Outreach for early TB diagnosis

E-DETECT TB

Ai Story, UCL, UK
Outline

• Background and context
• Objectives
• Proposed methods
• Expected outcomes
• Partnerships
Background: TB in the EU

- **High burden** 58,008 cases reported in 29 EU/EEA countries in 2014
  - 12.8 per 100,000
  - Slow decline - 3.8% per year in the last five years

- **50% of cases in Poland, Romania and the UK**
  - Romania accounted for 27% of all cases

- **4.1% multidrug resistant (MDR) TB**

- **Vulnerable groups**
1. **Know your epidemic** - vulnerable groups
2. **Earlier detection** - targeted systematic screening
3. **Tailored patient support** - especially for vulnerable groups
4. **Manage co-morbidities** — addictions and psycho-social care
5. **Prevention** - address risk factors and social determinants
6. **Research** - new tools
7. **Global action**

Outreach teams able to go directly to patients, in hospitals, shelters or on the streets

Mobile X-ray units help detect TB sooner in vulnerable groups which reduces transmission and is cost effective
3. Methods: Work Packages

- **Coordination**: WP 1
- **Dissemination**: WP 2
- **Evaluation**: WP 3
- **WP 4** Outreach: Vulnerable groups Screening
- **WP 5 & 6** Migrants: Italy screening Learning from database integration
- **WP 7** Strengthening National Programmes
Methods: Outreach

• **Early diagnosis:** “one-stop-shop” screening
  – Mobile X-Ray Unit
  – Teleradiology + CAD
  – GeneXpert Omni

• **Integrated care:**
  – Accompanied referral, social support, peer support
  – Treatment by the National TB Programme
  – Monitoring outcomes of treatment
  – Assessment of effectiveness and cost effectiveness

  – HepCare Europe - BBV
Objectives

1. To ensure **early diagnosis** in vulnerable populations - defined as **homeless individuals, Roma, those with a history of drug use within the community, and prisoners** - in two high incidence European countries (Romania and Bulgaria).

2. To strengthen **care integration using an outreach strategy within the same vulnerable populations**
- Early detection = \( \frac{2}{3} \) less likely AFB+ @ Dx
- >85% complete Rx
- Highly cost effective
One-stop-shop screening
% HCV infected

18 months

8 years

Time
Expected outcomes

Outreach:
1. Early TB detection – CAD performance
2. Rapid detection of Rif resistance - GeneXpert Omni
3. Treatment of disease

Integrated testing and care coordination:
1. BBV (HepCare)
2. Addiction ➔ Recovery
Social Determinants Model of Care

- Treatment support (DOT - VOT)
- Psychosocial support
  - Housing
  - Addiction
  - Mental health
  - Destitution
  - Criminal justice

Olallo House
TB Hostel

Video Observed
Treatment RCT
### Partnerships: Countries

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<thead>
<tr>
<th>Organization</th>
<th>Country</th>
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<tbody>
<tr>
<td>University College London (UCL)</td>
<td>UK</td>
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<tr>
<td>KNCV Tuberculosis Foundation (KNCV)</td>
<td>Netherlands</td>
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<td>Ospedale San Raffaele (OSR)</td>
<td>Italy</td>
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<td>National de Pneumoftiziologie Prof. Dr. Marius Nasta-National TB Programme (NTPR)</td>
<td>Romania</td>
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<td>Karolinska Institute (KI)</td>
<td>Sweden</td>
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<td>Universita degli Studi di Brescia (UNIBS)</td>
<td>Italy</td>
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<td>Public Health England (PHE)</td>
<td>UK</td>
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<td>Delft imaging systems (DELFT)</td>
<td>Netherlands</td>
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<td>Folkhälsomyndigheten-Public Health Agency Sweden (FoHM)</td>
<td>Sweden</td>
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<td>INMI Spallanzani, Rome (INMI)</td>
<td>Italy</td>
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<td>Health Strategies Programme Centre-National TB Programme (HSPC)</td>
<td>Bulgaria</td>
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**Other partners**
- HepCare
- ECDC
- WHO Europe
- IOM
Thank you