB-IC) constituye una medida fundamental en el control de la transmisión de la TB en los establecimientos de salud en Lituania. En el presente artículo se describe un proyecto encaminado a prestar apoyo a los establecimientos sanitarios en la ejecución de las normas de la TB-IC. El proyecto comportaba las siguientes medidas: 1) la evaluación del TB-IC en las instituciones; 2) la elaboración de planes de TB-IC en los establecimientos; 3) la capacitación en esta esfera; y 4) las visitas a los

centros. Se examinó la repercusión de estas intervenciones mediante un cuestionario de autoevaluación. Con el proyecto se alcanzaron mejoras de un alcance limitado. La mayor parte del progreso se observó en las actividades administrativas y de gestión. Entre las posibles razones de este resultado modesto se cuentan las dificultades de financiamiento, la falta de una legislación de apoyo y de un plan nacional de TB-IC.