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L.D. Todoriko[1],

V.P. Shapovalov[1],

I.O. Semyaniv[1],

E.V. Lesnic[2]

Higher State Educational Establishment of Ukraine "Bukovinian State Medical University", Chernivtsi[1];
Department of Pneumophtysiology, Nicolae Testemitsanu State University of Medicine and Pharmacy[2]

REVIEW ARTICLE. MIGRATION AS A SOCIAL DETERMINANT OF THE INCREASED ACTIVE TB AND MDRTB INCIDENTS

Key words*: tuberculosis, migration, risk factors.*

Abstract*. Background: Ukraine and R. Moldova report the biggest incidence of tuberculosis and the highest rate of migrants among European Region countries. For an average 1 bilion migrants, for whose this process - migration, is an effectively and immediately tool to reduce poverty, conflict and escape for improving the life condition for their families. Migrants are the backbone of health systems in all OECD countries and the safety valve in the global economy. On the other hand the migration is a big challenge, especially for the TB epidemiological security. At the most of migrants the risk for active TB developmen and the increase of mult-idrug resistant TB incidents. is correlated with social risk factors (low life conditions, overcrowding, disruption from the health care services), epidemiological risk factors (infectious contact) and biological features (young age, male sex, some physiological conditions, associated diseases). Risk factors association values more evident than the severity of an one risk factor. The review study was conducted using relevant scientific resourses.*

Conclusions. Despite of high trends of migration noted in the 20th centery the phemonen of migration as risk factor for TB development is low studied. Massive irregular emigrants automatically involves the reducing of the public health actions for providing the TB epidemiological security goals both hosting countries and country of origin, where is a high burden for TB, especially MDR-TB. Radiological and immunological screening in pre-departure is the most important procedure for decreasing of the rates of TB. Raising awareness among migrants about TB, emphasizing that diagnosis and treatment is free of charge and independent regarding migration status are important TB control actions. Considering high relevance of migration on the risk of TB development a TB national survey in the actual geopolitical context must be performed in both hosting countries and country of an origin.

Introduction

As it is known tuberculosis particularly affects poor and vulnerable populations, and migrants being assessed as of key affected population [34]. On 19 May 2014, in the frame of the 67th World Health Assembly were adopted the new post-2015 global TB targets and strategy [32]. It is built on a "know-your epidemic" approach and focuses particularly on serving those not reached/hard-to-reach as well as most vulnerable and marginalized populations [33]. For an average 1 bilion migrants, for whose this process - migration, is an effectively and immediately tool to reduce poverty, conflict and escape for improving the life condition for their families [32]. Migrants are the backbone of health systems in all OECD countries and the safety valve in the global economy [30].

So Ukraine gets the largest share of remittances from migrants living in Russia, USA, Germany, Greece, Italy and the UK. The amount of private money transfers received in Ukraine in 2012 is estimated at about 7.5 billion US dollars. which is 4% of Ukraine's GDP in the same year. Migrants are the major source of income for the R. Moldova national economy, with total remittances from moldovan living abroad estimated at 1 billion dollars per year. During 2000-

2010, the number of legal moldovan migrants working abroad increased from 138,300 to 311,000 thousand persons, which represents about 27% of the working age moldovan population [30]. This process is encreased due to expanding of European Union border in 2006 and due to changing of visa status for some cathegory of population, for example for moldovan with Romanian passports.

At this moment can be identified three types of international migration specific for migrants of CIS citizens [34]: 1) short international migration - labour migrants go to work in the Community of Independent Stats (CSI); 2) long international migration - labour migrants go to work in the states of European Union; 3) long legal international migration - migrants go to live in US and Canada.

According to the study conducted by the State Statistics Service of Ukraine 204,000 residence permits were issued to citizens of Ukraine in EU. In 2011 Ukrainians constituted the largest group of the third-country nationals who have received such permits in the EU. 1.2 million persons, or 3.4% of the population aged 15 to 70 years had been working or looking for work abroad from January 2010 to June 2012.

Among Ukrainian labor migrants working abroad in 2010-2012, 38% had a residence permit and work, 13% - a work permit, 24% - a temporary residence permit, 17% did not have legal status, and 4% were in other countries only on a tourist visa. However, most of these permits were short-term (one year). 156 thousand were issued by Poland for seasonal work.

In mid-2013 there were 1.4 million citizens of Ukraine who lived in on a permanent and temporary basis on the account of the Federal Migration Service of Russia. There were 127.8 thousand Ukrainians having work permits among them, that was 11% of foreign workers in Russia.

Since conducting a similar study in 2008. the trend of migration remains fairly constant. The balance between Ukrainian migrants working in Russia and in the EU, is about 50/50 persons making up about two-thirds of migrant workers.

Only some Ukrainian migrants find work corresponding to their skill level abroad, while almost all of them, regardless of their educational level have low-skilled jobs. In light of the inconsistency of migrant skills and the work they perform abroad, Ukrainian labor migrations, at least to some extent, can be described as "brain drain". This discrepancy is evident too if data regarding employment of migrants abroad is compared with their level of education.

According to research conducted by the National Bureau of Statistics, 60% of moldovan migrants are directed to CIS countries, mainly to the Russian Federation and 40% of them to EU countries, mainly to Italy. Characteristics of migrants working in CIS are the predominance of male and people from rural area, Only less than 3% of immigrants will rest in the destiny country for all their life.

Estimative every second citizen of R. Moldova has the status of migrant obtained due to internal and external migration [38]. Due to a low economical growth, the moldovan rural population rests without jobs being pushed to leave the family and to perform internal or external migration with the aim for finding a well paid place of work. Actually Moldova experiences a mass migration phenomenon due to its weak economy [29].

Finding work in a foreign country for a labor migrant is complicated by a multitude of problems: first, the residence visa issues, secondly - problems with the police, thirdly - problems with the crime organizators, fourth - low salary from the employer, the fifth - the problem with healthcare services. A serious problem for migrant in this regard is the lack of health insurance (56%), its high price (32%) and the absence of a residence address (4%) [20].

Research data showed that migrants have long absences at the medical addressing. So the moldovan migrants are visiting health care services 2 times less frequently than the population not involved in migration. Number of the visits to the general practitioner of migrants is average 1.5 visits/year versus 3.2 visits/year of the individuals not involved in migration.

Migration is a big challenge, especially for the epidemiological security. Massive immigration automatically involves the reducing of the public health actions for providing the epidemiological security goals. If the epidemiological security of the population immigrated from the country of origin is lower than the epidemiological security of the host country, migrants will bring with them infections and will be defined as public threat for the hosting population. This phenomen is well established for UE countries, where massive migration of groups originary from high burden for TB, especially MDR-TB countries, such as CSI countries, decreased the epidemiological security [1, 11].

In Western Europe, more frequently multidrug-resistant TB (MDR-TB) is diagnosed in immigrants from Eastern European countries. MDR-TB is very difficult and expensive to treat. Resistant TB determines a substantial economic impact on the hosting country (ex. UE countries that are low TB-incidence countries). As well as the transmission of TB infection from foreign-born to native European populations is well documented, by this way being established

the epidemiologic danger of immigrants. There are data showing that in low TB-burden countries, 20% to 70% of notified TB cases are foreign-born individuals.

Upon returning in the origin country, migrants who lived in poor housing, received low wages and had limited access to health services are returning home less healthy than when they left. When migrants return to their place of origin with detected, untreated TB, erroneously treated TB, or complications, they become an important load on their health care system and manifest profound health implications for their families and communities. By this way migrants determine high financial burden on their households if they do not have adequate health and social protection upon returning in their places of origin [1]. Another negative economical effect of migration is the increasing of consumption, non-productiveness and the remitence depending by the non-migrant population.

Migrant vulnerability to tuberculosis:

Social-related factors: stigma, lack of awareness of health services, low health-related spending capacity, as well as migrant-unfriendly health services, all lead to delaying in seeking for health care [20]. Due to social risk factors, migrants often do not have access to correct TB-related information as consequence of language barriers and cultural beliefs.

Risk factors for TB development in migrants - they face to a higher exposure to TB infection due to overcrowded living and working conditions. Due to poverty they have increased vulnerability to HIV infection contact, malnutrition and substance use.

Delays in TB diagnosis among migrants are commonly associated with difficulty in healthcare access, lack of education, poor health-seeking behaviors, cultural beliefs, stigma and marginalization.

Nkulu F. in the study regarding social features of migrants living in Sweden was established that implicated risk factors for TB are the language barrier and unfamiliarity with the Swedish Health Care System.

Among migrant workers with a legal status, their access to TB diagnosis tools and health care is determined by the health insurance coverage, provided by the State or by the employer [2].

Illegal migrants face with the fear of deportation that reduces their access to diagnostic and treatment services. Moving to a new place of residence, such patients often remain unknown by new TB facilities and, therefore, do not receive an appropriate treatment, also in their environment are not carried out the necessary preventive measures. If TB is diagnosed, the migrant is pushed to leave the destination country. Deportation during the anti-TB treatment causes the incompliance or interruption of anti-TB treatment which leads to development of drug resistant TB and increased danger of such patients on the health system of origin, transit and destination countries.

Irregular migrants may face violence and be held in detention centers with poor nutrition and ventilation, often in close proximity with others with preexisting TB. At destination migrants' integration into the host country's health system, social services, accessing of housing, jobs is difficult. The continuous risk to be expulsed from the arrival country diminishes the health care seeking due to mistrust. As well as migrants' own health seeking behavior and cultural practices may affect their use of TB services. Discriminatory practices such as deportation after positive TB diagnosis is an important barrier for migrants for seeking TB services in the country of destination [23].

Posey D.L in the study of the implementation of new TB screening requirements for US immigrants and refugees established that the risk for development is highest among foreign-born groups and is up to 50 times higher than in native populations. The increased risk among foreign-born individuals may continue for 20 years after migration due to reactivation of latent TB infection contacted in their country of origin.

Kruijshar M.E. in a study regarding TB in migrants from UK established that 28% of migrants had positive results at interferon gamma release assays, that means that one third of migrant population of UK have latent TB infection and a high risk for TB development [21].

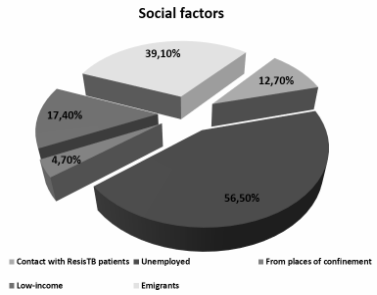
Local studies noted a high prevalence of moldovan migrants with tuberculosis returned form Russia (64%), Ukraine (12,1%), and other countries such as Italy, Turqie. It was established prevalation of severe forms: caseous pneumonia and fibrocovitary tuberculosis in 19,6% of migrants. Low succes rate, high default rate (10,6%) and deaths (5%) were more evident than in local resident population [10] .

According the data of Todoryko L.D. [41, 43, 44] social factors that may influence the development of MDR TB in Bukovinian region have been distributed as follows; unemployee - 56.5%; irregular labour migrants -39.1%, low income - 17.4%; and contact with MDR-TB patients - 12.7%, and 4,7% of released from confinement (see diagram).

So the largest social factors of MRTB risk hold the unemployee (56.5%) and the labour migrants (39.1%).

It is well established the negative influence of migration on the anti-TB treatment compliance.

So Chen Jing evaluated TB among migrants in



Shanghai China [41]. In China there are registered one million TB cases, the second largest number in the world with a global incidence of 75/100.000 population. There were established risk factors for default of anti-TB treatment in Chinese migrants: self-administrated treatment, being a retreatment case, and age of the patient over 60 years. A national study assesses that almost one third of patients with TB who interrupted or defaulted the TB treatment were migrants.

International experience of screening for tuberculosis in migrant population:

Migration as a social determinant of the increased TB-related morbidity and mortality. There are specific differences in migrant screening procedures in the pre-departure phase and post-arrival phase for each country. Those differences influence TB-related morbidity and potential public health impact on the health system [28].

The majority of European countries continue to use chest radiography for screening and detection of TB among applicants for permanent residence

According Posey DL In 2007 the US national algorithm was enhanced by including additionally sputum cultures as diagnostic tool for TB screening of those with suggestive findings for TB. In pediatric population TB screening from 2009 tuberculin skin test was replaced by interferon gamma release assays (IGRAs). The author demonstrated the importance of serological screening of foreign born migrants through IGRAs for identifying the latent TB infection [27].

Farah MG recommended the vigilance regarding migrants due to the high risk for TB disease that lasts many years after arriving in the hosting country.

Conclusions

TB is a big challenge worldwide. Massive irregular emigrants automatically involves the reducing of the public health actions for providing the epidemiological security goals both hosting countries and country of origin, where is the high burden for TB, especially MDR-TB. Radiological and immunological screening in pre-departure is the most important procedure for decreasing of the rates of TB. Raising awareness among migrants about TB, emphasizing that diagnosis and treatment is free of charge and independent regarding migration status are important TB control actions.

Considering high relevance of migration on the risk of TB development a national survey in the actual geopolitical context must be performed in both hosting countries and country of origin.

References. 1.Allebeck P. Delay in tuberculosis care: one link in a long chain of social inequities. Eur J. Public Health. 2007, 5:409. 2.Bivol S., Turcanu Gh., Mosneaga A., et al. Barriers and facilitating factors in access to health services in the R. Moldova. WHO, 2012: 7. 3.Buciuceanu-Vrabie M. Copiii ramasi singuri acasa in urma migratiei parintilor: riscuri si realitati. [Children home alone due to migration of parents: risks and reality]. Filozofie, Sociologie si Stiinte Politice. Chisinau, 2011;1(155): 222-226. 4.Burdelnii E. In cautarea talentelor: Politica Uniunii Europene privind fenomenul "Exodul de creiere", Brain Drain. Cazul Republicii Moldova. [The research for young talents: Politics of European Union regarding the "Brain drain" phenomen], Chisinau, 2011; 259. 5.Calduch EN, Diaz A, Diez M. Ethical and legal issues related to health access for migrant populations in the Euro-Mediterranean area. Eurosurveillance. 2008, 13:1-3. 6.Cheianu-Andrei D., Migrtia capitalului uman inalt calificat din Republica Moldova [Migration of the human capital from the R. Moldova]. In: Abstract book CEP USM Chisinau, 2012;170. 7.Ceban L., Butnaru V. Migratia internationala a fortei de munca si impactul ei asupra dezvoltarii socioeconomice a R. Moldova [Intenation migration of the labor force and its impact on the social economical development of R. Moldova]. Abstract book Conferinta "Academia de Administrare Publica la 15 ani", Chisinau, 2008; 291. 8.Cheianu-Andrei D. Impactul migratiei asupra cadrelor didactice si cercetatorilor din Moldova [Migration impact on the didactic and researche staff in R. Moldova]. Abstract book: CEP USM Chisinau, 2012;172. 9.Coker R. Migration, public health and compulsory screening for tuberculosis and HIV of asylum and migration workers. Institute for Public Policy Research. 2003:214 10.Culev V., Pesco O., Chiaburu V. Impactul migratilor in situatia epidemiologica de tuberculoza [Impact of migrants on epidemiological situation of tuberculosis]. Anale stiintifice. 2008, ed. 9, nr.3: 226-229. 11.Dara M, de Colombani P, et al. Minimum package for cross-border TB control and care in the WHO European region. Eur Respir J. 2012 Nov;40(5):1081-90. 12.Diaconescu D. Tipuri de migratiune - cauze, efecte asupra componentelor securitatii statului [Types of migrations - causes, effects on the compounds of the state security]; Editura Universitatii "Lucian Blaga", Sibiu, 2010; 269. 13.Farah MG, Meyer HE, Selmer R, et al. Long term risk of tuberculosis among immigrants in Norway. Int J Epidemiol. 2005, 34:1005-1011. 14. Gibson N, Cave A, Doering D, et al. Socio-cultural factors influencing prevention and treatment of tuberculosis in immigrants and in aboriginal communities in Canada. Soc Sci Med. 2005,61:931-942. 15.Heldal E, Kuyvenhoven J, Wares F et al. Diagnosis and treatment of tuberculosis in undocumented migrants in low - or intermediate-incidence countries. Int. J Tuberc Lung Dis 12(8):878-888/ 16.Hotarirea Guvernului RM nr. 768 din 12.10.2011 Cu privire la aprobarea Programului national strategic in domeniul securitatii demografice a R.Moldova 2011-2015. Monitorul Oficial, 2011,182-186:art. 851. 17.Hill AN, Becerra J, Castro KG. Modelling tuberculosis trends in the USA. Epidemiol Infect J. 2012;140:1862-72. 18. Jenkins H., Ciobanu A., Plesca V., et al. Risk factors and timing of default from treatment for non-MDR TB in Moldova. Int J Tuberc Lung Dis, 2013: 17(3):373-80/ 19.Jucov A. Impactul migratiei de munca asupra sanatatii migrantilor [Impact of the labour migration on the health of migrants]. Teza de doctor in stiinte, Chisinau, 2014: 165. 20.Jucov A., Accesibilitatea serviciilor medicale pentru migrantii de munca din R. Moldova, Sanatate Publica sii Management Chisinau. 2013; 3(48): 49-53. 21.Kruijshar ME., Lipman M., Moore J. Migration and tuberculosis: the start of intelligent new entrants screening. Thorax. 2011; 66. 22.Liu Y, Weinberg MS, Ortega LS, et al. Overseas screening for tuberculosis in U.S.-bound immigrants and refugees. N Engl J Med. 2009;360:2406-2415. 23.Liu Y,

Painter JA, Posey DL, et al. Estimating the impact of newly arrived foreign-born persons on tuberculosis in the United States. PLoS One. 2012;7:e32158. 24.Lowenthal P, Westenhouse J, Moore M, et al. Reduced importation of tuberculosis after the implementation of an enhanced pre-immigration screening protocol. Int J Tuberc Lung Dis 2011;15:761-6. 25.Stalker P. Workers without borders: The impact of globalization on international migration, Lynne Rienner Publishers: 163. 26.Nkulu F., Hurtig AK., Ahlm Clas et al. Screening migrants for tuberculosis-a missed opportunity for improving knowledge and attitudes in high-risk groups. 27.Posey LD., Naughton MP., Willacy E. Implementation of New TB screening Requirements for US Bound Immigrants and refugees 2007-2014. CDC. 63(11);234-236. 28.Rizzo M., Martin A, Jamal F. Evidence review on the effectiveness and cost-effectiveness of service models or structures to manage tuberculosis in hard-to-reach groups . Matrix, 2011, 145 p. 29.Sainsus V. Migratiile populatiei rurale in R.Moldova. Aspecte economico-geografice [Migration of the rural population of R. Moldova] Chisinau, 2006, 197 p. 30.Saran Vl., Politica Uniunii Europene in domeniul migratiei. Brain Drain. Cazul R. Moldova [Politics of EU in migration]. Chisinau, 2011: 19-26. 31.Vos AM, Meima A, Verver S, et al. High incidence of pulmonary tuberculosis persists a decade after immigration. Emerg Infect Dis 2004,10:736-739. 32.WHO resolution WHA 61.17 on Health of Migrants, WHA 61.17, May 2008. 33.World Health Organization. Global tuberculosis control 2011. Epidemiology, strategy, finances. Geneva, 2011. 258 p. 34.http://iom.md/attachments/110_raportpmero.pdf (citat16.10.2014) 35.http://www.regnum.ru/news/medicine (citat16.10.2014) 36.http://tarasow-ilya.livejournal.com (citat16.10.2014) 37.http://statbank.statistica.md/pxweb/Database/asp (citat16.10.2014) 38.http://migratie.md/riscuri-si-pericole/(citat29.10.2014). 39.http://www.migrant-health-europe.org/files.pdf (citat16.10.2014) 40.http://www.plosone.org/article/info:doi/10.1371/journal.pone.0081351 (citat16.10.2014) 41.Материалы I сьезда терапевтов Забайкальского края. - Чита: РИЦ ЧГМА, 2013. - С. 75-78).42.Міграція в Україні: факти і цифри". МОМ Україна (2013 р.) 43.Тодоріко Л.Д. Особливості еволюції імунопатогенезу лікарсько-стійкого туберкульозу / Л.Д. Тодоріко // Клінічна імунологія. Алергологія. Інфектологія. - 2014. - № 3 (спецвипуск). - С.16-20. 44.Тодоріко Л.Д. Резистентність мікобактерій туберкульозу - міфи та реальність / Л. Д. Тодоріко, В. І. Петренко М. М. Гришин / / Туберкульоз. Легеневі хвороби. ВІЛ-інфекція. - 2014. - № 1. - С. 60-67.

ОГЛЯДОВА СТАТТЯ. МІГРАЦІЯ ЯК СОЦІАЛЬНА ДЕТЕРМІНАНТА ЗНАЧНОГО РІВНЯ ЗАХВОРЮВАНОСТІ НА ТУБЕРКУЛЬОЗ ТРУДОВИХ МІГРАНТІВ

Л.Д. Тодоріко, В.П. Шаповалов, І.О. Сем'янів, Е.В. Лесник

Резюме. Україна і Республіка Молдова повідомляють про високий рівень своїх трудових мігрантів у країнах Європейського Союзу та рівень захворюваності на туберкульоз серед них. У світі нараховується біля одного мільярду мігрантів, для яких процес міграції є ефективним і швидким інструментом подолання бідності, уникнення військових конфліктів та поліпшення стану життя своїх родин.

Трудова міграція вважається запобіжним клапаном у світовій економіці. З іншого боку, міграція створює серйозну проблему, зокрема, щодо епідеміологічної безпеки. У значної частини мігрантів ризик захворіти активним туберкульозом та туберкульозом з множинною лікарською стійкістю корелює з факторами соціального ризику (низький рівень життя, перенаселеність, обмежений доступ до медичних послуг), епідеміологічнними ризиками (інфекційний контакт) і біологічними особливостями (молодий вік, чоловіча стать, шкідливі звички, супутні хвороби). Причому сукупність факторів ризику має більш вагоме значення, ніж наявність значимого, але одного фактору. Огляд літератури був проведений за аналізом доступних інформаційних джерел.

На сьогодні, незважаючи на високі темпи міграції, сам феномен міграції як фактор ризику поширення туберкульозу мало вивчений. Масова нелегальна еміграція автоматично передбачає зниження ефективності протидії туберкульозу закладів охорони здоров'я та забезпечення епідеміологічної безпеки щодо обох сторін як країн, що приймають мігрантів, так і країн їх походження, особливо з високим тягарем активного та мультирезистентного туберкульозу.

Рентгенологічний та імунологічний прескринінг мікрантів є дієвим заходом щодо зниження рівня захворюваності на туберкульоз. Важливою складовою також вважається обізнаність мігрантів не тільки щодо статуса мігранта, а й захворювання на туберкульоз, можливостей його безкоштовної діагностики і лікування. У геополітичному контексті, враховуючи високу ревалентність процесу міграції та ризик активного туберкульозу, профілактичне обстеження мігрантів повинні виконувати обидві сторони: як приймаюча країна так країна походження.

Ключові слова: туберкульоз, міграція, фактори ризику.

ОБЗОРНАЯ СТАТЬЯ. МИГРАЦИЯ КАК СОЦИАЛЬНАЯ ДЕТЕРМИНАНТА ЗНАЧИТЕЛЬНОГО УРОВНЯ ЗАБОЛЕВАЕМОСТИ ТУБЕРКУЛЕЗОМ ТРУДОВЫХ МИГРАНТОВ

Л.Д. Тодорико, В.П. Шаповалов, І.А. Семянив, Е.В. Лесник

Резюме. Украина и Республика Молдова сообщают о высоком уровне своих трудовых мигрантов в странах Европейского Союза и уровень заболеваемости туберкулезом среди них. В мире насчитывается около одного миллиарда мигрантов, для которых процесс миграции является эффективным и быстрым инструментом преодоления бедности, избежания военных конфликтов и улучшения состояния жизни своих семей.

Трудовая миграция считается предохранительным клапаном в мировой экономике. С другой стороны, миграция создает серьезную проблему, в частности, относительно эпидемиологической безопасности. У значительной части мигрантов риск заболеть активным туберкулезом и туберкулезом с множественной лекарственной устойчивостью коррелирует с факторами социального риска (низкий уровень жизни, перенаселенность, ограниченный доступ к медицинским услугам), эпидемиологическими рисками (инфекционный контакт) и биологическими особенностями (молодой возраст, мужской пол, вредные привычки, сопутствующие болезни). Причем совокупность факторов риска имеет более весомое значение, чем наличие значимого, но одного фактора. Обзор литературы был проведен согласно анализу доступных информационных источников.

На сегодняшний день, несмотря на высокие темпы миграции, сам феномен миграции как фактор риска распространения туберкулеза мало изучен. Массовая нелегальная эмиграция автоматически предусматривает снижение эффективности противодействия туберкулезу учреждений здравоохранения и обеспечение эпидемиологической безопасности относительно обеих сторон - как стран, которые принимают мигрантов, так и стран их происхождения, особенно с высоким бременем активного и мультирезистентного туберкулеза.

Рентгенологический и иммунологический прескрининг мигрантов является действенной мерой снижения уровня

заболеваемости туберкулезом. Важной составляющей также полагается осведомленность мигрантов не только относительно статуса мигранта, а и заболевания туберкулезом, возможностей его бесплатной диагностики и лечения. В геополитическом контексте, учитывая высокую реваленттность процесса миграции и риск активного туберкулеза, профилактическое обследование мигрантов должны выполнять обе стороны: как принимающая страна, так страна происхождения.

Ключевые слова: туберкулез, миграция, факторы риска.

Высшее государственное учебное заведение "Буковинский государственный медицинский университет", г. Черновцы;
Государственный университет медицины и фармации имени Николая Тестемицану

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