

The burden of infectious diseases on the migrant population in Sicily: a mini review

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ABSTRACT:

— Migration in Italy is a complex and heterogeneous phenomenon, due to different allocation, length of stay in Italy and origin.

In the last years, Sicily has experienced an increasing migration due to war, famine, dictatorship, and poverty. Data from a recent study conducted by the Italian Society of Infectious Diseases (SIMIT) highlight an increased presence of infectious diseases, especially sexually transmitted diseases.

In the present review, we report and comment on some recent data on migration and infectious diseases.

— **Keywords:** Migration, HIV, Tuberculosis, Sexually transmitted diseases.

INTRODUCTION

Migration in Italy is a complex and heterogeneous phenomenon, due to different allocation, length of stay in Italy and origin. In 2015, according to "Dossier Statistico e Migrazione"¹, 5,421,000 regular immigrants live in Italy, of whom 64.6% from outside the European Community (mainly Albania, Morocco, China, Ukraine, Philippines). 59.4% of migrants live in the North of Italy, 25.4% in the central regions and 15.2% in the South. 2,147,000 people are long-term residents¹.

In the last years, Italy has experienced an increasing migration due to war, famine, dictatorship, and poverty. Some migrants decided to remain in Italy, while for the majority Italy was just a crossing point. In 2014, 170,100 African migrants arrived in Italy; In 2015, 153,842 people arrived in Italy² (Figure 1). In 2015, more than 3700 have died after their overloaded vessels foundered in the Mediterranean Sea.

The experience of several Centers that take medical care of migrants within the Italian health system shows

that in most cases they are young people, motivated, well-educated and often healthy at their arrival in Italy³. Furthermore, women are mostly young, with a fertility rate doubled than the Italian one, as documented by the fact that in Italy about 20% of newborns are from foreign mothers⁴. They often face pregnancy, childbirth and postnatal period without any family support. These women, unlike the Italian ones, are increasingly undergoing voluntary interruption of pregnancy, putting in strong evidence the inability of health systems to intercept their needs of contraception and protection from sexually transmitted diseases⁵.

WHO DATA ON MIGRATION, IN BRIEF

According to the World Health Organization⁶, there are several health challenges related to the migration process at different stages, such as age, gender, socioeconomic status and genetic factors. A migrant has to face pre-departure and travel conditions, host community and return to home country factors (Figure 2).

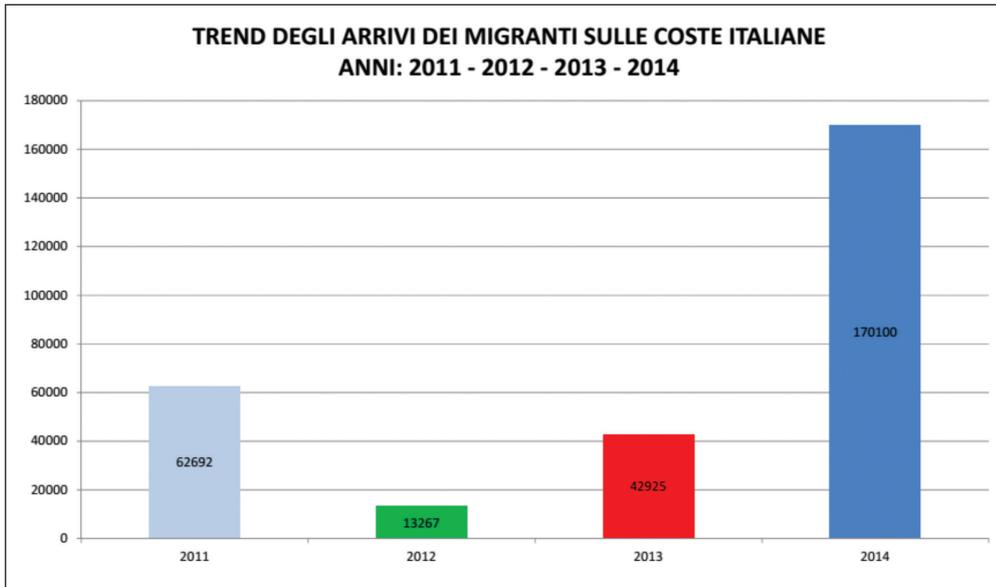


Figure 1. African migrants in Italy from 2011 to 2014. (Source: Ministry of Interior, 2016).

Migrants have to deal with both psychological and physical issues. Psychological distress could be linked to the separation from their own socio-cultural context and the condition of poverty and marginalisation. These circumstances could lead them to engage into dangerous lifestyle behaviours (such as drug addiction, alcohol abuse) that could make them more susceptible to pathological conditions⁷.

In 2013, 24% of people newly diagnosed with HIV infection in Italy were foreign residents. The incidence was 4.9 per 100,000 among Italian residents and 19.7 per 100,000 among foreign residents, in reduction compared to the previous year (in 2012 the incidence rates were 5/100,000 inhabitants and 22.3/100,000 inhabitants, respectively). The highest incidence of foreign residents was observed in Lazio, Campania, Sicily and Sardinia and among heterosexual females (38.3%), while among Italian citizens most newly diagnosed individuals were men who have sex with men (MSM) (45.9%)⁸.

Pezzoli et al⁹ found that in a cohort of 3003 irregular migrants tested for HIV, 29 people were positive (0.29%). 22.2% of them, presumably, got infected in Italy, probably as a result of social marginalization. More recently, the European aMASE cohort has confirmed these data¹⁰.

EXPERIENCES AND ACTIVITIES AIMED AT THE MIGRANT POPULATION LANDED IN SICILY

The adopted model of community health path envisages an initial intervention of hospitality and triage at the pier and a subsequent activity of transcultural and social healthcare.

The phases of this intervention are based on the following 3 principal activities: 1) preparation of the host location and clinical diagnostic path; 2) creation of a centralized database (DB) for collecting and analyzing

Confronto migranti sbarcati nel periodo 1 gennaio - 10 ottobre. Anni 2014 e 2015

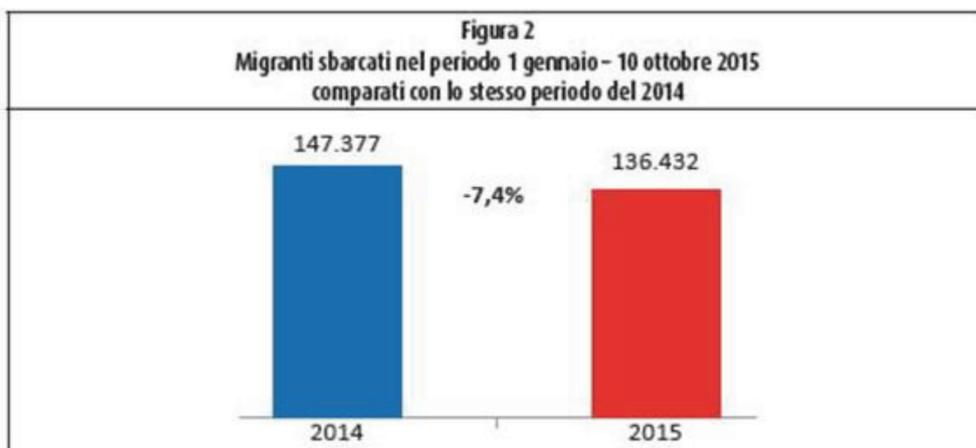


Figure 2. African Migrants in Italy (January-October 2014 and 2015). (Source: Ministry of Interior, 2016).

data on the physical and psychological condition of migrants; 3) psychological and legal assistance through the activation of specific windows for prompt support, information on the right to health and access to care and to respond directly to the needs expressed by the migrants.

The program was launched in 2011 and made it possible to accommodate and assist 24,861 people who came through 106 landings¹¹.

The presence of infectious disease has been reported in 66 subjects (Table 1). In 184 cases out of the total population observed (0.3%), it has been necessary the use of the helicopter rescue team to transfer the migrants to the Sicilian hospital network. The clinical pictures that have requested the transfer to hospitals are shown in Table 2, in which it is possible to highlight that female genital pathologies and reproductive problems have represented the largest part of women; in men, the diseases that have requested more urgent transportation have been infectious diseases and mental disorders.

After 2011, the activities of reception and service have undergone some changes related to the number of landings and migrants arrived in Sicily and to the specific request of screening for sexually transmitted infections manifested by the migrants themselves. Specific interventions for early diagnosis of tuberculosis have been started in some centers.

A specific study evaluated the prevalence of HBV infection in a population of African migrants in Palermo¹². Between May 2014 and April 2015, a total of 265 male African migrants were tested for HbsAg. In HBsAg positive patients the biochemical and virological activity of infection and the possible presence of coinfections (HCV, HDV, HIV) were evaluated.

Among the 265 subjects tested, 19 (7.1%) resulted HBsAg positive. Mean age was 28 years (range 18-42). The HBsAg positive patients came from: Mali, 4 (21%); Ghana, 4 (21%); Gambia, 3 (15.7%); Nigeria and Guinea-Bissau, 2 (10.5%); Senegal, Somalia and Costa d'Avorio, 1 (5.2%).

Only 3 patients infected by HBV had elevated alanine-aminotransferase (ALT) serum levels (average level was 202 IU/l, range 61-323). The others 16 patients had normal ALT serum levels. In the normal ALT group, the se-

rum HBV DNA was detectable by PCR-Real Time in 11 patients (68.7%); average level was 1,688,284 copies/ml, range: 96-170,000,000. In the last 5 patients (31.3%), HBV DNA was undetectable (<20 copies/ml). In the 3 patients with elevated alanine-aminotransferase serum levels, we observed detectable serum HBV DNA by PCR-Real Time (average level 16.277 copies/ml, range 128-47,740).

Our study points out an intermediate prevalence of HBV-infection in migrant African people. Two remarkable aspects emerged from the study: the elevated number (13 cases, 68.4%) of young healthy carriers of HBsAg (mean age 26.4 years, range: 18-37) and the relative frequency (21%, 4 cases) of coinfection with Human Immunodeficiency Virus (HIV).

Another important experience has been conducted to assess the prevalence of tuberculosis in young migrants confined in the Centres for Identification and Expulsion (CIE)¹³.

In June 2012, we worked with a team of Medecins Sans Frontières (MSF) for a "Pilot project for early diagnosis, treatment and monitoring of tuberculosis in migrants hosted in closed Centres of Identification and Expulsion and consequently prevent the spread of the disease" to improve and strengthen the prevention, diagnosis and care of tuberculosis in 4 out of 13 immigration centres in Italy.

The objectives of the project were: 1) to evaluate the TB screening tool and to identify factors leading to loss of follow-up; 2) to determine the number of TB cases and suspected TB cases in the screened population and; 3) to identify significant risk factors for active TB in this specific population.

The investigators provided TB training for local staff, administered TB screening questionnaires to all inmates at admission in collaboration with local health staff and facilitated referrals to TB centers. TB questionnaires consisted of verbal screening on symptoms proving active TB, previous history of TB or previous contact with a TB case.

From August 2012 to December 2013, 1931 migrants were enrolled; the majority were young adult men with an average age of 30 years. The screened migrants came from 93 different countries. The most represented countries were Tunisia, Morocco and Nigeria. Among the screened migrants, 54 (2.8%) had a positive questionnaire: the majority were men, but HIV co-infected MSM had the highest risk of having a positive questionnaire due to the previous TB. Most frequent answers were: a previous history of TB (35%) and chronic cough (33%). Twenty-three (42.6%) were referred to TB Centers. Reasons for not being referred were (in order): CIEs operational limitations, physician decision and host's refusal. Active TB was diagnosed in four individuals (0.2% among screened).

The results confirm the higher incidence of active TB among irregular migrants in closed centres compared to general population living in Italy. The overall yield of this intervention is in the range reported for other migrant TB screening programs in open contexts. Referral outside the CIEs was not optimal, mainly because of CIEs operational limitations: since a high number of positive questionnaires were not referred, in order to en-

Table 1. Diagnosis of identified infectious diseases.

Diagnosis	No. of cases
TB infection	21
HBV infection	13
Scabies	8
Pneumonia/bacteria bronchopneumonia	5
Malaria	5
HCV infection	4
Acute gastroenteritis	4
HIV infection	2
Herpetic stomatitis	1
Purulent meningitis	1
Bacterial endocarditis	1
Visceral leishmaniasis	1
Total	66

Table 2. Clinical cases requiring urgent transportation by helicopter rescue.

Females (No. 88)		Males (No. 96)	
Gynaecological and reproductive disorders	80	Infectious diseases	23
Term pregnancies or premature births	63	Tuberculosis	10
Abortion	11	Pneumonia or bacterial bronchopneumonia	5
Pelvic pain unknown origin	5	Acute gastroenteritis	3
Bartholinitis	1	Scabies	2
		Bacterial endocarditis	1
		Bacterial Meningitis	1
		Herpetic stomatitis	1
Other pathologies	8	Neuropsychiatric disorders	29
Acute appendicitis	4	Suicide attempt	23
HIV infection	1	Epileptic seizures	5
Pulmonary TBC	1	Abstinence syndrome	1
Visceral leishmaniasis	1		
Acute gastroenteritis	1	Traumatic diseases	14
		Traumatic fractures of the limbs	11
		Brain trauma with fracture	3
		Other pathologies	30
		Acute abdominal pain	7
		Severe dehydration (shock)	7
		Acute urinary retention	5
		Acute appendicitis	4
		Skin ulceration/burns	4
		Cerebrovascular accidents	3

sure universal access to secondary health care, more effort must be done by CIEs staff towards the completion of the diagnostic workup.

In the last five years, screening programs for HIV infection have not been performed in immigrants who have landed in Sicily. Therefore, no reliable data are available. However, the observation and the perception of an increased risk of sexually transmitted infections in the migrants from Libya has led us to perform, in Lampedusa, in the month of July 2011, a special screening for the diagnosis of HBV and HIV infection in two specific cohorts who reported different migration patterns. The methodological limitations and sampling of the study do not allow an accurate and meaningful analysis of the data. However, it has been highlighted a relevant difference of prevalence among the population from Tunisia and Morocco compared to Libya, with a history of prolonged forced permanence in the concentration camps. In fact, the Tunisian population screened (171 people) filed a single case of HBV infection; no cases of HIV infection were detected. 194 people from the Horn of Africa region and sub-Saharan Africa, who reported about an extended period of stay in the concentration camps in Libya, have been found to be infected with HIV in one case, with HIV/HBV in one case, with HBV in 4 cases.

As expected, migration is changing the epidemiology of HIV infection; in 2013, 24% of new diagnoses of HIV infection have been reported in non-Italian patients¹⁴. In the same year, the incidence was 4.9 new cases per 100,000 among Italian residents and 19.7 new cases per 100,000 among foreign residents. The highest incidences of foreigners were observed in Lazio, Campania, Sicily and Sardinia. Among the foreigners, women are infected through heterosexual intercourses (38.3%), while among Italians through male homosexual sex (45.9%).

The data reported by the AIDS Operational Centre (AOC) Institute of Health reflect the cases observed in our unit that receives the largest number of migrants with infectious diseases in Sicily; in the period between 2009 and 2014 we observed 138 new diagnoses of HIV infection: 77 (55.9%) in non-Italian patients and 61 in Italian patients living in Sicily. In our experience, men represent 59% of cases; mean age was 27 years in the foreign patients and 32 years in the Italian ones.

DATA FROM THE ITALIAN SOCIETY OF INFECTIOUS DISEASES (SIMIT)

There are two social aspects strongly linked to migrants' infectious diseases: detention and sex workers. Data from a recent study conducted by the Italian Society of Infectious Diseases (SIMIT)¹⁵ highlight an increased presence of infectious diseases, especially sexually transmitted diseases, in the prison population when compared to the general population: HCV infection is the most prevalent (32.8%), followed by HIV infection (5.6%), HBV infection (5.3%) and syphilis (2.3%). Tuberculosis prevalence in prisoners is 21.8%. A leading study conducted in Palermo emphasized some important problems such as transfer to other prisons, release or incompatibility with prison life, delay in diagnosis and therapy and difficulties in medical assistance. The study revealed that 38% of all TB cases observed had no clinical definition and 19% suspended TB therapy¹⁶.

Sex workers were included in a prospective observational study conducted in Palermo, to evaluate the prevalence of some sexually transmitted infections (HIV, HBV, HCV and syphilis). Over 239 women, 7.1% had a diagnosis of STD¹⁷.

Access to healthcare facilities is one of the biggest obstacles to vulnerable populations, especially immigrants without a permit of stay, because of misinformation, social exclusion, discrimination, the lack of support networks and precarious economic conditions^{18,19}. The above statements and the above listed health conditions highlight the benefits and the need of an increasing integration in the National Health Service for migrants' medical assistance, no matter if regular or irregular, stable or seasonal. The goal could be reached also including committed professionals in order to provide adequate information, social, psychological and legal support^{18,19}. In order to foster and promote such activities, an information manual was recently drawn up by Istituto Superiore di Sanità (ISS), available at http://www.iss.it/binary/publ/cont/ONLINE_2guida.pdf. The brochure covers topics and methods of particular relevance and usefulness for all personnel involved: the role and need for interpreters and/or cultural mediators; health protection and permit of stay; Temporarily Present Foreigners (STP code) and European New Members (ENI code); prohibition of expulsion and reporting to the police.

CONCLUSIONS

To respond adequately to the health needs of migrants, it is essential to identify an effective intercultural mode of communication that allows a real relation and mutual understanding between the health professionals and the migrants. Furthermore, communication between individuals and groups belonging to different cultures should be defined as an interactive dialogue, as a two-way process of negotiation that includes persistent and mutual adjustments, in constant evolution, able to decode the different meanings assigned to words, gestures and behaviour patterns.

CONFLICT OF INTERESTS:

The Authors declare that they have no conflict of interests.

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