UNIVERSITY OF MEDICINE AND PHARMACY
"CAROL DAVILA" BUCHAREST

TUBERCULOSIS CASE MANAGEMENT IN HOMELESS PEOPLE

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Introduction

- Tuberculosis (TB) represents a public health problem in Romania, the TB incidence is still the highest in the European Union (in 2014 – 74.6‰, respectively 12.8‰).
- Homeless people are a vulnerable group:

- often having poly-morbidity, a poor immunity,
- low interaction with health services,
- treatment compliance - usually low,
- due to their lifestyle, they have a high capacity for transmitting diseases, including TB.

Epidemiological surveys are hampered in general, due to the high mobility of homeless and to their reticence concerning health services.

Year 2009

- WHO made a statement: in many industrialized countries TB rates in homeless can be over 20 times higher than in the general population (the economic crisis we are experiencing in recent years has increased poverty).
- A study conducted by UMP "Carol Davila" and Samusocial (an NGO) revealed the morbidity data collected from the medical office of Samusocial an incidence of 40 cases per thousand and a prevalence of 604 cases per thousand people examined - much higher than in the general population from Bucharest (about 80%ooo inhabitants, respectively, 110%ooo inhabitants). (I > 50)
- A study conducted in the UK showed that the incidence was 15%ooo in the general population and 300% ooo homeless population. (I> 20)

TB SITUATION IN HOMELESS FROM BUCHAREST, 2009-2014

Year		2009 - 29 cases	2010 – 38 cases	2011 - 29 cases	2012 – 38 cases	2013 – 45 cases	2014 – 32 cases *
Notification	NC	17	21	19	23	30	20
	R	5	15	9	9	8	7
	Cr	1	0	0	1	0	0
	Failure	1	1	0	1	1	0
	Default	5	1	1	4	6	5
MDR-TB		3	1	0	2	3	1
Treatment outcomes							
Default		9	10	9	12	8	9
Failure		1	0	1	1	3	1
Treatment succes		12	28	18	23	28	13
Died		7	0	1	2	6	6

* 3 cases-not evaluated

Associated conditions: liver diseases, HIV, drug use and alcohol abuse.

The average number of hospitalization days and average cost per homeless patient compared to the general adult population - 2013, in Bucharest

		Average	Standard deviation
The average number of hospitalization days	Homeless	126.667	81.491
	General adult population	42.284	39.432

p<0.001

		Average cost (lei)
Average cost per patient	Homeless	30087.988
	General adult population	10426.431

p<0.001

European level

- In 2008, ECDC published a plan that aims to reduce the incidence by directions and proposals submitted- “Framework action Plan to fight tuberculosis in the European Union".
- Elaborated measures to reduce the incidence in populations "hard-to-find" and "hard to reach“ - "management situation of TB in vulnerable populations should be a key element of any comprehensive strategy to reduce, and eventually, to eliminate TB. "
- The plan had four principles:
- 1. Provided promptly and quality medical care (special needs for vulnerable groups) - needed resource that provides DOT;
- 2. The health systems from EU countries should be accessible, flexible and patient-centered, with no barriers (socio-economic, cultural);
- 3. Operational components in TB control must be driven/boosted by development of new evidence-based public health systems, to be able to stop early and effective chain of TB transmission (identify active cases in vulnerable populations);
- 4. Ensure partnerships and collaborations between countries.

- **The aim** is to reduce the prevalence of the disease among homeless.

- **The objectives** are:

- to improve the methods of detection and diagnostic, and
- to decrease disease transmission through a correct and complete treatment.

Methodology – TB specific interventions

- 1. Screening would consist in an active **early detection** of TB cases among homeless people in Bucharest using mobile caravans with X-ray.
- In the years 2002 - 2003 in Rotterdam, respectively, in London, one in six patients diagnosed with TB was a homeless, a drug user or former prisoner.
- In the Netherlands, in 2002, they were introduced caravans for TB screening in drug users and in homeless, that led to halving in the number of TB cases detected in only 3 years and 8 months.

- A suspected TB case will perform a rapid bacteriological test of diagnostic and if it is positive will be referred to the TB hospital.

- Also is important to detect the strain that infected the patient in order to know the transmission in the group or between different groups, given the mobility of homeless people.

- The caravan team
- In the team should be a person with history of homelessness, and / or who has had TB and was cured
- Should be involved community health workers and key partners in promotion and improving TB screening
- Could be provided incentives (monetary) for screening.

- 2. The enhancement of treatment adherence by enabling, motivating and simplifying completion of diagnosis and treatment.
- !Treatment interruption contributes to the development of drug resistance and to TB transmission.
- The patient-centred approach -treatment based on the patients' needs and mutual respect between the patient and the provider.
- Diagnosis of TB- the homeless patient must be admitted in the hospital during the period of infectivity.

- After discharge:

-admission in the sanatorium (especially MDR-TB cases) they are patients with complex medical needs.

- admission in a social shelter (social / community workers)

- outreach team provide treatment in the street (?).

- Could be provided incentives for homeless people that complete their treatment!

- Take into account the opportunity to reintegrate into society - the professional reinsertion.

- There should be legislation to compel for treatment or to be isolated if they refuse to be treated, without violating human rights (given the danger posed TB).

Results

- The expected results - a decrease in number of TB cases in homeless in Bucharest, treated correctly and completely, following the disappearance of the disease among people belonging to this vulnerable group.

CONCLUSIONS

- Breaking the chain of TB transmission among homeless will bring benefit to society by lowering the risk of disease among homeless, but also in general population, and increasing treatment adherence will lead to decrease in cases that can select resistant strains.
- The health system can not provide all the homeless needs, and is therefore very important joint action of medical (public health programs could be based on community), social, legal and economic systems - interdisciplinary manner, solutions to be adapted to our country.
- Would require cooperation with countries where programs have been successful for vulnerable groups and it should be conducted fundamental research on TB in urban areas among homeless in our country.

DISSCUSSIONS

- Caravans model implementation could be made at country level, in counties where there are "hard-to-find, hard-to-reach“ groups and here is concerned also the Roma population, people in poor areas.
- The best solution to reduce long-term costs could be regular screening of homeless people (TB, hepatitis virus B or C, HIV).
- TB represents a complex issue, but TB is already known as the most curable infectious disease, while the patient with the disease get treatment correctly and completely.

THANK YOU!