

Tuberculoza în Moldova: cunoștințe, atitudini și practici ale populației generale, 2012

Scurt raport al sondajului sociologic

**Tuberculosis in Moldova:
Knowledge, Attitude and Practice
in General Population, 2012**

**Туберкулёз в Молдове:
знания, отношение и практика
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Отчет о результатах социологического опроса

Sondajul a fost efectuat de către Centrul de Analiză și Investigații Sociologice, Politologice și Psihologice „CIVIS” în cadrul proiectului „Sporirea rolului pacientului și a comunității în controlul tuberculozei în Moldova” finanțat de Fondul Global de combatere a SIDA, Tuberculozei și Malariei și implementat de Centrul pentru Politici și Analize în Sănătate.

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The survey has been conducted by the Centre of Sociological, Politological and Psychological Analysis and Investigations „CIVIS” in the framework of the project „Empowerment of People with Tuberculosis and Communities in Moldova”, financed by the Global Fund to Fight AIDS, Tuberculosis and Malaria and implemented by the Center for Health Policies and Studies.

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Социологический опрос проведен Центром социологических, политологических и психологических исследований «CIVIS» в рамках проекта «Усиление роли пациентов и сообщества в контроле над туберкулезом в Молдове», который финансирует Глобальный фонд для борьбы со СПИДом, туберкулезом и малярией и внедряет Центр политики и исследований в здравоохранении.

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Descrierea CIP a Camerei Naționale a Cărții

Sințov, Ruslan / Bivol, Stela

Tuberculoza în Moldova: cunoștințe, atitudini și practici ale populației generale... = Tuberculosis in Moldova: Knowledge, Attitude and Practice in General Population = Туберкулез в Молдове: знания, отношение и практика поведения населения : Scurt raport al sondajului sociologic / Ruslan Sințov, Stela Bivol. – Chișinău: S. n., 2013 (Tipogr. „Elan Poligraf”). – ISBN 978-9975-66-338-0.

... 2012. – 2013. – 76 p. – Tit., text paral.: lb. rom., engl., rusă. – 500 ex. – ISBN 978-9975-66-339-7. 303.5:616.24-002.5(478)=135.1=111=161.1

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KEY FINDINGS

Knowledge about symptoms and transmission of tuberculosis

- Tuberculosis (TB) is a disease largely known by the population of the Republic of Moldova: 98 percent of the population has heard about it. Coughing is the most known symptom of tuberculosis, named by the majority of respondents (82.1% of the population). Different types of coughing by duration, characteristics of sputum, etc. were mentioned in the majority of spontaneous responses. Beside this symptom, the population mentioned other signs of the disease as well, the most frequently mentioned being fever, fatigue, loss of appetite and weight loss.
- When prompted for an answer, the most well-known symptoms of tuberculosis were: (a) different manifestations of coughing (acute, convulsive coughing, frequent coughing, permanent coughing, persisting coughing (at least 3 weeks), coughing with sputum, with sputum and blood strands); (b) weakness, fatigue and wheeze; (c) fever for more than three weeks. When being read the list of TB specific symptoms, at least 80% of the citizens of the Republic of Moldova recognize them.
- Almost all respondents consider that tuberculosis is an infectious disease (95%). The vast majority of respondents (95%) know that tuberculosis is transmitted through air when coughing. Nevertheless, myths about transmission of tuberculosis persist, especially the belief that tuberculosis can be transmitted through household contact and contact with personal items (92.3%) and through contact with blood and sexual exposure.
- Each of the symptoms presented in the survey is a serious reason for seeking care for the majority of respondents. However, the most obvious sign is sputum with blood strands, followed by coughing and fever for more than three weeks.
- In case of necessity, the majority of respondents would go first to their family doctors (87%), and a third of the country population would prefer to receive specialized medical opinion and would go to a TB specialist.
- Approximately in one of every 11 households in Moldova there was/is at least one family member who experienced signs of tuberculosis. Most of them have sought medical care.

Attitudes towards TB patients

- Despite the fact that tuberculosis is quite known and spread, it is a stigmatizing disease in the Moldovan society, and is linked with moral prejudices, especially in rural areas, among elder people, population with lower education levels and persons with lower socio-economic status. Every fourth person considers that it is a shame to have

tuberculosis and slightly more than a half of the respondents (56%) think that persons with tuberculosis would not disclose their TB status. The main reason is the fear of being avoided by community (both at work and in the community of friends, relatives and acquaintances). The majority of respondents believe that people change their attitudes towards persons who have tuberculosis (59%), and commonly try to avoid them (77%).

- The person who has contracted tuberculosis would not be visited at home by a significant number of close people, or people that the person used to socialize with (67%), the main reason indicated by half of the respondents being fear of getting infected with TB.

Support in case of treatment

- On the other hand, the population is willing to house and provide home care for relatives who are in continuation phase and who had been treated with tuberculosis in hospital and became smear-negative (76%). The majority of the respondents showed openness for supporting the persons with tuberculosis. Moreover, 7 of 10 persons stated that, if needed, they would offer moral support and would monitor the medicine intake of a patient with tuberculosis from their community.
- According to general population's opinion, the health care workers (79%) and the relatives (43%) are the main actors who should offer support to patients with tuberculosis, so that they finalize their treatment. The other social actors, such as local public authorities, social workers, police workers, church, volunteers etc., could get involved in offering support to the patients with tuberculosis, but were named by a smaller number of respondents.
- In the perception of the population, the main reasons of treatment defaults are related to the patients' poor attitudes towards their health and related to the costs linked to treatment. Fewer people consider that long term treatment and deficiencies on service provider side could influence treatment completion. At the same time, around 18% of respondents believe that they themselves would not be able to adhere to long-term treatment, showing this way their social distance and blaming attitudes towards TB patients.

Perception regarding information about tuberculosis

- More than one third of respondents believe that population awareness about tuberculosis changed during the last 12 months, which resulted in positive changes for the patients with tuberculosis related to provision of more financial and food support, encouragement provided by community in continuing treatment. At the same time, more focus on isolating infectious patients and coercive treatment has increased the level of discrimination of patients in the communities.

- Most respondents (87%) consider that they are well informed about tuberculosis (from very good to medium level). Urban residents stated to be well-informed more often compared to rural residents. Only about a third of respondents said that they talked to someone about tuberculosis in the past 12 months. The lower the level of education and socio-economic status of the person, the less frequency of discussing about tuberculosis was registered. Most often respondents discussed about tuberculosis with health workers (family doctor, nurse), followed by immediate social network (relatives, friends, acquaintances).
- The majority of respondents said that they heard or read about tuberculosis in the last six months. The lower the social-economical level of respondents, the higher the degree of information intake is.

Mass media campaigns and communication

- Almost two thirds of respondents (61.4%) have heard or seen the message *"If you experience any symptoms, got to see a doctor. Tuberculosis can be cured!!"* The most frequent source of the message was television, but it is impressing that the respondents mentioned brochures and posters in 21.3% of cases, 16.1% - street advertising, 3.9% - seminars and informational events, which proves an active community outreach activity.
- At least 4 of 5 persons mentioned that they would take into consideration the recommendations received through informational materials by paying more attention to symptoms, visiting or suggesting others to visit a doctor in case of experiencing any of the symptoms or offering more support to patients with tuberculosis. The table below presents the comparison of key indicators regarding knowledge, attitudes and practices of the general population with regards to TB in all rounds of KAP conducted in 2004, 2008, 2010 and 2012.

Table 1. Comparative key indicators of knowledge, attitudes and practices related to tuberculosis, Republic of Moldova, years of comparison 2004, 2008, 2010, 2012, %

Indicator	2004	2008	2010	2012
1. Respondents who heard about tuberculosis	99	98	98	98
2. Integrated indicator of knowledge about the symptoms tuberculosis (numerator: respondents who answered “yes” to the symptoms as follows 1. Coughing with sputum for more than 3 weeks, 2. Fatigue and 3. Fever for 3 weeks; denominator: all of those who answered to these questions)	46	63	64	63
3. Respondents who know that tuberculosis is a contagious disease	89	89	90	9
4. Respondents who know that tuberculosis is transmitted through air while coughing	22	92	93	95
5. Respondents who know that tuberculosis cannot be transmitted through habitual contact (sharing household items)	-	8	9	4
6. Respondents who know that tuberculosis can not be transmitted through shake of hands	-	42	39	38
7. Respondents who know that coughing is the main symptom of tuberculosis	-	55	52	69
8. Respondents who know that tuberculosis can be cured (answers <i>generally yes and yes in case of timely treatment</i>)	71	81	80	88
9. Respondents who think that having tuberculosis is a shame	72	67	68	73
10. Respondents who in case of any symptoms will go first to see a family doctor.	64	69	76	83

SURVEY METHODS

- **Sample size:** 1,415 persons aged 15-64 years old
- **Sample characteristics:**
 - Stratified sampling – two criteria of sampling stratification were used:
 - Regions – 12 regions of the former territorial-administrative unit (counties);
 - Category of locality – villages, cities and municipalities;
 - Size of the stratum – the size of the strata resulted from the distribution by regions and categories of locality were calculated in proportion to the number of population (according to the target group) from each basic stratum based on the newest data offered by the National Bureau of Statistics;
 - Quasiprobabilistic – the localities and households were selected based on a quasiprobabilistic scheme, each locality having an initial known non-zero probability to be included in the sampling;
 - Multistage sampling:
 - *Primary Sampling Unit (PSU) (locality)* – localities (95) from each stratum included in the sample were randomly selected based on the principle probability proportional to size;
 - *Secondary sampling unit (SSU)* - SSUs in localities were randomly selected;
 - *tertiary Sampling Unit (TSU – households)* – households within each secondary sampling unit were included in the sample based on statistical step;
 - *Final sampling unit (FSU – respondent)* – the respondents within household were randomly selected based on the principle of closest birthday to the date of interview.
- **Representativity:** The national sampling is representative for the population aged 15-64 years from the Republic of Moldova, excluding Transnistrian region, with the maximum margin of error of $\pm 2.6\%$.
- **Period of data collection in the field:** 23 October – 22 November 2012. The questionnaires were answered at the respondents' household. The average time for filling in a questionnaire was 26 minutes.
- **Method of data collection:** CAPI – computer assisted personal interview.
- **Data collection tool:** written questionnaire. The questionnaire was developed based on previous the one used in previous rounds of knowledge, attitudes and practices surveys, carried out in 2004, 2008 and 2010. In order to evaluate the intention to provide support to patients with tuberculosis and to evaluate the perception regarding the changes in community's attitudes in the last year, a number of new questions were added in this round, thus, the questionnaire was pretested in the office and on the field.

- **Training of interviewers** Around 60% of interviewers have experience in working with questionnaires within around 15 representative national surveys and other 40% - in at least seven surveys. Interviewers were trained in small groups of about 10 persons. All training sessions were held face to face and led by Survey Coordinator and supervised by Project Coordinator.
- **Ethical considerations:** respondents took part on a voluntary basis by signing an anonymous informed consent. The study included only questioning. The study data will be used to improve the prevention measures through communication campaigns for the benefit of the general population.
- **Statistical analysis SPSS:** The statistical analysis of responses was made overall and included overall frequencies and disaggregation by: region, rural/urban, gender, age, level of education, socioeconomic status and nationality.
- **Data validation** CIVIS validated questionnaires based on the following criteria:
 - (a) Checking completion of all questionnaires (100%) at CIVIS office;
 - (b) Checking selection of households and respondents;
 - (c) Checking by telephone at least 50% of respondents provided with telephone services;
 - (d) Field checking of 10% of randomly selected questionnaires;
 - (e) Field control of the interviewers with identified errors during office and telephone testing.
- **Data entry and analysis:** data entry was performed in statistical program CS-Pro which allows establishing logical rules for data registration based on answers to the questions, including filters, the fact which minimized the errors of data registration. Data was processed in STATA software and statistically analyzed using SPSS 17.
- **Results are weighted.** The survey sample structure complies with the distribution of population from National Bureau of Statistics, within the range of acceptable statistical difference. Significant differences were registered in sex structure, women being over-represented and within age groups, young people and adults aged 18-44 years being under-represented. These differences have a common reason: a significant number of young people (especially men) are not in the country because of being abroad for work on a temporary basis that are not reported by the official statistics. To correct for the difference results are weighted, so that the sample structure reflects the reference population according to the current population records from January 1, 2012. The difference between weighted and non-weighted results does not exceed 1.8% for any of the questions.

DETAILED RESULTS

Socio-demographics of the sample

The sample is represented by 37% of men and 63% of women, with age distribution of 18% of population aged 15-24 years, 20% aged 25-34 years, 26% aged 35-49 years and 36% aged 50-64 years. The significant statistical difference for age and sex is caused by labor migration, both long-term and seasonal that is not reported by official national statistics. More information regarding the socio-demographic distribution is shown in Table 2.

Table 2. Socio-demographics of the sample compared to the National Bureau of Statistics data, 2012,%

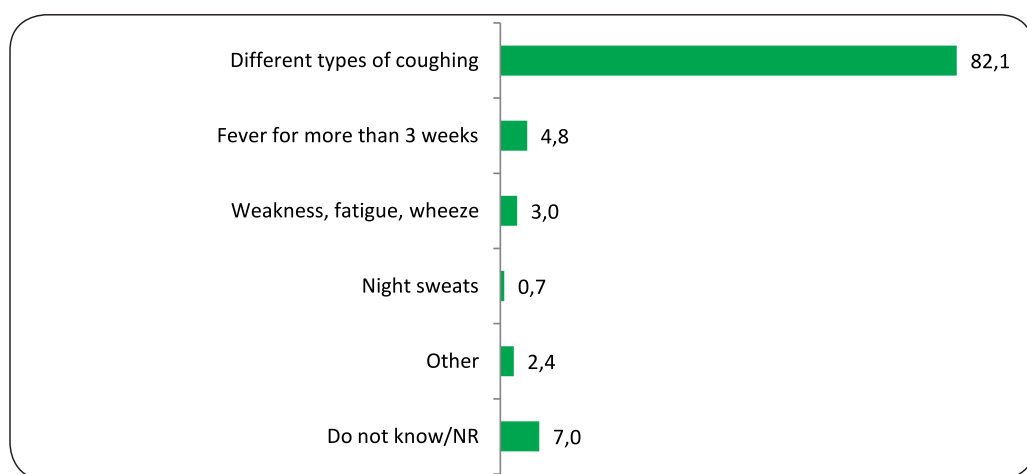
Characteristics		Sample	NBS Data
Region	North	29	28
	Center	50	52
	South	21	20
Area of residence	Urban	41	44
	Rural	59	56
Sex	Male	37	49
	Female	63	51
Age	15-24 years	18	23
	25-34 years	20	24
	35-49 years	26	27
	50-64 years	36	26
Education	Low	24	-
	Medium	50	-
	High	26	-
Socio-economic status	Low	49	47
	Medium	35	40
	High	16	13
Nationality	Moldovan/ Romanian	78	78
	Russian	5	6
	Ukrainian	8	9
	Other	9	7

Knowledge of symptoms of tuberculosis

Tuberculosis is a disease known to almost all the citizens of the Republic of Moldova (98.1%), only 1.4% of respondents stated that they had never heard about this disease. Almost all the persons who have never heard of tuberculosis come from rural areas of the country.

For majority of respondents (82.1%) the most visible symptom of tuberculosis (*spontaneous answer¹, first named²*) are different types of coughing (coughing, coughing for more than 3 weeks; acute coughing, convulsive, frequent, permanent and repressed coughing, coughing with sputum and blood strands). Other symptoms considered as specific signs of tuberculosis received little consideration in the answers of respondents. Fever for at least 3 weeks (4.8%); weakness, rapid fatigue and wheeze (3.0%); chest pain (0.7%); unnatural complexion (yellowish or unhealthily dark) - 0.7% and other symptoms (1.7%). The rate of non-responses is 7.0%.

Figure 1. The most obvious symptom of tuberculosis, spontaneous answer, first named, 2012, %



When asked what other symptoms of tuberculosis they know (second named) respondents mentioned: fever for at least three weeks (26.4%); weakness, rapid fatigue and wheeze (22.7%); loss of appetite (10.6%) weight loss (10.2%), night sweats (7.8%); and different types and characteristics of coughing.

According to the respondents' *prompted answers³* the characteristic signs of tuberculosis are: coughing (88.9%); sputum with blood strands (88.0%); acute, convulsive, frequent, permanent and repressed coughing (86.9%); persistent coughing (at least 3

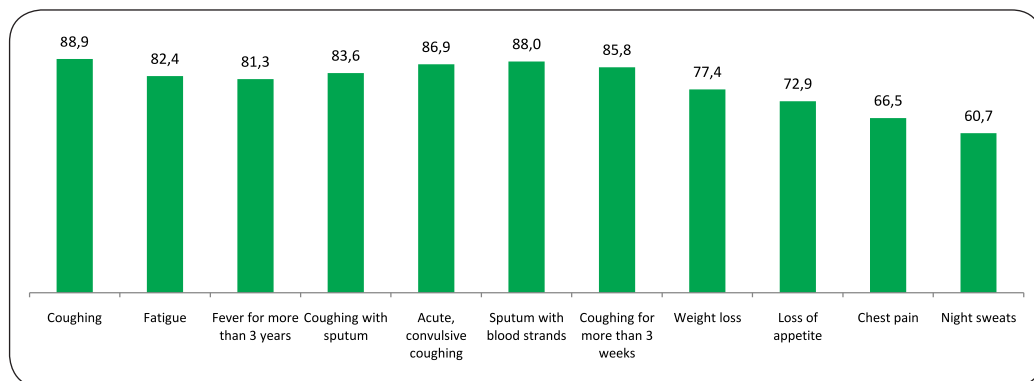
1 Spontaneous answer – answer when the list of options is not read.

2 First named – first answer of the respondent.

3 Prompted answer – answers given after the list of answer options is read to the respondent.

weeks) - 85.8%, coughing with sputum (83.6%); weakness, rapid fatigue and wheeze (82.45); fever for at least 3 weeks (81.3%); weight loss (77.4%); loss of appetite (72.9%); pale and unhealthy complexion (71.8%); chest pain (66.5%); night sweats (60.7%), dry coughing (54.4%).

Figure 2. Share of population recognizing tuberculosis symptoms, prompted answers, 2012, %

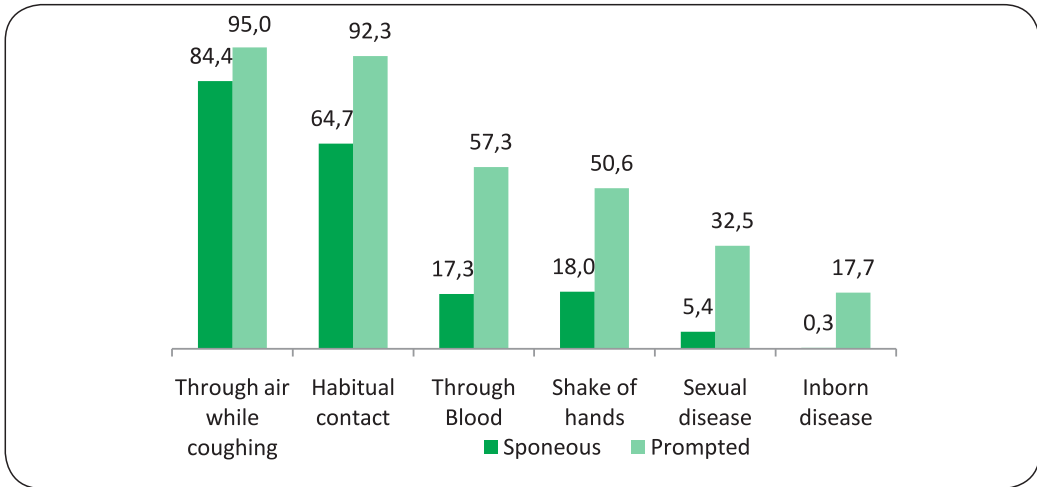


Knowledge about tuberculosis transmission route and transmission risk perceptions

The great majority of respondents (94.5%) believe that tuberculosis is an infectious disease, 3.4% think that it is not an infectious disease, and 2.1% of Moldovan population does not know if tuberculosis is or not an infectious disease.

The respondents were asked to express their opinion regarding tuberculosis transmission routes. The results obtained from spontaneous answers show that 84.4% of respondents believe that tuberculosis is an air borne disease that is transmitted through air while coughing. At the same time, misconceptions concerning the tuberculosis transmission routes persist, since about two thirds (or 64.7%) mentioned that people can get this disease if they share household items and other objects previously used by a person with tuberculosis, 18.0% of respondents think that they can contract tuberculosis through handshake, 17.3% - TB is a blood borne disease, 5.45% - through sexual contact, and other routes (4.2%). According to spontaneous answers, 4.0% of respondents do not know how tuberculosis is transmitted from one person to another, and 0.3% of them are of the opinion that tuberculosis is a congenital disease.

Figure 3. Knowledge tuberculosis transmission routes (spontaneous and prompted answers), 2012, %



The prompted answers to this question show a good knowledge about routes of tuberculosis transmission “through air while coughing” (95.0%) and, at the same time, confirm the high prevalence of misconceptions: through shared use of household objects (92.3%), through blood (57.3%), through handshake (50.6%), through sexual contact (32.5%), and 17.7% of respondents believe that tuberculosis is a congenital disease.

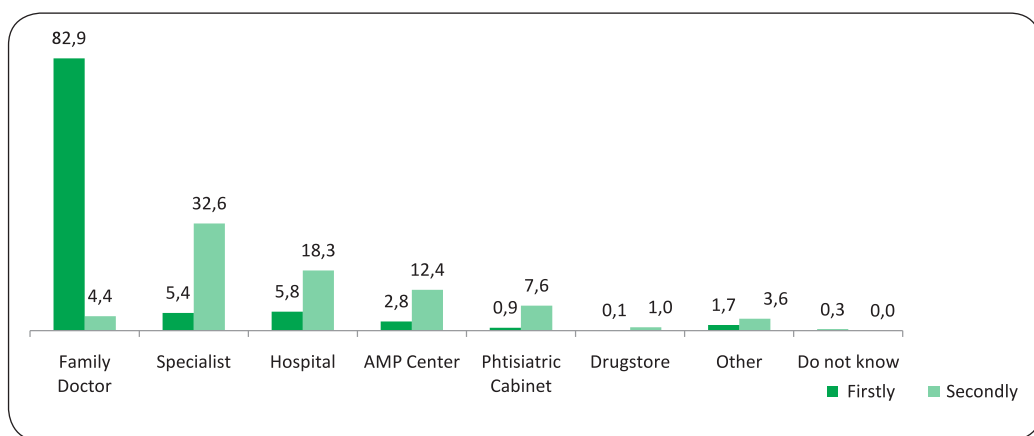
Even with a high rate of misconceptions regarding tuberculosis transmission routes, the respondents do not perceive themselves to be exposed to increased risk of contracting tuberculosis. Approximately every fourth respondent thinks that s/he has a high or very high risk of contracting tuberculosis (28.0%), a third (or 34.1%) believe that they are subject to a medium risk of contracting tuberculosis, 29.9% of respondents believe that there is little or no risk at all, while 8% do not know to what extent they are exposed to the risk of getting this disease.

Health care seeking in case of symptoms of tuberculosis

If the respondent would experience symptoms of tuberculosis, any of the symptoms discussed above would be a serious reason for respondents to seek medical care. Thus, 97% of respondents would go to see a doctor in case of blood in sputum, 94% - in case of coughing for more than three weeks, 93% - in case of fever lasting for three weeks. For 89% of respondents coughing is a sufficient reason to see a doctor, and for 82% - weakness, fatigue and wheeze. Chest pain (80%), weight loss (75%), loss of appetite (72%) and night sweats (69%) represent important symptoms that would make the respondents to seek medical care.

The family doctor is the first point of contact that people would refer to in case of suspected symptoms of tuberculosis (87%), as well as centers of family medicine or clinics – 15%. Other providers, according to the respondents' answers, are: TB specialist (38%), hospital (24%), tuberculosis office (8%), pharmacies (1%), other place or provider (5%).

Figure 4. Health seeking behavior in case of TB symptoms, depending on health provider type, (first and second choice), 2012, %



In fact, every 11th person (9%) from all the respondents indicated that they or their family members have experienced certain symptoms of tuberculosis, 90% of them did not observe any symptoms, and the rate for non-response constitutes 1%. Of those who have experienced TB-specific symptoms, more than half (63%) come from rural areas and about half of them (53%) come from families with low socio-economic status. The majority of respondents (85%) who noticed the mentioned symptoms stated that the persons experiencing them (either themselves or their families) sought health care.

Respectively, 15% of respondents (or 20 persons) chose not to seek medical care. The reasons to refrain from seeking medical care were: self-treatment at home (21%), lack of financial resources (15%), improvement of health condition (12%), lack of time (12%), inconvenient location of medical facilities (far from home) (8%) and other reasons (33%).

Attitudes towards TB patients

The prevalence of tuberculosis is quite high, as 11% of respondents indicated that they or their family members have or had tuberculosis, and every 7th respondent (or 15%) stated that they often communicate with a person with tuberculosis (neighbor, classmate, friend). It should be mentioned that 6% of participants to the survey know if any of their relatives or acquaintances has or had tuberculosis.

Although the society is generally used to occurrence of tuberculosis, when asked if tuberculosis is a disease associated with stigma, every fourth respondent considers it a shame to have tuberculosis (23%), with a higher rate of respondents in rural areas (26.8%) compared to municipalities (16.9%) and rayon centers (18.9%); in elder population (29.5% the age group 50-65 years old) compared to 17.4% in the age group 25-34 years, in population with low level of education (30.8%) compared to the group of respondents with higher level of education (14.8%) and in population with low socio-economic status (28.1%) compared to 17.4% respondents with high socio-economic status. Being asked to explain why it is considered a shame to have tuberculosis, most respondents answered that this disease can cause them to lose their job (89%), that people would avoid the person with tuberculosis (88%) and more than a half of respondents (58%) consider that tuberculosis is a disease of the poor, the homeless and drunkards.

Table 3. Share of population who believe that tuberculosis is a shame, by socio-demographics, 2012, %

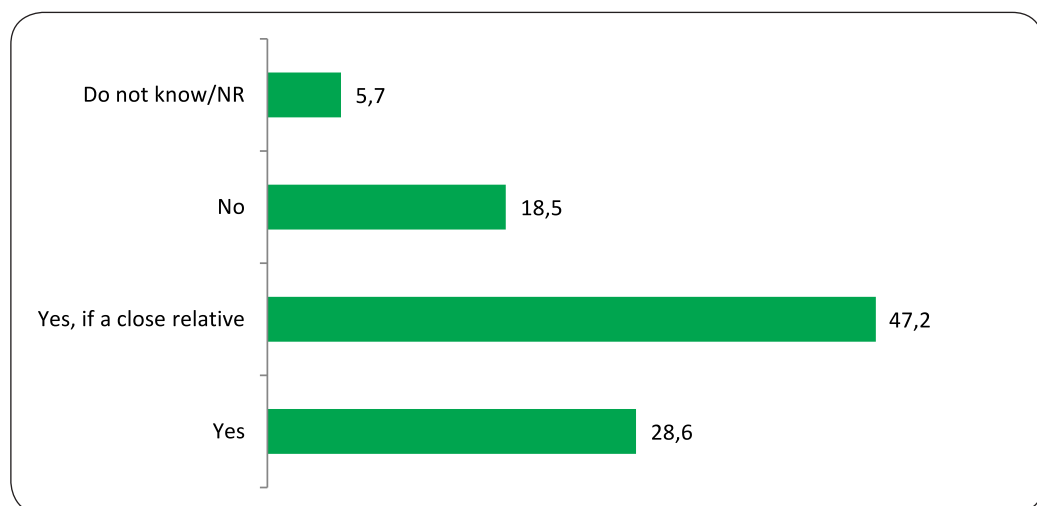
Region	North	18.0
	Center	25.3
	South	24.1
Area of residence	Urban (municipalities)	16.9
	Urban (other cities)	18.9
	Rural	26.8
Gender	Male	22.6
	Female	23.3
Age	15-24 years old	22.1
	25-34 years old	17.4
	35-49 years old	22.7
	50-64 years old	29.5
Education	Low	30.8
	Medium	23.6
	Higher	14.8
Socio-economic status	Low	28.1
	Medium	22.3
	High	17.4
Nationality	Moldovan/Romanian	24.9
	Russian	14.4
	Ukrainian	17.3
	Other	16.0

Most frequently, the population of the country avoids coming in contact with a TB patient, even though they are friends, colleagues or neighbors. Thus only a third of respondents who had a close person infected with tuberculosis (n=213) visited them (33.4%), the rate being higher among men compared to women (37.5% vs. 27.2%), and two thirds of respondents or (66.6%) do not visit the people affected by tuberculosis at home, the prevalence being higher in the North region (74.1%) compared to 65.6% in the Center and 61.7% in the South region. The main mentioned reason is the fear of getting infected (51.4%).

More than half of the respondents (55.8%) believe that TB patients would not disclose their TB disease; there were no significant differences in the answers related to age group, gender, area of residence, education and socio-economic status. As for the reasons of not disclosing about TB, the fear of losing friends represents 94% of the answers; the fear of being avoided by others – 92%; the fear that no one would like to marry a person with tuberculosis represents 88% of the answers and the fear of losing job - 84%.

On the other hand, the majority of respondents (75.8%) would be willing to host a relative who had been diagnosed and treated in hospital and is to continue treatment on an outpatient basis. Of these, approximately half of the respondents (47.2%) would receive this relative in their homes until treatment completion, provided that the patient is a close relative. Every fourth respondent (18.5%) would refuse to take care of a relative, and 6% would hesitate to receive a person with tuberculosis at home until treatment completion. This time again, the rate of those who would refuse to take care of a close person during the outpatient treatment phase is higher in case of rural areas (21.6% compared to 7.5% in the municipalities), in case of women (21.9% compared to 14.6% of men), in case of respondents with low education level (24.3% compared to 13.9% of persons with high education level) and in case of persons with low socio-economic status (20.6% compared to 11.3% of respondents with high socio-economic status).

Figure 5. Share of population willing to take care of a TB patient relative during outpatient treatment phase, 2012, %

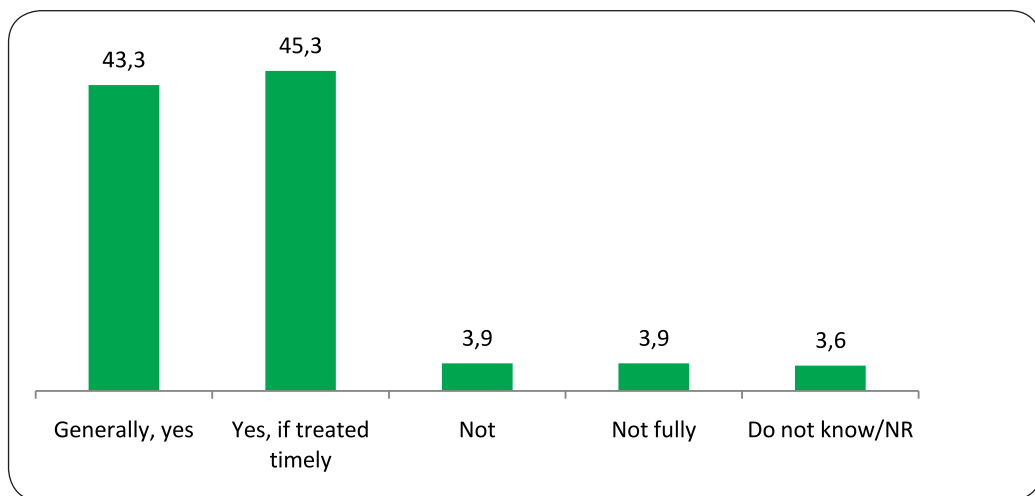


According to the opinion of more than half of the respondents (59.2%), the attitudes of people towards a person would change if that person contracted tuberculosis, a third (or 31.4%) believes that people would have the same attitudes towards a person who contracted the disease and 9.4% of respondents were undetermined. As for how the attitude would change, 76.9% (of 826 of respondents who agreed that people would change their attitude towards persons with tuberculosis) believe that the person with tuberculosis would be avoided, and only 31.8% think that people would have compassion and would help the infected persons.

Opinions regarding TB treatment and support to patients

The great majority of respondents (88.6%) believe that tuberculosis is a disease that can be treated. Less than half of these (45.3%) think that a patient can be cured if receiving treatment in time and a similar share (43.3%) believes that tuberculosis can be generally cured. According to the opinion of 7.8% of respondents, tuberculosis cannot be generally cured or fully cured (by 3.9%). The rate of non-responses is 3.6%.

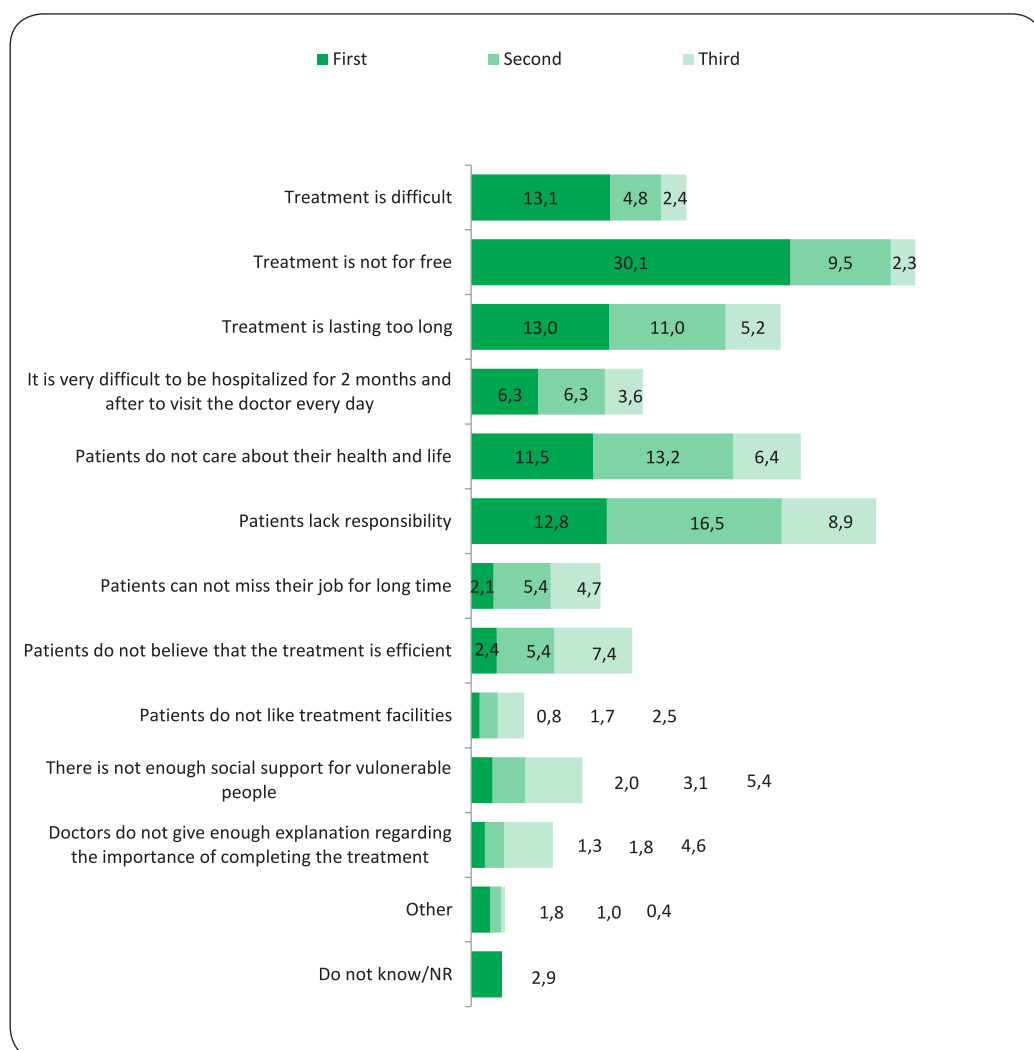
Figure 6. Share of population who believes that tuberculosis can be treated, 2012, %



Respondents were asked why according to their opinion some patients with tuberculosis do not finalize their treatment. First of all, perception of additional costs related to treatment was considered as a main reason by 41.9% of respondents. Disapproval and social distance from TB patients is felt in this case as well, since personal weaknesses of patients are rated high and namely 38.2% of respondents think that patients refuse to complete the treatment because they are irresponsible and 31.1% think that patients do not care about their health and life.

The reasons related to treatment and medical institutions were mentioned with a much lower frequency and these included lengthy treatment (29.2%), difficulty to take the TB treatment (20.3%), inconvenience of being hospitalized for more than two months, followed by outpatient phase, when one has to visit the health provider on a daily basis or several times a week (16.2%), the need to take a long break from work (12.2%) and lack of social support (10.5%). In the opinion of 15.2% respondents, the TB patients do not believe in treatment effectiveness, thus giving up the treatment too soon, 7.7% of respondents believe that doctors do not give enough explanation regarding the importance of completing the treatment, and only 5.0% of respondents think that poor medical services cause the patients to abandon the treatment.

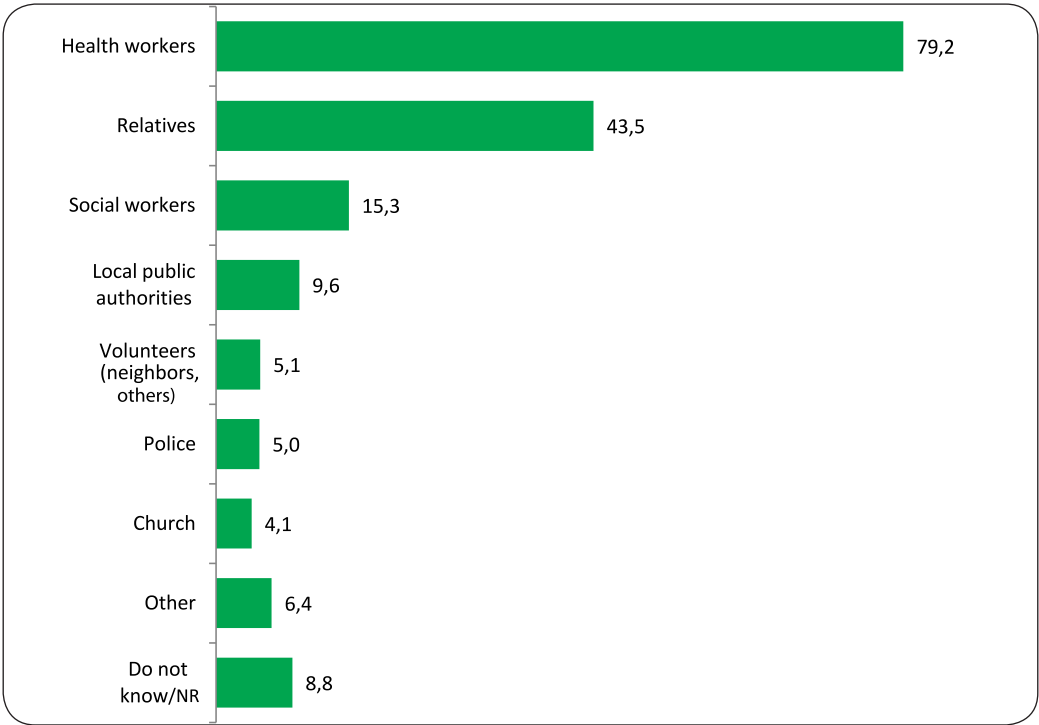
Figure 7. Factors that are associated with treatment default, in the opinion of general population, 2012, %



When asked if they personally would have to take a long-term treatment, which would include daily intake of medicines in front of a health worker for a period of six to 12 months, the great majority of respondents were certain that they would take all the medicines according to the prescription (81.5%), 7.7% of respondents were fairly certain and 8.2% mentioned that they were not quite or not certain at all that they would comply with treatment. The most common hypothetical reasons for not complying with treatment were forgetting to take medicines (41.0%), belief that medicines are dangerous for health (37.2%), unwillingness to take medicines (23.0%), 9% of respondents would feel uncomfortable to visit a doctor for taking medicines, and 11% of them mentioned other reasons. The rate of uncertain answers was 10%.

As for who could provide support to patients during their treatment to increase the chances of treatment completion, the majority of respondents (79.2%) think that doctors and other health workers are the persons who should provide all types of support to TB patients. Other important actors in treatment support were considered relatives by less than a half of respondents (43.5%). At the same time, the role of other community actors in supporting patients with tuberculosis was not frequently mentioned by respondents, such as social workers (15.3%), local public authorities (9.6%), volunteers (5.0%) and church (4.1%). The rate of uncertain answers to this question was 9%.

Figure 8. Opinions in the general population about who can provide support to treatment adherence, 2012, %



Respondents were generally willing to provide their personal support to persons with tuberculosis. Thus, some 72.5% of respondents said that they would offer moral support and would supervise the patient's intake of medicines, in case that no one of the above mentioned actors would be available. At the same time, every fifth respondent (or 19.4%) refused to support the persons with tuberculosis because of fear to contract TB (31.3%), unwillingness to get involved in someone's life (23.6%), lack of time (17.6%) and other reasons, while 1.8% of respondents were undetermined regarding their availability to offer support in the treatment of TB patients.

Table 4. Availability to provide support to patients with tuberculosis during their treatment, 2012, %

TOTAL		72.5
Region	North	68.8
	Center	71.8
	South	79.9
Area of residence	Urban (municipalities)	70.2
	Urban (other cities)	74.3
	Rural	73.0
Gender	Male	72.3
	Female	72.8
Age	15-24 years old	69.3
	25-34 years old	73.0
	35-49 years old	75.7
	50-64 years old	72.0
Education	Low	70.0
	Medium	73.9
	Higher	72.4
Socio-economic status	Low	74.0
	Medium	70.4
	Higher	73.4
Nationality	Moldovan/Romanian	70.6
	Russian	74.6
	Ukrainian	72.2
	Other	87.6

Trends in awareness about tuberculosis in general population

When asked about the change of their community's awareness about tuberculosis, the opinions of respondents were divided. Thus, 38.0% of respondents think that population awareness about tuberculosis has changed, 29.7% believe that it has not changed and 32.3% were undetermined. The prevalence of positive answers was higher in case of Center region (46.4%) compared to Southern region (34.6%) and Northern region (25.4%) and in case of municipalities (49.5%) compared to rural areas (35.0%) and rayon centers (32.1%).

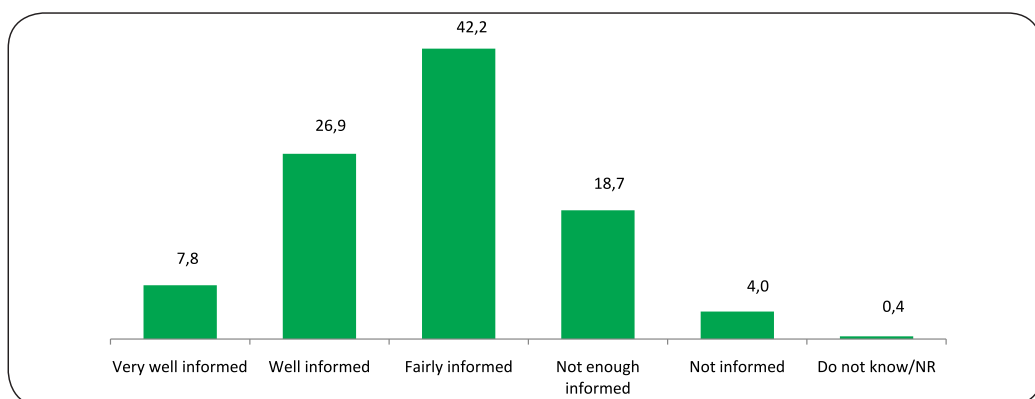
The majority of respondents who noticed the change, think that higher awareness about tuberculosis made a difference for the patients (72.8%), the prevalence of the positive answers being higher in case of Central region (78.1%) compared to Northern region (67.9%) and Southern region (59.7%), 11.3% of respondents believe that this change did not have any impact on the situation of the persons with tuberculosis, and 15.9% do not know if there have been any changes for the patients with tuberculosis.

In the opinion of respondents who think that there were any changes in the last year, the patients receive more financial and food support (49.2%), people around TB patients have become more open to offer support to patients in treatment adherence (34.5%). A smaller share of population think that more consideration is given to isolation of infectious patients (32.0%); that patients are forced to treatment (17.9%), and patients are more discriminated by the community (10.1%). Approximately every fourth respondent did not know if the life of the patients from their community has changed (22.0%).

Communication and the sources of information about tuberculosis

The general population think that people are generally informed about tuberculosis: 35.7% think they are very well or well informed, 42.4% think they are fairly informed and less than one fourth (22.7%) believe that they are little or not informed on this subject. There are no significant differences in terms of geographical distribution, but 67% of respondents who stated that they are little or not informed about tuberculosis live in rural areas, 14% are residents of municipalities and 20% are citizens of other urban areas.

Figure 9. Degree of information related to tuberculosis, 2012, %



For 68.1% of respondents, it is very important to be informed about tuberculosis and for other 22.8% it is rather important, showing a high public interest for tuberculosis. The share of those showing little or lack of interest is of 8.0% and the non-responses represent 1.1%.

About a third of respondents (29.8%) mentioned that they talked to someone about tuberculosis in the last 12 months. The most frequent discussions were reported by the residents of Central region (58%) and the least by the residents of the Southern region (18%). The persons with whom the respondents most often discussed about tuberculosis were health workers: family doctor (60.4%), and nurses (44.0%), followed by social network: colleagues (46.1%), parents (42.8%) and friends or neighbors (37.0%). The ones who did not talk with anyone about tuberculosis are most commonly living in rural areas (60%) and people with low socio-economic status (61%).

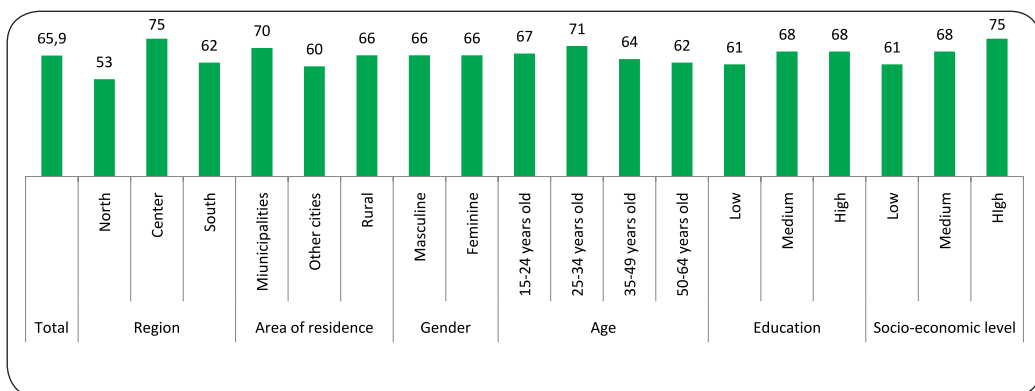
The majority of respondents (61.4%) stated that they heard or read about tuberculosis in the last 6 months, while 37.0% did not receive any information about this disease (non-responses – 1.6%), the prevalence of those who heard about tuberculosis being higher depending on the education and socio-economic level and lower in the Southern region and rayon centers.

As for the sources of information, the most frequently named were television (83.8%), followed by booklets, posters (46.0%), radio (43.8%), internet (32.9%), written press (27.9%) and volunteers (9.1%). As per age group, television (88%) and radio (50%) are the most common sources of information for the persons aged 50-64 years old; newspapers (32%) for those aged 35-49 years old; booklets and posters (54%) represent a source of information for people aged 25-34 years, and internet (54%) for the youngest (15-24 years old).

For 55.4% of respondents, the above mentioned sources of information contributed to significant or very significant improvement of knowledge about tuberculosis (17.2% and 38.2%); fair improvement of knowledge (30.8%); little or lack of improvement of knowledge (11.4% and 1.5%). Some 60% of respondents who received information about tuberculosis passed it to someone else: family members (85%), friends (65%), neighbors (29%), work mates (27%) or other persons (3%). Persons aged 35-49 years were the most active in spreading the information.

Approximately two thirds of respondents (65.9%) have heard or seen the message “*If you experience any symptoms, go to see a doctor. Tuberculosis can be cured!*”, the prevalence being higher in case of residents of Center region (75.0%), municipalities (70.3%) and villages (65.7%), and in the age group 25-34 (71.2%) and in case of higher socio-economic status (74.8%).

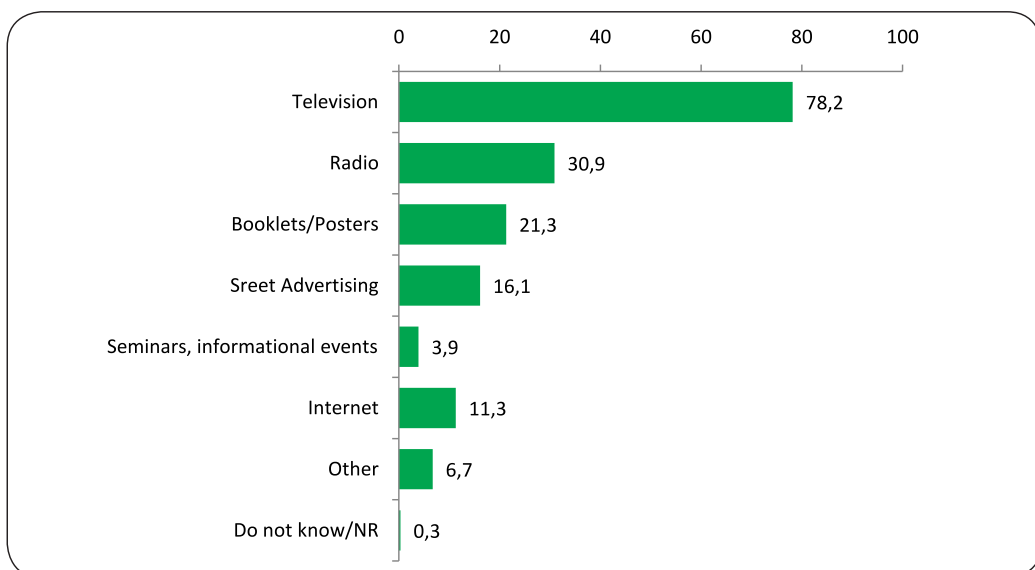
Figure 10. Share of population who has heard or seen the message „If you experience any symptoms, go to see a doctor - tuberculosis can be treated!”, 2012, %



Among those who has heard or has seen the message, 78.2% heard or saw it on TV, 30.9% heard it on the radio, 21.3% read it in the booklets or on the posters, 16.1% saw it on the street banners, 11.3% - on the internet, 3.9% - at the seminars and informational events and 7% in other sources.

Respondents were generally receptive to key messages in the informational campaigns and to the recommendations included in the informational materials. Thus, 94.9% of respondents stated that they would be alert about TB symptoms, 95.6% would visit a doctor in case of experiencing these symptoms, 93.3% would recommend to their relatives and friends to see a doctor, 89.0% would encourage the patients to complete the treatment, and 84.0% would offer more support to patients with tuberculosis.

Figure 11. Sources through which the key campaign message was received, 2012, %



COMPARATIVE ANALYSIS OF MAJOR INDICATORS AGAINST PREVIOUS KAP ROUNDS

1. Tuberculosis is a disease known to almost all the citizens of the Republic of Moldova, a constant finding within all four rounds.

2004	2008	2010	2012
99%	98%	98%	98%

2. The integrated indicator⁴ of knowledge about symptoms of tuberculosis had a positive evolution in the period of 2004-2010 (from 46% to 64%). If we refer to the period of 2008-2012, the evolution was relatively constant.

2004	2008	2010	2012
46%	63%	64%	63%

3. The share of respondents who know that tuberculosis is an infectious disease increased continuously from 2008, reaching the maximum level in 2012 (94%).

2004	2008	2010	2012
89%	89%	90%	94%

4. If in 2004 only about every fourth respondent answered that tuberculosis is transmitted through air while coughing, later in 2008 over 90% of respondents mentioned this route of transmission of the disease. A continuously increasing trend for all four rounds of survey is observed, the maximum value of this indicator being reached in 2012 (95%).

2004	2008	2010	2012
22%	92%	93%	95%

5. The share of respondents who know that tuberculosis is not transmitted through household contact did not increase compared to previous years.

2004	2008	2010	2012
-	8%	9%	4%

6. The share of respondents who know that tuberculosis is not transmitted through handshake did not improve either. The stagnant dynamic of indicators 5 and 6 show that informational campaigns should provide more focus on decreasing misconceptions TB transmission routes.

⁴ This integrated indicator combines the answers to three questions, these are: (a) coughing with sputum for more than 3 weeks, (b) fatigue and (c) fever which lasts for more than 3 weeks. The indicator represents the positive answers to these three questions.

2004	2008	2010	2012
-	42%	39%	38%

7. More than two thirds (or 69%) of respondents within the 2012 survey think that coughing is the main symptom of tuberculosis. The results of the previous surveys show that a little more than half of the respondents thought the same way. In case of this indicator, a positive evolution is observed in 2012 compared to last round of survey (2010).

2004	2008	2010	2012
-	55%	52%	69%

8. The indicator *tuberculosis can be cured* showed an increasing trend from 2004 until 2010. In 2012 there was a slight decline compared to the last round (from 45% in 2010 to 43% in 2012).

2004	2008	2010	2012
14%	39%	45%	43%

9. The indicator *tuberculosis can be cured if treated in time* showed a negative evolution from 2004 until 2010. In 2012 the share of respondents who believe that TB can be cured if timely treated increased, reaching 45%. This share is higher with 10% compared to the results of the survey from 2010.

2004	2008	2010	2012
57%	42%	35%	45%

10. The indicator *having tuberculosis is not a shame* reached a maximum level in 2012 (73%), which is a slight improvement compared to previous years. Starting with 2008, the share of respondents who believe that it is not a shame to have tuberculosis was increasing.

2004	2008	2010	2012
72%	67%	68%	73%

11. The indicator *family doctor, the first one to refer to in case of contracting the disease* has increased in all the rounds of survey (from 64% in 2004 to 83% in 2012).

2004	2008	2010	2012
64%	69%	76%	83%