

WP 4: Outreach for early diagnosis

WHO recommends systematic screening for active TB in high risk subpopulations that have poor access to health care. Romania and Bulgaria are countries in transition from high to intermediate incidence and are experiencing high TB rates among certain subpopulations. This work package will utilize a mobile diagnostic unit equipped with digital radiography, computer aided detection and molecular point of care tests to improve early diagnosis in these populations.



Institutul de
Pneumofiziologie
"Marius Nasta"



KNCV
TUBERCULOZAFONDAȚIEN
To eliminate TB

FIND & TREAT

DELFT
IMAGING SYSTEMS

UCL

Past experience

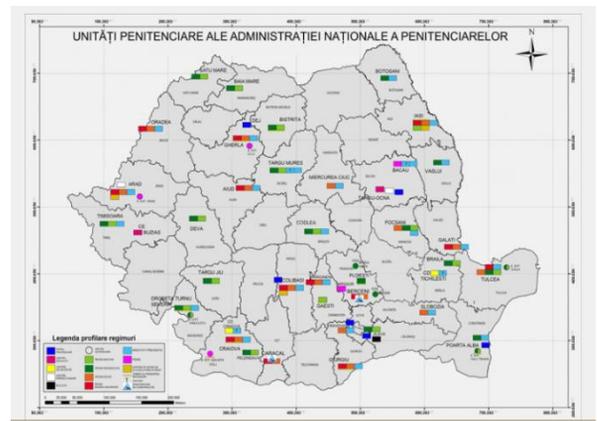
- Netherlands: a mobile digital x-ray unit was used to successfully control TB among homeless persons and illicit drug users in Rotterdam (2001-2014).
- United Kingdom (UK): a Find&Treat project provides screening for active TB and blood-borne viruses to vulnerable populations in London.

Vulnerable populations in Romania

- In 2016, 12,790 TB patients were notified in Romania (64.7/100,000 population). The notification rate is steadily declining. In 2005, nearly 30,000 patients were notified.
- Rates among vulnerable populations are not declining and remain much higher than in the general population, i.e. 600/100,000 among prisoners and drug users, and 1,600/100,000 among homeless persons.



TB screening in Rotterdam



Map of Romanian prisons

(credit: Administrația Națională a Penitenciarelor)

Main objectives

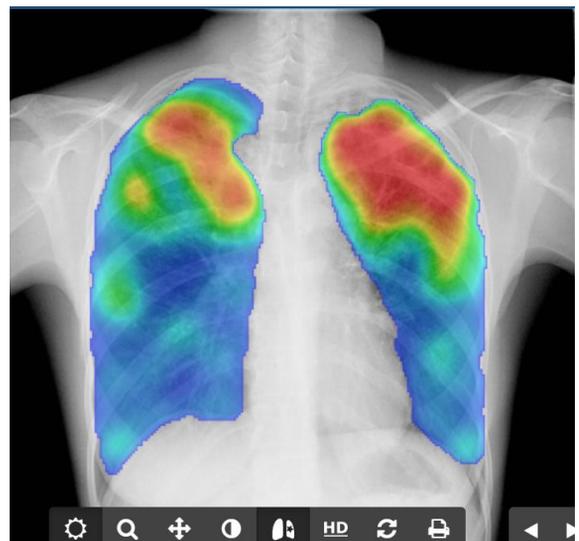
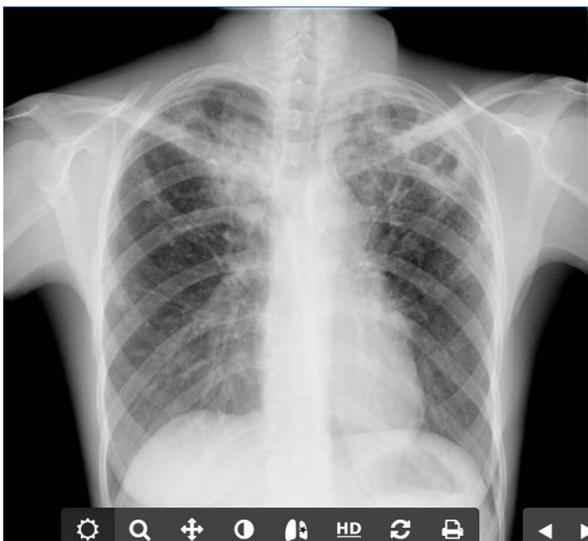
- To ensure early diagnosis in vulnerable populations (prisoners, drug users, homeless persons and Roma population) in Romania and to pilot the screening for 1 week in Bulgaria. The aim is to screen 12,800 persons per year.
- To strengthen care integration using an outreach strategy by providing a one-stop "shop" (clinic).

Key achievements to date

- ✚ Mobile x-ray unit (MXU) was designed and built to include digital x-ray equipment and computer aided detection for TB (CAD4TB) and molecular point of care sputum testing
- ✚ Pulmonologists of Marius Nasta Institute, Bucharest were trained to use of CAD4TB technology. The staff operating the MXU received training during a field visit to the UK Find&Treat Project.
- ✚ Analysis was done of characteristics of risk groups in the Romanian surveillance data, which serves as a baseline for the screening project.
- ✚ Arrangements have been made with the Ministry of Justice and NGOs to implement the screening.



Above left: The truck keys are handed over for the drive back to Romania, following installation of the x-ray
Above right: Romanian pulmonologists and Dutch colleagues take part in a training session



Above: X-ray images demonstrating the CAD4TB screening software installed in the E-DETECT TB truck