



# **TUBERCULOSIS IN MOLDOVA:**

KNOWLEDGE, ATTITUDES AND PRACTICES

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#### **SUMMARY**

This survey was conducted by Magenta Consulting for PAS Center.

The purpose of the survey was to assess the knowledge, attitudes and practices, stigma in the community of tuberculosis people towards TB prophylaxis and fighting.

The data were collected using the quantitative method – CAPI face-to-face survey (computer-assisted personal interview). The general sample covered 1226 women and men, citizens of the Republic of Moldova, aged between 15 and 64 years. The general sample comprised a migrant category, which included 112 respondents who were abroad for 3 months for work purposes during the last year. They had to answer to an additional chapter for this category.

The data were collected during 23 August – 2 October 2021.

#### I. Knowledge

As much as 99% of the respondents said they heard about the disease called 'tuberculosis'. Most of them mentioned the cough as the most obvious TB symptom. The general population mentioned, with the interviewer's assistance, the following symptoms: long-lasting cough (91%), acute, convulsive cough (89%), weakness/rapid fatigue, cough with phlegm, phlegm with blood (88% each symptom). Compared to the non-migrants, the migrants, with the interviewer's assistance, said that the cough with phlegm (93%), the cough (90%) and the long-lasting cough (90%) were the three main TB symptoms.

As much as 84% of the respondents – general population (85% of non-migrants and 74% of migrants) believed that tuberculosis was an infectious disease. Most of the general population (90%) continued to say that tuberculosis was spread by air when coughing. At the same time, the majority of the respondents had the misguided perception that TB was spread from person to person through touching or sharing the same plates. A share of 46% of the general population said that tuberculosis was spread by shaking hands.

Around 42% of the respondent general population believed that tuberculosis could be treated, and almost a half of them (45%) thought that a patient could be cured if receiving treatment on time.

About 10% of survey participants believed having a high or very high risk of contracting tuberculosis. The share of persons who assessed the risk as low or no risk at all was significantly higher – 59% among the general population (58% of non-migrants and 65% of migrants).

#### II. Attitudes

As much as 10% of the respondent general population mentioned that they or their relatives had tuberculosis.

The respondents were also asked if there was anyone sick with tuberculosis among the people they communicate frequently with (10% answered positively). Most of them mentioned not visiting the sick person at home, the fear to get infected being the most often invoked reason.

About 43% of respondents believed that a person with tuberculosis would try to hide their diagnosis from the others. They gave the following grounds: 'fear to be avoided by others' (97%), 'fear to lose friends' – 87% (86% of non-migrants and 97% of migrants) and 'fear to lose the job' – 79% (79% of non-migrants and 82% of migrants).

A majority (84%) of the general population (84% of non-migrants and 79% of migrants) believed that being sick with tuberculosis was not a shame.

In general, the respondents were willing to accommodate a relative sick with tuberculosis until they were cured fully (after the hospital treatment). Around one in four people in the general population (27%) said they would

be willing to take the sick person home, and about half (54%) would accommodate only a close relative. Compared to the non-migrants, 30% of the migrants said that they would invite the sick relative to stay at their dome until he/she was cured fully, and 50% would accommodate the patient only if he/she was a close relative.

#### III. Practices

As much as 7% of the general population declared having noticed symptoms of tuberculosis in them or in some members of their families. The survey results reveal that most of the respondents see any symptom of tuberculosis as a grounded reason to seek immediate health care. The following symptoms were mentioned most often: 'phlegm with blood' (97%), 'long-lasting cough' (94%), and 'fever during 3 weeks' (94%).

When noticing the above-mentioned symptoms, most respondents (81%) would first or second see the family doctor. Also, about one in three would see the phthisis pneumology specialists and would go to the hospital. According to the survey participants, three main reasons why certain patients do not finish TB treatment were as follows: 'it is very difficult to stay for 2 months in the hospital and then visit the doctor on a daily basis' (76%), lengthy treatment (76%) and patient irresponsibility (66%).

If they personally had to adhere to a treatment that required taking medicines for 6-12 months in the presence of a health worker, 79% of respondents said they would follow it.

The health workers were viewed as the main persons who could provide any kind of support to tuberculosis patients in order to finish their treatment (87%). At the same time, the respondents declared their willingness to offer moral support and to monitor the intake of medicines by tuberculosis patients. Most of them said that they would personally involve in offering moral support and in monitoring the intake of medicines by a TB patient they knew (74%). The respondents who mentioned not being willing to support the TB patient stated that they were afraid of getting infected and that they could not get involved in another individual's life.

#### IV. Information about tuberculosis

Out of all participants in the survey, 38% reported to be 'well' or 'very well' informed about tuberculosis. Compared to the non-migrants (40%), the migrants seemed to be less informed about tuberculosis: 28% reported to be 'well' or 'very well' informed. As much as 62% of the respondents reported the information about tuberculosis as being important.

A total of 11% of the general population (11% of non-migrants and 7% of migrants) declared that someone had talked to them about tuberculosis during the past 12 months. When asked about this person, the family doctor, the colleagues and parents or relatives were mentioned most frequently. The television continued to be the main source of information about tuberculosis (77%).

A share of 14% believed that people's attention to tuberculosis had increased during the past year.

During the past 12 months the message 'In case of symptoms, see the doctor. Tuberculosis can be treated!' was noticed by 46% of respondents (47% of non-migrants and 36% of migrants). The former was seen on TV mostly.

## IV. Stigmatisation of people with tuberculosis

The respondents were presented with a list of statements describing how some people feel about individuals with tuberculosis. Most of them totally agreed that some people do not want individuals with tuberculosis to play with their children (57%). To the same extent, half of them fully agreed with the statement 'some people stay away from the individuals with tuberculosis' (50%).

Few of the interviewed respondents (9%) mentioned seeing or hearing of cases when individuals with tuberculosis in their community were stigmatised for having tuberculosis (8% of non-migrants and 14% of migrants). Of the former, most often, the respondents stated that the latter failed to admit that they had symptoms.

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#### **INTRODUCTION**

This survey was conducted by Magenta Consulting for PAS Center.

## i.1 Purpose of the survey

**The primary purpose** of the survey was to assess the level of tuberculosis knowledge, attitudes, and practices in general population.

# i.2 Methodology

The data presented in this report were collected via a survey conducted in the general population.

### i.2.1 Sample and data collection

Sample type: probabilistic sample.

Sample size: 1226 persons, 15-64 years old, general population

**Error margin:** ±2.83%

Geography: nationally representative.

Data collection: face-to-face, CAPI - Computer-assisted personal interview (using tablets).

**Period of data collection:** 23 August – 2 October 2021

Table i.1. General population demographics, N=1226, %

		%	N
	15-24 y.o.	18	225
	25-34 y.o.	18	226
Age	35-44 y.o.	19	236
_	45-54 y.o.	16	200
	55-64 y.o.	28	339
C	Male	46	563
Sex	Female	54	663
	No education	0.1	1
	Primary school	1	15
	9 grades or less	9	114
	Incomplete secondary education	7	89
Education	Secondary/upper-secondary education	23	282
Education	Vocational secondary education, college	34	411
	Incomplete higher education	5	60
	Complete higher education	19	233
	Postgraduate education	1	16
	DK/NA	0.4	5
	Single	24	299
	Married	60	736
Marital status	Cohabitation	2	26
	Divorced	7	91
	Widowed	6	73
	Large urban areas	27	325
Average	Small urban areas	17	214
_	Rural	56	687
	Moldovan/Romanian	87	1064
	Russian	5	62
	Ukrainian	2	22
	Bulgarian	2	20
Ethnicity	Gagauzian	4	47
·	Roma	0.1	1
	Mixed ethnicity	0.5	6
	Other	0.2	2
	DK/NA	0.2	2
	Under MDL 1000	6	78
Household in some	MDL 1001 – 3000	17	209
Household income	MDL 3001 – 5000	17	204
	MDL 5001 - 7000	11	137

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MDL 7001 – 9000	9	106
MDL 9001 – 11000	7	84
MDL 11001 – 13000	2	30
MDL 13001 – 15000	2	28
More than MDL 15000	4	46
DK/NA	25	304

The migrants were identified using a filter that required each respondent to answer to the following questions: whether they had been abroad for 3 months in the past year and what was the purpose of their departure. Those who mentioned being abroad for work purposes had to answer to an additional chapter for this group. Hence, the report presents the data for this category too. The questionnaire for the general population made it possible to interview 112 representatives from the analysed category.

#### **Data Collection**

**Choosing the settlement.** Being a nationally representative sample, the settlements were divided into 11 geographic region groups, and each of them comprised on average 4 districts. Thanks to this procedure, the interviews had a uniform geographic coverage. Each group contains a list of urban and rural settlements, divided by size: large, average and small.

The next step was to select randomly the required number of settlements. The number of questionnaires for each settlement is limited as follows: up to 15 interviews are conducted in large villages, up to 13 interviews are done in average-sized villages and 10 in small villages. As regards urban areas, only one town from each district is chosen randomly to conduct the interviews.

Choosing the household. As far as the towns go, a list of streets is developed. Then, the streets where the interviews are to be conducted are chosen randomly. Prior to start collecting the data, the project manager of data collection department sporadically choses for each street the house number that is going to serve as a starting point. When arriving at the street assigned to him/her, the interviewer starts to conduct the interviews from the point the project manager indicated. For a start, the interviewer calculates the apartment number from which he/she is going to begin. This is done by using a table of randomly generated numbers with which the starting point is randomly determined. Then, after completing the first questionnaire, the interviewer follows the +3-step rule, i.e. he/she skips 2 apartments to reach the next respondent.

In case of rural settlements and smaller towns, the starting point may be the mayoralty, the church, the school, the post office or, when there are no such locations, the orientation point may be a cafe/shop, if there are no other public places. Since each entrance is considered as a separate building, the +3-step rule is used in this case. The interviewer skips 2 entrances and goes to the third, similar to the apartment method. If there is only one apartment left in the first entrance, he/she continues to calculate for the next entrance.

**Choosing the respondent.** If the door opens, the interviewer invites for interview the person who meets the survey criteria and the one who celebrated last his/her birthday. If there is a person who has been gone for a longer period of time (for example, to work abroad), the interviewer chooses the next person who celebrated his/her birthday before the person who is not present.

The methodology described above is the most appropriate for this survey since:

- It ensured the highest geographical coverage;
- Interviews were conducted face-to-face, according to the systematic sampling methodology.

The data were collected according to a statistical step. The person in the household was selected using 'the last anniversary' method, i.e., the person who celebrated last his/her birthday is interviewed. If the needed person was not at home, the interviewer came back later. Each contact was recorded on a roadmap, where the interviewer wrote down the address and the result of the contact (interview conducted/refused and the reason for the refusal/not at home, to come back later). Thanks to these data, the information on answer rate was presented.

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#### i.2.2 Data collection tools

The survey was conducted on the basis of the questionnaire for the general population (Annex 1). The latter built on the questionnaire used during the previous surveys (2017, 2012, 2010, 2008, and 2004). When developed, these questionnaires were pre-tested to check them for mistakes and to prevent the misunderstanding of some questions. Thus, 20 tests and pilot interviews were conducted in Romanian and Russian. As a result, the questionnaire was improved, adjusted, and approved jointly with the representatives of PAS Center.

#### i.2.3 Interviewing

The data were collected using CAPI (computer assisted personal interview) method. In addition, about 50% of the respondents were randomly called at the end of data collection to confirm their participation in the survey. They were asked questions about the duration and the place where the interview took place, as well as some key questions from the questionnaire, to check the answers the interviewer wrote down.

In order to prevent COVID-19 infection, data collection rules have been established in the context of the pandemic, which were based on the recommendations of the World Health Organization (WHO) and the Commission for Emergency Situations of the Republic of Moldova. All the employees involved in the survey were trained on the key measures to prevent COVID-19 infection and were provided the necessary personal protection equipment (disposable gloves, face masks, disinfectant). The field operator informed the respondents about the protection measures put in place to prevent COVID-19 infection. The former observed the social distance recommended by the WHO (1 m) and excluded all interpersonal contact. Both the field operator and the respondents who participated in the survey wore personal protection equipment throughout the whole interview. The field operator requested, with the respondent's permission, the questionnaire to be filled in the yard of the house/building.

#### i.2.4 Data analysis

CAPI survey was conducted using tablets, which is an important advantage when entering and processing the data. Collecting questionnaires on tablets allows all interviews to be gathered simultaneously on a common database. In addition, the programming reduced to a minimum the situations when the questionnaire is filled in incorrectly and the passages are not observed. This is due to the inclusion of the filter in the system and the scheduling of the jumps needed to logically fill in the questionnaire.

SPSS software was used to analyse the survey data. It not only determines the overall results for each question, but also allows an analysis related to other questions. The report presents, via graphs, the answers to each question. In addition, the answers to all the questions, disaggregated by socio-demographic criteria (sex, age, area of residence, education, and economic status), were attached in the annexes.

#### i.3 Research limits and barriers

 Considering the fact that the data included in the report rely on the self-reported information, and the sensitivity of the analysed topic, a limit is the possible predisposition of certain respondents to give socially desirable answers.

#### CHAPTER I: DYNAMIC ANALYSIS OF KEY INDICATORS

As many as 10 key indicators were identified for this survey, which focus on citizens' knowledge, attitudes, and practices with regards to tuberculosis. Their value and dynamic analysis are shown in this chapter.

The table below presents the evolution over time of indicators' value for the general population (total sample) and for the migrants. The latter are the respondents from the general population who were abroad for 3 months for work purposes during the last year.

Table 1.1. Key indicators on tuberculosis knowledge, attitudes, and practices. Republic of Moldova, comparison years: 2004, 2008, 2010, 2012, 2017, 2021 (%)

	Indicators	2004	2008	2010	2012	2017	2021
1	Respondents who heard about tuberculosis	99	98	98	98	100	99
2	Integrated indicator of tuberculosis symptoms knowledge (number of respondents who answered 'yes' to the following symptoms: 1. Cough with phlegm for more than 3 weeks; 2. Fatigue; 3. Fever for 3 weeks. Denominator – everyone who answered this question).	46	63	64	63	71	68
3	Respondents who know that tuberculosis is an infectious disease.	89	89	90	94	85	84
4	Respondents who know that tuberculosis is spread by air when coughing.	22	92	93	95	93	90
5	Respondents who know that tuberculosis is not spread by habitual contact (dishes).	-	8	9	4	3	6
6	Respondents who know that tuberculosis is not spread by shaking hands.	-	42	39	38	34	42
7	Respondents who know that cough is the main sign of tuberculosis.	-	55	52	69	61	79
8	Respondents who know that tuberculosis can be treated (answers in general yes and yes, if treated on time).	71	81	80	88	82	87
9	Respondents who believe that tuberculosis is not a shame.	72	67	68	73	71	84
10	Respondents who would see the family doctor in case of disease symptoms.	64	69	76	83	83	81

**Share of population who heard about tuberculosis.** Most of the participants in the surveys conducted so far mentioned that they heard about tuberculosis. Their share in 2021 is 99%, by 1 percentage point (p.p.) less than in 2017.

Table 1.2. Share of population who heard about tuberculosis (%)

	2004	2008	2010	2012	2017	2021
General population	99	98	98	98	100	99
Migrants	-	-	-	-	100	99

**Integrated indicator of tuberculosis symptoms knowledge among the population.** For the general population, the integrated tuberculosis knowledge indicator has increased from 2004 to 2017. In 2021, 68%

<sup>&</sup>lt;sup>1</sup> This integrated indicator combines the answers to 3 questions: (2) weakness, rapid fatigue, and suffocation; (3) fever during 3 weeks and longer; (4) cough with phlegm (liquid/mucus eliminated when coughing). The indicator presents the affirmative answers of respondents to these three questions.

of the general population and 69% of the migrants gave affirmative answers to all three questions about tuberculosis symptoms. Though the indicator's value among the general population decreased in 2021 by 3 p.p. compared to 2017, the share is higher than those recorded during 2004-2012.

Table 1.3. Integrated indicator of tuberculosis symptoms knowledge reported to general population and migrants (%)

	2004	2008	2010	2012	2017	2021
General population	46	63	64	63	71	68
Migrants	-	-	-	-	71	69

Share of population who knows that tuberculosis is an infectious disease. The share of those mentioning that tuberculosis is an infectious disease has steadily risen during 2004-2012. In 2021, 84% of the respondents in the general population (-1 p.p. compared to 2017) and 74% of migrants (-14 p.p. compared to 2017) reported knowing that tuberculosis is an infectious disease.

Table 1.4. Share of general population and migrants who know that tuberculosis is an infectious disease (%)

	2004	2008	2010	2012	2017	2021
General population	89	89	90	94	85	84
Migrants	-	-	-	-	88	74

**Share of population who knows that tuberculosis is spread by air when coughing.** The share of respondents who knew that tuberculosis is spread by air when coughing has been on the rise during 2004-2012, with a 2-p.p. decrease in 2017. In 2021, 90% of general population (-3 p.p. compared to 2017) and 88% of interviewed migrants (-4 p.p.) reported knowing that tuberculosis is spread by air when coughing.

Table 1.5. Share of general population and migrants who know that tuberculosis is spread by air when coughing (%)

	2004	2008	2010	2012	2017	2021
General population	22	92	93	95	93	90
Migrants	-	-	-	-	92	88

**Share of population who knows that tuberculosis is not spread by habitual contact.** The population seems to be less informed that tuberculosis is not spread by habitual contact, the highest share being recorded in 2010 (9%). In 2021, 6% of the general population surveyed knew that tuberculosis is not spread by habitual contact: a 3-p.p. increase compared to 2017 and a 3-p.p. decrease compared to 2010. Both in 2017 and 2021, 3% of migrants mentioned that tuberculosis is not spread by habitual contact.

Table 1.6. Share of general population and migrants who know that tuberculosis is not spread by habitual contact (%)

	2004	2008	2010	2012	2017	2021
General population	-	8	9	4	3	6
Migrants	-	-	-	-	3	3

**Share of population who knows that tuberculosis is not spread by shaking hands.** The share of participants who mentioned that tuberculosis is not spread by shaking hands has experienced a steady decrease during 2008-2017. It was for the first time in 2021 when this indicator recorded an increase as compared with the previous year – 42% of general population (+8 p.p compared to 2017) knew that tuberculosis is not spread by shaking hands. Compared to 2017, there is a decrease of 10 p.p. of the share of the migrants surveyed in 2021 who knew that tuberculosis is not spread by shaking hands.

Table 1.7. Share of general population and migrants who know that tuberculosis is not spread by shaking hands (%)

	2004	2008	2010	2012	2017	2021
General population	-	42	39	38	34	42
Migrants	-	-	-	-	41	31

**Share of population who knows that cough is the main symptom of tuberculosis.** The highest share of those who know that cough is the main symptom of tuberculosis was recorded in 2021: 79% of general population (+10 p.p. compared to 2012) and 71% of migrants (+14 p.p. compared to 2017) who participated in the survey know this.

Table 1.8. Share of general population and migrants who know that cough is the main symptom of tuberculosis (%)

	2004	2008	2010	2012	2017	2021
General population	-	55	52	69	61	79
Migrants	-	-	-	-	57	71

Share of population who knows that tuberculosis can be cured. As much as 87% of general population and 83% of migrants surveyed in 2021 know that tuberculosis can be cured. Though this is an increase compared to 2017 (+5 p.p. for the general population and migrants), the share is by 1 p.p. lower than the highest value recorded in 2012.

Table 1.9. Share of general population and migrants who know that tuberculosis can be cured (%)

	2004	2008	2010	2012	2017	2021
General population	71	81	80	88	82	87
Migrants	-	-	-	-	78	83

**Share of population who believes that being sick with tuberculosis is not a shame.** If compared with the previous years, the 2021 survey revealed a significantly higher share of those believing that being sick with tuberculosis is not a shame: 84% of general population (+11 p.p. compared to 2012) and 79% of migrants.

Table 1.10. Share of general population and migrants who believe that being sick with tuberculosis is not a shame (%)

	2004	2008	2010	2012	2017	2021
General population	72	67	68	73	71	84
Migrants	-	-	-	-	78	79

**Share of population who would see the family doctor in case of disease symptoms.** During 2004-2012, the share of those who would first see the family doctor in case of disease symptoms experienced a positive trend. In 2021, their share is 81%, with 2 p.p. lower than in 2012-2017, but also higher than in 2004, 2008 and 2010. As much as 78% of the surveyed migrants mentioned that they would first see the family doctor, which represents a decrease of 4 p.p. compared to 2017.

Table 1.11. Share of general population and migrants who would first see the family doctor in case of disease symptoms (%)

	2004	2008	2010	2012	2017	2021
General population	64	69	76	83	83	81
Migrants	-	-	-	-	82	78

# CHAPTER II: TUBERCULOSIS KNOWLEDGE, ATTITUDES AND PRACTICES IN GENERAL POPULATION

This chapter presents the results of the survey on tuberculosis knowledge, attitudes, and practices in the Republic of Moldova.

# 2.1 Tuberculosis knowledge, attitudes, and practices in general population

The majority of the population stated that they had heard about tuberculosis (99%).

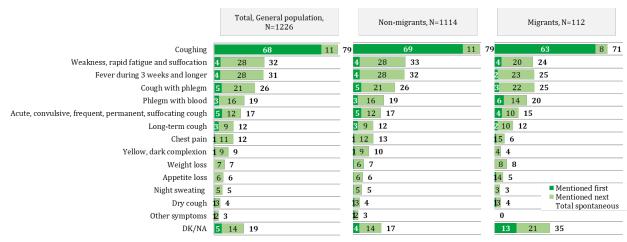
Figure 2.1.1. Share of population who heard about tuberculosis (%).



The respondents were asked to indicate the most obvious TB symptoms. First, they spontaneously listed (without suggestion) all the symptoms they remembered, and then they were presented with a list of symptoms.

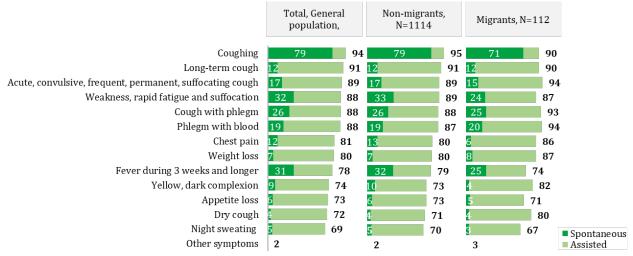
The symptoms mentioned spontaneously were analysed according to the order in which they were indicated: the first mention and the other. Most of the respondents spontaneously indicated the cough as the most obvious TB symptom – 79% of non-migrants and 71% of migrants. All of them were mentions. In addition, around one in three respondents said that the weakness, rapid fatigue, suffocation (32% of the population, all mentions) and fever during 3 weeks (31% of the population) were the most obvious TB symptoms. About one in four respondents mentioned the cough with phlegm as a TB symptom (26%).

Figure 2.1.2. Population's mentions of the most obvious TB symptoms (%).



Once the list of symptoms was presented, most interviewees believed that all the symptoms on the list were specific to the tuberculosis. The share of the general population varied from 69% to 94%, depending on the symptom. Similar to the spontaneous mentions, the cough was identified on the list most often by the respondents from the general population as a TB symptom (94%). In addition, the general population mentioned, with the interviewer's assistance, the following symptoms: long-lasting cough (91%), acute, convulsive cough (89%), weakness/rapid fatigue, cough with phlegm, phlegm with blood (88% each symptom). Some symptoms were reported, with the interviewer's assistance, more often by migrants compared to non-migrants (94% of migrants identified from the list that acute cough and phlegm with blood were TB symptoms). In addition, the migrants said that the cough with phlegm (93%), the cough (90%) and the long-lasting cough (90%) were TB symptoms.

Figure 2.1.3. Share of population that indicated, alone and with interviewer's assistance, the symptoms of tuberculosis (%).



The majority of the population (84%) knows that tuberculosis is an infectious disease. Compared to the non-migrant population, the interviewed migrants stated to a lesser extent that tuberculosis is contagious (74%).

A higher share of respondents from towns, other than municipalities (90%), and Russian respondents (92%) indicated that tuberculosis is an infectious disease.

Figure 2.1.4. Share of respondents who believe that tuberculosis an infectious disease (%).

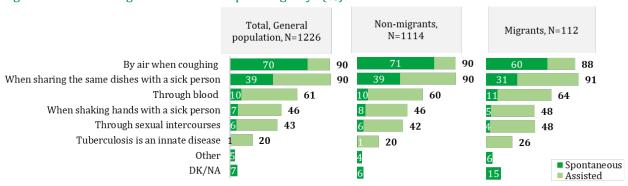


The respondents were asked to say how does tuberculosis spread. First, they answered spontaneously, without interviewers' assistance, and later they identified the ways in the list presented to them.

Most often, the general population stated that tuberculosis is spread by air when coughing. This answer was given spontaneously by 70% of respondents and by 90% when assisted by the interviewer. At the same time, the citizens mentioned that TB spreads from person to person when sharing the same plates (39% – spontaneous mention, 90% – with interviewer's assistance). Once they were presented how tuberculosis spreads, the majority (61%) said that the disease spread through blood, and just under half believed that it spreads by shaking hands (46%) and through sexual intercourses (43%).

Overall, the migrants spontaneously indicated to a lesser degree the ways tuberculosis spreads – 60% mentioned without interviewer's assistance that it spreads by air when coughing, and 31% – when sharing the same plates with infected people. Once the list of routes of tuberculosis contamination was read to them, 91% of migrants said that it spreads when sharing the same dishes with a sick person, while 88% stated that it spreads by air. When assisted by the interviewer, the migrants also mentioned that tuberculosis spreads through blood (64%), by shaking hands and through sexual intercourses (48% each share).

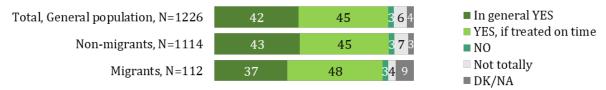
Figure 2.1.5. Knowledge of tuberculosis spreading ways (%).



The majority of the surveyed population believed that tuberculosis can be cured. As much as 42% of the general population reported that tuberculosis can be cured, and 45% thought that a patient can be cured if receiving treatment in time. In addition, a smaller share of the surveyed migrants mentioned that, in general, tuberculosis can be cured (37%).

A higher share of respondents who reported a household income exceeding MDL 9000, and those who live in municipalities believed that tuberculosis can be cured in general or if caught early.

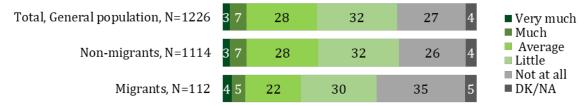
Figure 2.1.6. Share of general population and migrants who believe that tuberculosis can be cured, (%).



Around one in ten respondents believed having a high or very high risk of contracting tuberculosis. The majority assessed the risk as low or no risk at all.

The respondents of Gagauz ethnicity, the residents of towns (other than municipalities), and those living in the South of Moldova claimed to a higher degree having a high risk of contracting tuberculosis.

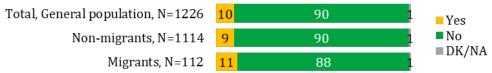
Figure 2.1.7. Estimation of the risk of contracting tuberculosis, (%).



#### 2.2 Attitudes towards tuberculosis and tuberculosis sufferers

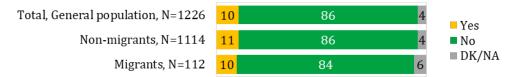
Around one in ten respondents mentioned that he/she or their relatives had tuberculosis. At the same time, the majority reported the contrary.

Figure 2.2.1. Distribution of answers regarding respondents or their relatives being sick with tuberculosis



10% of the general population said that they communicated often with people that were or are sick with tuberculosis.

Figure 2.2.2. Distribution of answers on tuberculosis sufferers among people with whom respondents communicate often (neighbour, classmate, friend)



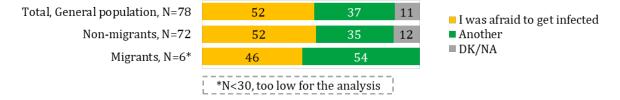
Among general population, who stated that they communicated often with people that were sick with tuberculosis, 61% declared that they had not visited these sick people at home.

Figure 2.2.3. Tuberculosis sufferers visit rate, (%).



About half of the respondents who did not visit the person sick with tuberculosis with whom they often communicate, stated that they were afraid of getting infected (52%). 37% said they had another reason for avoiding visiting the person sick with tuberculosis.

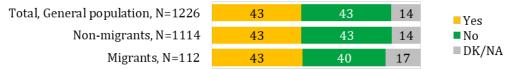
Figure 2.2.4. Reasons to avoid visits, (%).



The opinion towards willingness of people with tuberculosis to hide their diagnosis is divided. 43% of the general population believe that a person sick with tuberculosis would try to hide the diagnosis from the others. A similar proportion of respondents state that people sick with tuberculosis are not inclined to hide their diagnosis (43%).

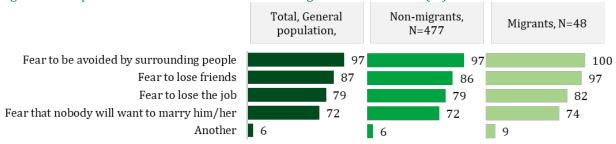
Respondents from municipalities (54%) claim to a higher degree that if someone gets sick with tuberculosis, then that person would hide the diagnosis from the others.

Figure 2.2.5. Opinion about the people with tuberculosis' inclination to hide their diagnosis, (%).



Most of the respondents who believe that a person sick with tuberculosis would try to hide the diagnosis from the others, think that all reasons identified may be relevant. The main reason for hiding the diagnosis 'tuberculosis' was the fear to be avoided by others (97% of the general population).

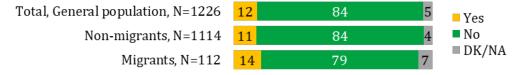
Figure 2.2.6. Opinion about the reasons to hide the diagnosis 'tuberculosis' (%).



A majority of respondents believed that being sick with tuberculosis was not a shame – 84% of non-migrants and 79% of migrants.

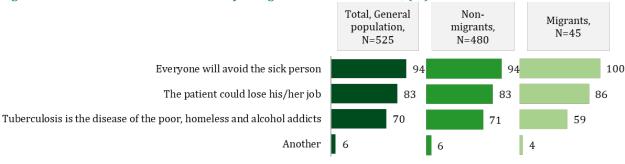
Respondents living in the central part of the country and those with income up to MDL 5,000 claimed to a higher degree that being sick with tuberculosis was a shame. Similarly, this perception seems to increase with age.

Figure 2.2.7. Prevalence of the opinion that tuberculosis is a shame, (%).



94% of the general population who considered that being sick with tuberculosis was a shame, said that they all avoided a person with tuberculosis. At the same time, the following reasons were mentioned: 'job loss' (83%) and 'tuberculosis is the disease of the poor, homeless and alcohol addicts' (70%).

Figure 2.2.8. Reasons for shame caused by being sick with tuberculosis, (%).



If a relative would get sick with tuberculosis, around one in four respondents in the general population (27%) said they would take the relative home until the definitive recovery, and about half (54%) would accommodate only a close relative.

Survey participants who live in urban areas, and those with a household income up to MDL 5,000 were more open to take a relative sick with tuberculosis home, until the definitive recovery.

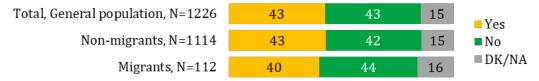
Figure 2.2.9. Willingness to accommodate a relative with tuberculosis in own home, for a longer period of time (%).



Respondents' opinion about people's attitude towards people sick with tuberculosis is divided. 43% of general population believe that if someone gets sick with tuberculosis, the others will change their opinion towards the former.

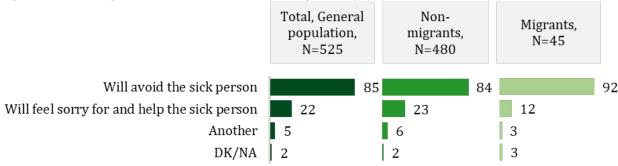
About half of the Russian respondents stated that if someone got sick with tuberculosis, the others would change their opinion towards the former.

Figure 2.2.10. Respondents' opinion about others' attitude towards a person sick with tuberculosis, (%).



Among respondents who believe that others would change their opinion about the person with tuberculosis, the majority thinks that others would avoid the sick person (84% of non-migrants and 92% of migrants).

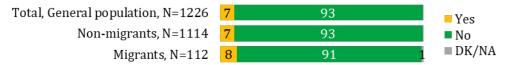
Figure 2.2.11. Change in the attitude towards the sick person, (%).



# 2.3 Willingness to adhere to the treatment or provide support in the case of tuberculosis treatment

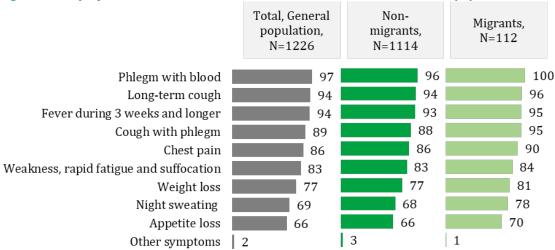
7% of the general population declared they noticed symptoms of tuberculosis in them or in some members of their families.

Figure 2.3.1. Rate of respondents who noticed symptoms of tuberculosis in themselves or in members of their families, (%).



A list of symptoms and the question asking which symptom would make them consult a doctor immediately was presented to the respondents. It seems that all the symptoms indicated would make most respondents seek medical assistance. The top three symptoms that would make respondents visit the doctor immediately were phlegm with blood, long-lasting cough, and fever during 3 weeks.

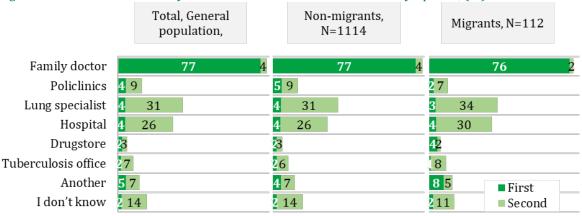
Figure 2.3.2. Symptoms that would determine immediate contact with a doctor, (%).



When noticing the tuberculosis-specific symptoms, most respondents would first or second see the family doctor (81% of the general population). Concurrently, about one third would see the phthisis pneumology specialists and would go to the hospital.

Respondents from other towns than municipalities (84%) mentioned to a higher degree that they would first see the family doctor if noticing symptoms of tuberculosis.

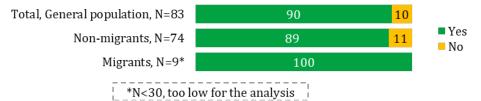
Figure 2.3.3. The institution they would contact in case of tuberculosis symptoms, (%).



Among the general population, the most respondents (90%) who noticed symptoms of tuberculosis in them or in their family, went to a doctor.

It seems that the higher the level of education is, the higher is the intention to see a doctor, if respondents notice symptoms of tuberculosis in them or in their family.

Figure 2.3.4. Share of persons who went to see a doctor in case of tuberculosis symptoms, (%).



3 of the interviewees who declared they did not visit a doctor when they noticed certain symptoms of tuberculosis, said they felt better.

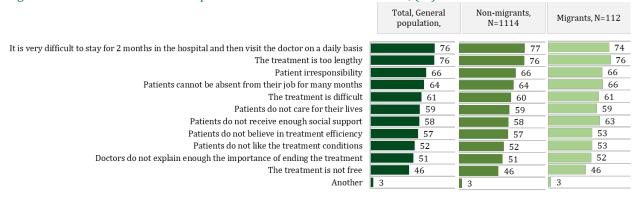
Figure 2.3.5. Reasons for not seeing a doctor, (N).

Number of mentions	General population
I/he/she felt better	3
Lack of money	2
Lack of time	1
I/he/she have/has been treating at home	1
I was (am) away from health facilities	0
Fear of doctors	0
Fear of being diagnosed with tuberculosis	0
Other	2
DK/NA	1
Total number of mentions	8

According to the most respondents, three main reasons why certain patients do not finish TB treatment were as follows: 'it is very difficult to stay for 2 months in the hospital and then visit the doctor on a daily basis' (76% of general population), lengthy treatment (76%) and patient irresponsibility (66%).

Respondents with a household income amounting to MDL 5,000 – MDL 9,000 mentioned to a higher degree that it is very difficult to stay for 2 months in the hospital and then visit the doctor on a daily basis (87%). The reason that the treatment is too lengthy was indicated to a higher degree by residents of the northern region and those with an income above MDL 5,000. 80% of respondents with a household income above MDL 9,000 say that the reason for treatment non-completion is the patient irresponsibility.

Figure 2.3.6. Reasons for non-completion of the tuberculosis treatment, (%).



The majority of respondents -79% of the general population - are very or pretty certain that they would comply with the requirements of a 6-12-month medicinal treatment in the presence of a health worker.

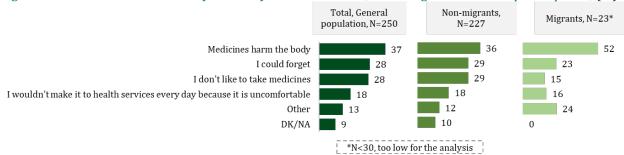
Figure 2.3.7. Willingness to follow a medicinal treatment for 6-12 months in the presence of a health worker, (%).



Among the general population who said they were not very certain they would comply with the requirements of a medicinal treatment over 6-12 months, about every third person (37%) said that medications harm the body.

Higher share of participants living in the northern part of the country said that medications prescribed to treat tuberculosis harm the body.

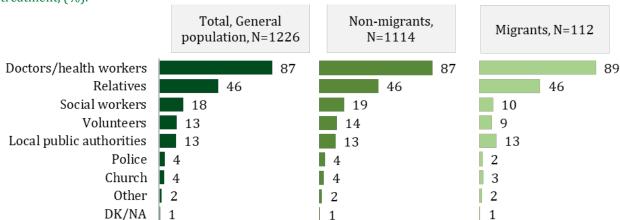
Figure 2.3.8. Reasons for uncertainty to strictly follow treatment, according to the medical prescriptions, (%).



The most respondents – 87% of general population – believe that doctors/health workers may provide any support to patients in order to finish their treatment. At the same time, 46% say that relatives could provide this type of support.

The survey participants of Gagauz ethnicity, those living in the South of Moldova and those with household income of MDL 5,001–9,000 claimed to a higher degree that doctors/health workers are those who may support patients with tuberculosis.

Figure 2.3.9. People or institutions who could provide support to tuberculosis patients in order to finish their treatment, (%).



It seems that respondents are inclined to offer moral support and to monitor the intake of medicines by tuberculosis patients. The majority says that they would personally involve in offering moral support and in monitoring the intake of medicines by a TB patient they knew (74% of general population).

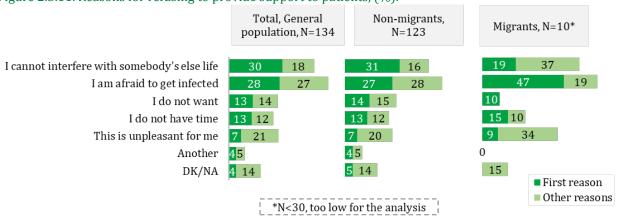
A higher share of respondents with household income above MDL 9,000 mentioned that they would be willing to offer moral support and to monitor the intake of medicines by tuberculosis patients.

Figure 2.3.10. Respondents' willingness to offer moral support and monitor the intake of medicines by the patient, (%)



The general population surveyed who mentioned not being willing to support the TB patient stated that they were afraid of getting infected (55% – all reasons) and that they could not get involved in another individual's life (48% total reasons).

Figure 2.3.11. Reasons for refusing to provide support to patients, (%).

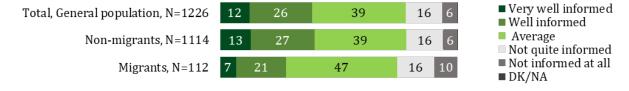


# 2.4 Perception of information about tuberculosis

38% of general population believe they are well or very well informed about tuberculosis. A part of the population (39%) believes that their level of awareness. Compared to non-migrants, migrants believe they are less informed about tuberculosis.

As age and education level increase, so does the level of awareness about tuberculosis.

Figure 2.4.1. Level of awareness about tuberculosis, (%).



The majority of general population (62%) said that information about tuberculosis is very important.

Respondents with a high level of education claim to a higher degree that information about tuberculosis is very important. It seems that the share of people who believe that informing about tuberculosis is important increases together with their age.

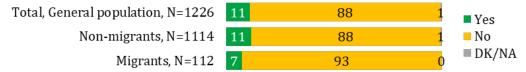
Figure 2.4.2. The need to be informed about tuberculosis, (%).



About one in ten respondents noted that he/she have talked with someone about tuberculosis during the past 12 months (11 of general population). At the same time, most of them said they did not talk with anyone about tuberculosis during the past 12 months.

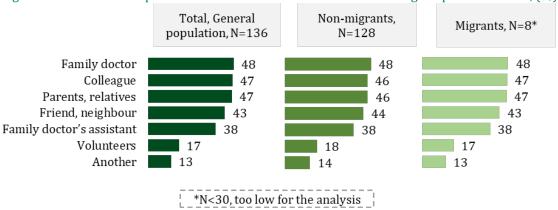
Respondents aged between 15–24 claimed to a higher degree that they talked with someone about tuberculosis during the past 12 months.

Figure 2.4.3. Communication about tuberculosis during the past 12 months, (%).



About half of general population who said that someone told them about tuberculosis during the past 12 months, declared that this information was provided to them by doctor (48%), colleagues and parents or someone of relatives (47% each share).

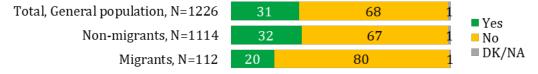
Figure 2.4.4. Person who provided information about tuberculosis during the past 12 months, (%).



About one third said they saw any information about tuberculosis during the last year – 32% of non-migrants and by 10 p.p. fewer migrants said they saw, read, or heard information about tuberculosis during the last 12 months. At the same time, the majority stated that they did not see, read, or hear information about tuberculosis over the last year.

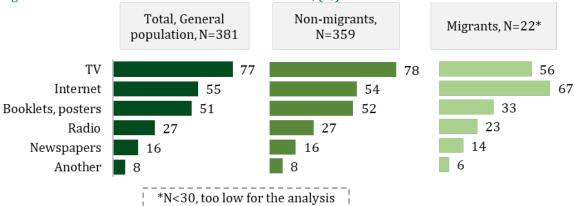
A larger share of respondents who live in other towns than municipalities and people aged between 15-24 claimed they saw/heard/read information about tuberculosis over the last 12 months.

Figure 2.4.5. Information about tuberculosis during the last 12 months, (%).



Most of respondents among the general population who said they saw/read/heard information about tuberculosis, stated that the source of information was television (77%).

Figure 2.4.6. Sources of information about tuberculosis, (%).



A majority of respondents who have said they heard/saw/read information about tuberculosis, believe this information improved their knowledge very much (27%) or much (33%).

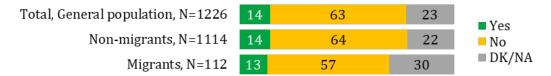
Figure 2.4.7. Influence of sources of information on the knowledge about tuberculosis, (%).



14% of respondents in the general population believe that community's attention to tuberculosis has raised over the past year.

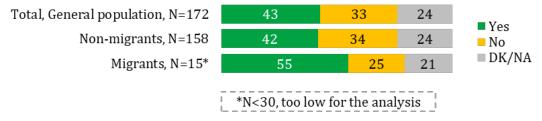
Respondents who live in other towns than municipalities noted to a higher degree that people's attention to tuberculosis in the community had increased during the past year.

Figure 2.4.8. Respondents' opinion on the level of population's attention to tuberculosis during the past year, (%).



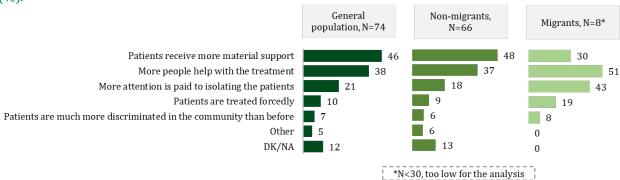
Among the general population who believes that community attention to tuberculosis has increased in the last year, 43% believe it has changed the life of tuberculosis patients.

Figure 2.4.9. Change of the life of tuberculosis patients by level of attention paid, (%).



A list of possible changes caused by the attention of community to people with tuberculosis was presented to respondents. The top three changes for people with tuberculosis mentioned by the general population were the following: higher material support (46%), better support in adherence to the treatment (38%) and focus on increased isolation of patients (21%).

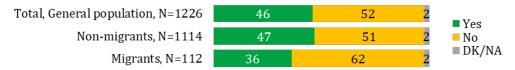
Figure 2.4.10. Perception of the change in lifestyle of patients with tuberculosis in the respondents' locality, (%).



Respondents were asked to remember if they saw or heard, during the last 12 months, the message 'If you have symptoms, go to the doctor. Tuberculosis can be treated!' – overall, 46% of respondents saw the message. 47% of non-migrants and 36% of migrants said they noted the information message. At the same time, the majority of non-migrants (51%) and migrants (62%) say they have not heard or seen this message.

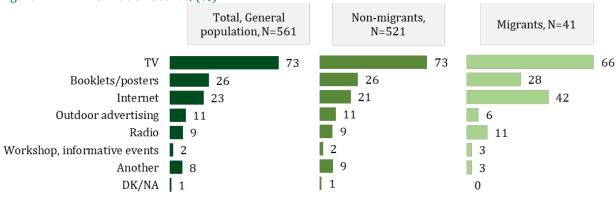
Respondents from the central region of the country noted to a higher degree that they saw the information message 'If you have symptoms, go to the doctor'.

Figure 2.4.11. Noticing the information message about tuberculosis 'If you have symptoms, go to the doctor', (%).



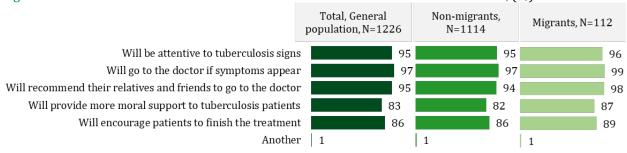
Among all respondents who claimed they saw or heard the information message about tuberculosis treatment, the majority said they saw or heard it on TV. (73% of non-migrants and 66% of migrants).

Figure 2.4.12. Information source, (%).



Most of the interviewed population reported that they would consider each of the recommendations indicated in the information materials. Thus, 95% of the general population mentioned that they would pay attention to the symptoms of tuberculosis. Also, 97% of the general population reported that they would go to the doctor if symptoms appear. Also, the interviewed respondents said they would recommend their relatives and friends to go to the doctor (95%).

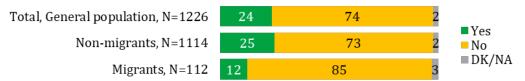
Figure 2.4.13. Recommendations included in information materials and their observance, (%).



About one in four respondents among non-migrants and one in ten migrants said they transmitted the information they saw/heard/saw/heard/read about tuberculosis. At the same time, most of them said they did not transmit the information about tuberculosis.

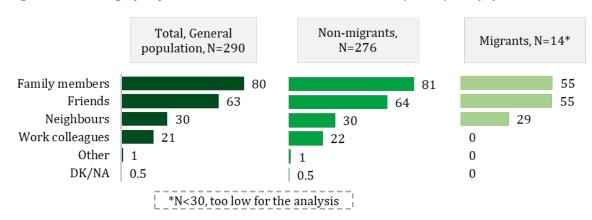
A larger share of respondents who live in Chisinau or in other towns and those aged between 15-24 claimed to a higher degree having transmitted the information they saw/heard/saw/heard/read about tuberculosis.

Figure 2.4.14. Transmission of information seen/red/heard, (%).



Most of the general population that reported about transmitting the information about tuberculosis reported about communicating this information the family members (80%) and friends (63%).

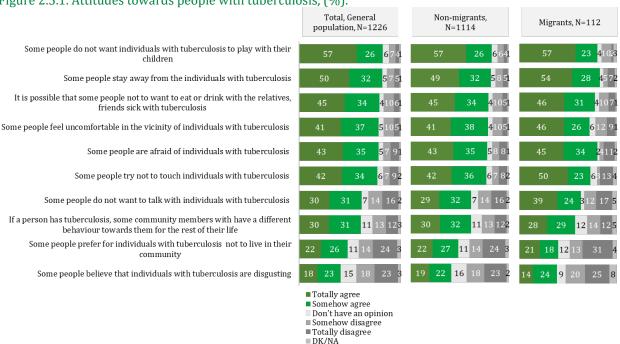
Figure 2.4.15. Category of persons who received the information seen/heard/red, (%).



# 2.5 Perception about stigmatisation of people with tuberculosis

The respondents were asked to express their opinion about the list of statements describing how some people feel about individuals with tuberculosis. Thus, most of the general population (57%) mentioned they totally agreed that some people do not want individuals with tuberculosis to play with their children. Also, half of them fully agreed with the statement 'some people stay away from the individuals with tuberculosis' (50% – of the general population and by 4 p.p more migrants). Around one in four respondents of the general population (24%) completely disagreed with the statement 'certain people prefer individuals with tuberculosis not to live in their community'. About a quarter of the respondents totally disagree with the statement according to which people believe that individuals with tuberculosis are disgusting.





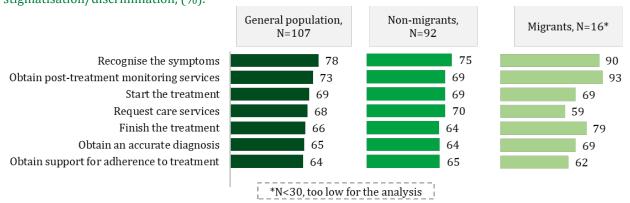
9% of the general population (8% of non-migrants and by 6.6 p.p. more migrants) mentioned seeing or hearing cases when individuals with tuberculosis in their community were stigmatised for having tuberculosis. At the same time, most of the respondents mentioned about not seeing cases when someone in their community is stigmatised (discriminated) due to tuberculosis.

Figure 2.5.2. Stigmatisation/discrimination of people from the community with tuberculosis, (%).



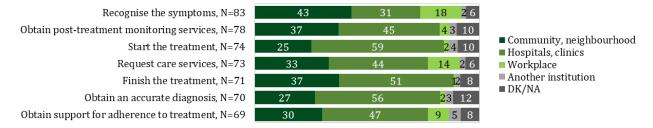
Most of the respondent general population who mentioned that they heard or saw that a person from their community was stigmatised (discriminated) because of tuberculosis, reported that due to stigmatisation the person with tuberculosis did not manage to perform the listed actions. Most often, the respondents stated that the person with tuberculosis failed to admit they had symptoms (78%).

Figure 2.5.3. Perception about limiting certain actions taken by people with tuberculosis following stigmatisation/discrimination, (%).



Most often, the respondents heard that people with tuberculosis from their community were stigmatised in health facilities. Most of respondents among the general population claimed that due to stigmatisation, people with tuberculosis did not manage to start the treatment in hospitals/clinics (59%). Half of the general population (51%) that stated that due to stigmatisation the person with tuberculosis failed to end the treatment claim that the person was stigmatised in hospitals and clinics.

Figure 2.5.4. Places and institutions where people with tuberculosis were stigmatised/discriminated, (%).



# 2.6 Tuberculosis knowledge, attitudes and practices in migrants

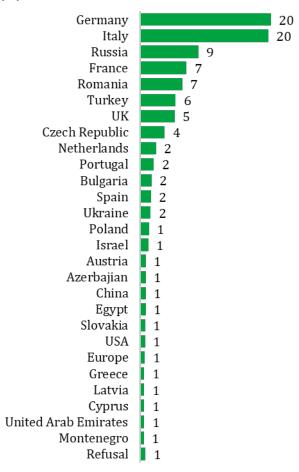
In the last year, 14% of the interviewed general population was abroad for more than 3 months.

Figure 2.6.1. Share of people who were abroad for more than 3 months over the past 12 months, N=1226, (%)



The main five countries where the respondents were abroad for more than three months are: Germany (20%), Italy (20%), Russia (9%), France and Romania (7% each share).

Figure 2.6.2. Country in which people were abroad for more than 3 months over the past 12 months, N=172, (%)



Of the interviewed people who were abroad for more than 3 months over the past 12 months, most of them left for work (legally -53%, illegally -12%).

Figure 2.6.3. Reason of leaving, N=172, (%)



The respondents who were abroad for 3 months for work purposes during the last year were considered migrants and provided answers to the following questions.

Among the interviewed migrants, 41% know about the obligation to make a tuberculosis test once in 6 months for the population who work legally.

Figure 2.6.4. Knowing about the obligation to make a tuberculosis test once in 6 months for the population who work legally, N=112, (%)



37% of the migrants claim that they made the x-ray examination before leaving abroad. Most of them stated that they did not made the x-ray examination before leaving abroad.

Figure 2.6.5. Conducting the x-ray examination before leaving abroad N=112, (%).



About one in five migrants (22%) claim that they were required to present the x-ray examination in the country of destination.

Figure 2.6.6. Requiring the x-ray examination in the country of destination, N=112, (%).



As regards the performance of x-ray examination in the country of destination, about one third of the interviewed migrants (32%) claim they performed it.

Figure 2.6.7. Conducting the x-ray examination in the country of destination, N=112, (%).



23% of the migrants went to a doctor abroad due to a health problem and most of them claim they didn't (72%).

Figure 2.6.8. Seeing a doctor abroad, N=112, (%)



Most of migrants who participated in the survey claimed that they did not have signs or symptoms characteristic to tuberculosis in the country of destination (99%).

Figure 2.6.9. Presence of symptoms characteristic to tuberculosis while being in the country of destination, N=112, (%)



At the same time, 98% of interviewed migrants claim they were never diagnosed with tuberculosis. 1% of migrants stated the have/had tuberculosis and 1% – that they have never carried out an examination.

Figure 2.6.10. Share of migrants diagnosed with tuberculosis, N=112, (%)



Annexes 31

# **CONCLUSIONS**

#### Tuberculosis knowledge, attitudes, and practices in general population

All the respondents said they heard about tuberculosis. The top three symptoms mentioned by the respondents among general population were: cough, which is still the most obvious symptom of tuberculosis, long-term cough and acute cough.

Most of the population acknowledge that tuberculosis is a serious communicable disease, but their share registers a slight decline compared to 2017. A large share of the general population continues to believe that the main way of transmitting the tuberculosis is by air during coughing. At the same time, people believe erroneously that this disease can be transmitted by using personal belongings – most of them stated that tuberculosis can be spread in this manner. Although less than half of the respondents indicated that tuberculosis spreads by shaking hands, this share decreases compared with 2017. Most of the general population claim that tuberculosis can be treated and this indicator registered an increase this year compared to 2017.

Most of the symptoms included in the questionnaire would determine people to go to the doctor. The top three symptoms that would make the general population to make an examination were: phlegm with blood, long-lasting cough and fever during 3 weeks. If respondents would identify symptoms specific to tuberculosis, they would first go to the family doctor for help.

Most of the interviewed general population believe that tuberculosis is not a shame, their share being higher than in 2017. If a relative would get sick with tuberculosis, around one in four respondents in the general population said they would take the relative home until the definitive recovery, and about half would accommodate only a close relative. The opinion towards willingness of people with tuberculosis to hide their diagnosis is divided. Half of the respondents believe the sick person would try to hide this fact. Most of people believe that the main reason to hide the fact of being infected with tuberculosis is the fear to be avoided by surrounding people.

The general population continues to believe that doctors/health workers should be those who provide support to patients in order to finish the treatment. At the same time, most of them declared their willingness to offer moral support and to monitor the intake of medicines by tuberculosis patients and this share registers a slight increase compared with 2017. About one in ten respondents would not provide support to the person with tuberculosis and the main reason is the fear to get sick.

There are two reasons for which the majority of people believe that would determine certain patients not to finish the treatment: 'it is very difficult to stay for 2 months in the hospital and then visit the doctor on a daily basis' and 'the treatment is too lengthy'.

The majority of people believe that people's attention to tuberculosis did not increase during the past year and the share of such people increased compared with 2017.

Most of the population is at least partially informed about tuberculosis. Approximately one in three persons state that they saw or heard information about tuberculosis during the past year. Almost half of the respondents saw during the last year the information message 'If you have symptoms, go to the doctor. Tuberculosis can be treated!'. The TV is still the most popular source of information about tuberculosis.

The respondents were asked to express their opinion about the statements that describe the situations when people with tuberculosis were stigmatised. Most of them agreed that certain people can exhibit such behaviour. About one in ten claims seeing or hearing about cases when a person with tuberculosis is stigmatised because of the disease.

Annexes 32

#### Tuberculosis knowledge, attitudes, and practices in migrants

Almost all migrants heard about tuberculosis. The share of migrants that recognise the cough as an obvious symptom of tuberculosis is increasing compared with 2017. At the same time, three top symptoms indicated by migrants are: acute cough, phlegm with blood and cough with phlegm.

The majority of migrants acknowledge that tuberculosis is a communicable disease, but this indicator is smaller among the general population and registered a significant decrease compared with 2017. Most of migrants believe that the main way of transmitting the tuberculosis is by air. Migrants are still badly informed about the fact that tuberculosis cannot be passed through habitual contact and handshaking, this rate being lower compared with 2017. Migrants claim that tuberculosis can be treated, and this share is similar to that among the general population, which increased compared with 2017.

Like in the case of the general population, the top three symptoms that would make the migrants to visit the doctor were: phlegm with blood, long-lasting cough and fever during 3 weeks. If worrying symptoms occur, most of migrants would visit the family doctor.

Most of the migrants state that tuberculosis is not a shame. Similar to the trends registered in the general population, almost one third of migrants would agree to accommodate a relative with tuberculosis and half would accommodate only a close relative. Migrants seem to have the same opinion as the general population towards willingness of people with tuberculosis to hide their diagnosis, which is divided.

Migrants claim that doctors and health workers should be those who provide support to patients in order to finish the treatment, but most of them would agree to offer moral support to the patient in order to finalise the treatment.

Similar to the general population, most of the interviewed migrants believe that the following reasons would determine certain patients not to finish the treatment – lengthy treatment and the fact that it is very difficult to stay for 2 months in the hospital and then visit the doctor on a daily basis.

The majority of people believe that people's attention to tuberculosis in the community did not raise during the past year.

While the largest share of migrants believe that they are at least partially informed about tuberculosis, it seems that migrants believe they are less informed than the general population. Over the past 12 months, one in five migrants saw or heard information about tuberculosis and about one in three migrants saw during the last year the information message 'If you have symptoms, go to the doctor. Tuberculosis can be treated!'. Both shares are smaller than that among the general population. Migrants reported about seeing the information message on TV and less on the internet.

Similar to the general population, most of migrants agreed that certain people stigmatise individuals with tuberculosis. About one in seven migrants saw or heard that a person with tuberculosis in the community was stigmatised because of the disease – a higher share in general population.