



VHPB TECHNICAL MEETING

Addressing Viral Hepatitis Among Europe's Migrant
and Refugee Population:
lessons learnt and the way forward

*Trends of acute hepatitis in migrants in Italy
and potential impact of vaccinations*

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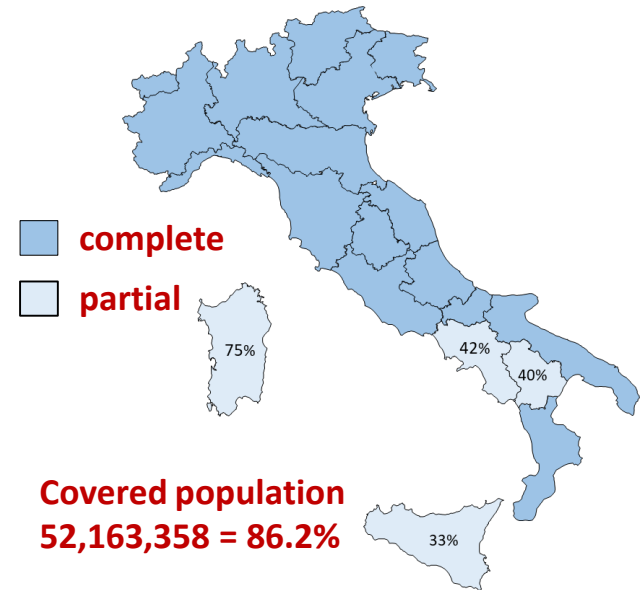
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Methods

✓ **Data source for cases:**

data from the SEIEVA surveillance (acronym for Integrated Epidemiological System for Acute Viral Hepatitis)

✓ period: 2004-2023



✓ data from the 10 Italian Regions completely “covered” by the SEIEVA surveillance

Methods

- ✓ a descriptive analysis of cases of hepatitis A, B, C and E in migrants coming from:

Strong Migratory Pressure Countries (SMPC) and
High-Income Countries (HIC)

- ✓ a comparison of standardized incidence rates* among the **Italian** and **migrant populations**

- ✓ **Data source for denominators:**

Italian National Institute of Statistics (ISTAT): estimate of the number of migrants living in Italy by gender, age, Country of origin and Region of residence

* the rates standardised by age (standard: the total Italian population covered by SEIEVA in the 10 complete Regions, in 2014)

Distribution of foreign citizens among acute viral hepatitis cases

SEIEVA 2004-2023

Year	Foreigners/Total cases (%)				
	Total Cases	Hepatitis A	Hepatitis B	Hepatitis C	Hepatitis E
2004	127/1,252 (10.1)	58/651 (8.9)	62/489 (12.7)	7/112 (6.2)	--
2005	106/855 (12.4)	46/386 (11.9)	56/368 (15.2)	4/101 (4.0)	--
2006	160/984 (16.3)	84/407 (20.6)	69/468 (14.7)	7/109 (6.4)	--
2007	152/950 (16.0)	56/353 (15.9)	85/485 (17.5)	6/102 (5.9)	5/10 (50.0)
2008	153/1,278 (12.0)	71/742 (9.6)	67/449 (14.9)	6/74 (8.1)	9/13 (69.2)
2009	151/1,233 (12.6)	84/753 (11.2)	50/384 (13.0)	8/83 (9.6)	9/13 (69.2)
2010	136/781 (17.4)	62/371 (16.7)	62/323 (19.2)	5/75 (6.7)	7/12 (58.3)
2011	138/683 (20.2)	58/244 (23.8)	61/334 (18.3)	10/88 (11.4)	9/17 (52.9)
2012	150/659 (22.8)	70/251 (27.9)	63/302 (20.9)	9/86 (10.5)	8/20 (40.0)
2013	164/1,210 (13.6)	90/781 (11.5)	65/313 (20.8)	3/94 (3.2)	6/22 (27.3)
2014	137/623 (22.0)	73/281 (26.0)	53/256 (20.7)	9/69 (13.0)	2/17 (11.8)
2015	98/531 (18.5)	41/214 (19.2)	39/225 (17.3)	5/63 (7.9)	23/29 (44.8)
2016	98/604 (16.2)	46/317 (14.5)	44/201 (21.9)	4/52 (7.7)	4/34 (11.8)
2017	163/2,597 (6.3)	123/2,352 (5.2)	30/176 (17.0)	5/32 (15.6)	5/37 (13.5)
2018	158/677 (23.3)	116/472 (24.6)	32/140 (22.9)	5/30 (16.7)	5/35 (14.3)
2019	118/492 (24.0)	85/275 (30.9)	16/124 (12.9)	5/31 (16.1)	12/62 (19.3)
2020	33/177 (18.6)	9/68 (13.2)	23/84 (27.4)	0/9 (0.0)	1/16 (6.2)
2021	26/174 (14.9)	12/71 (16.9)	11/68 (16.2)	3/23 (13.0)	0/12 (0.0)
2022	49/244 (20.1)	21/86 (24.4)	15/78 (19.2)	7/48 (14.6)	6/32 (18.7)
2023	63/335 (18.8)	36/171 (21.0)	17/96 (17.7)	4/28 (14.3)	6/40 (15.0)
Total	2,380/16,339 (14.6)	1,241/9,246 (13.4)	920/5,363 (17.1)	112/1,309 (8.6)	107/421 (25.4)

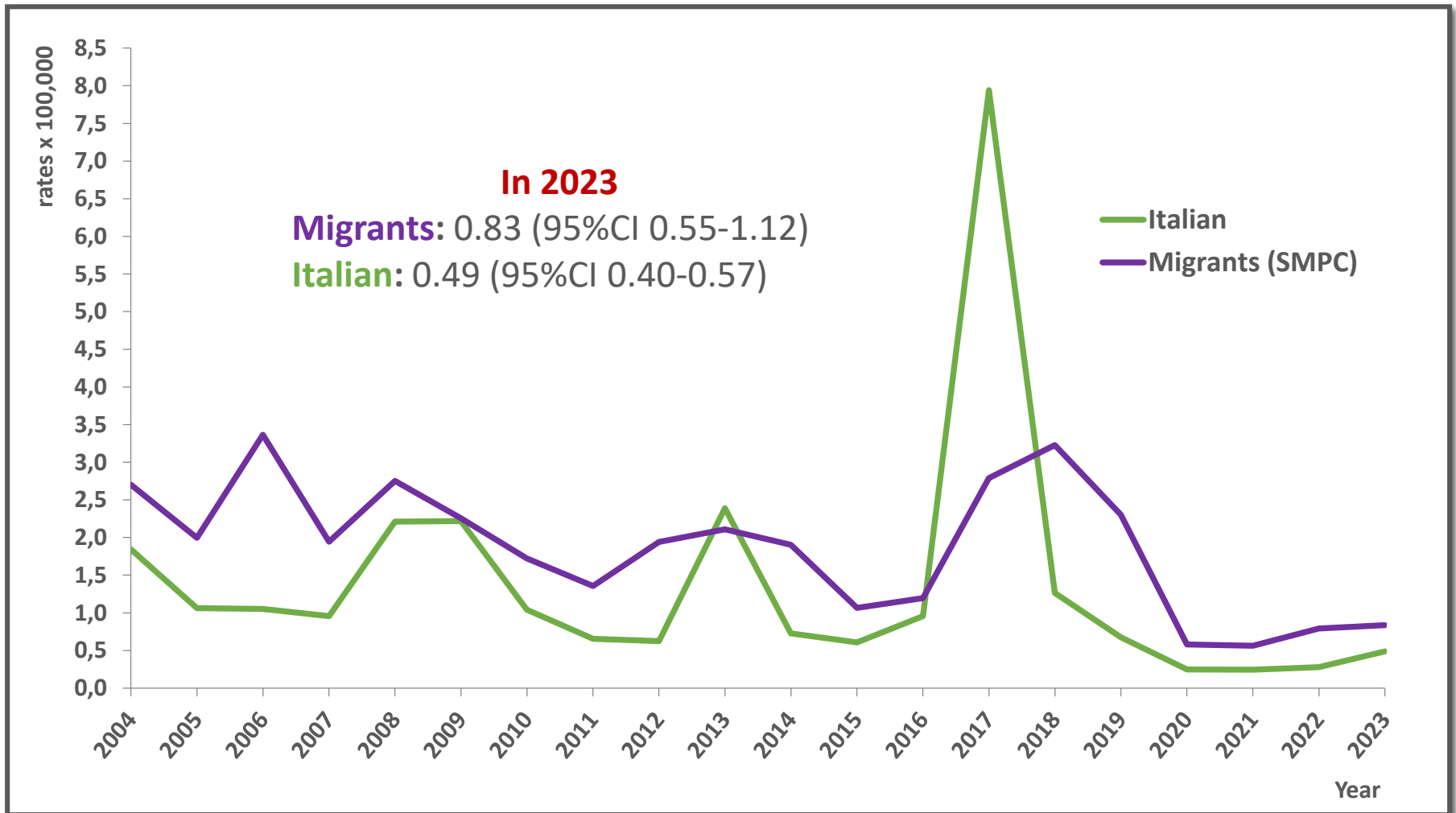
Distributions by area of origin of migrants among acute hepatitis cases

SEIEVA 2004-2023

	Hepatitis A	Hepatitis B	Hepatitis C	Hepatitis E
Country classification				
SMPC	1,182 (95.3)	903 (98.2)	111 (99.1)	106 (99.1)
HIC	59 (4.7)	17 (1.8)	1 (0.9)	1 (0.9)
Area of origin				
Africa	575 (46.3)	206 (22.4)	25 (22.3)	5 (4.7)
[Morocco	455 (38.9)]			
Centre/South Amer.	126 (10.1)	78 (8.5)	7 (6.2)	6 (5.6)
Asia	175 (14.1)	145 (15.8)	13 (11.6)	85 (79.4)
[Bangladesh				37 (35.9)]
East Europe	314 (25.3)	478 (52.0)	66 (58.9)	10 (9.3)
[Romania		229 (26.0)	26 (24.8)]	
West Europe	46 (3.7)	11 (1.2)	1 (0.9)	1 (0.9)
North America	4 (0.3)	1 (0.1)	0 (0.0)	0 (0.0)
Oceania	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)
Total	1,241 (100)	920 (100)	112 (100)	107 (100)

Hepatitis A. Yearly trend in standardised incidence rates: Italian vs Migrants from Strong Migratory Pressure Countries (SMPC)

SEIEVA 2004-2023



Description of acute hepatitis A cases in migrants

SEIEVA 2004-2023

Characteristics	N° (%)
Gender	
male	688 (55.7)
female	548 (44.3)
Age	
median (range)	12 (0-84)
Geographical area of residence	
North	776 (62.5)
Centre	435 (35.1)
South-islands	30 (2.4)
Total	1,241 (100)

Time of stay in Italy, before symptoms' onset

median (range) **7 years** (0-62)

Only 7 cases had been in Italy less than 1 year

	Migrants	Italians
Travels to endemic areas		
N° (%)	543 (48.5)	941 (13.9)
p-value	<0.001	

Travels of acute hepatitis A cases, in migrants SEIEVA 2004-2023

	Migrants	Italians
Travels to endemic areas		
N° (%)	543 (48.5)	941 (13.9)
p-value		<0.001

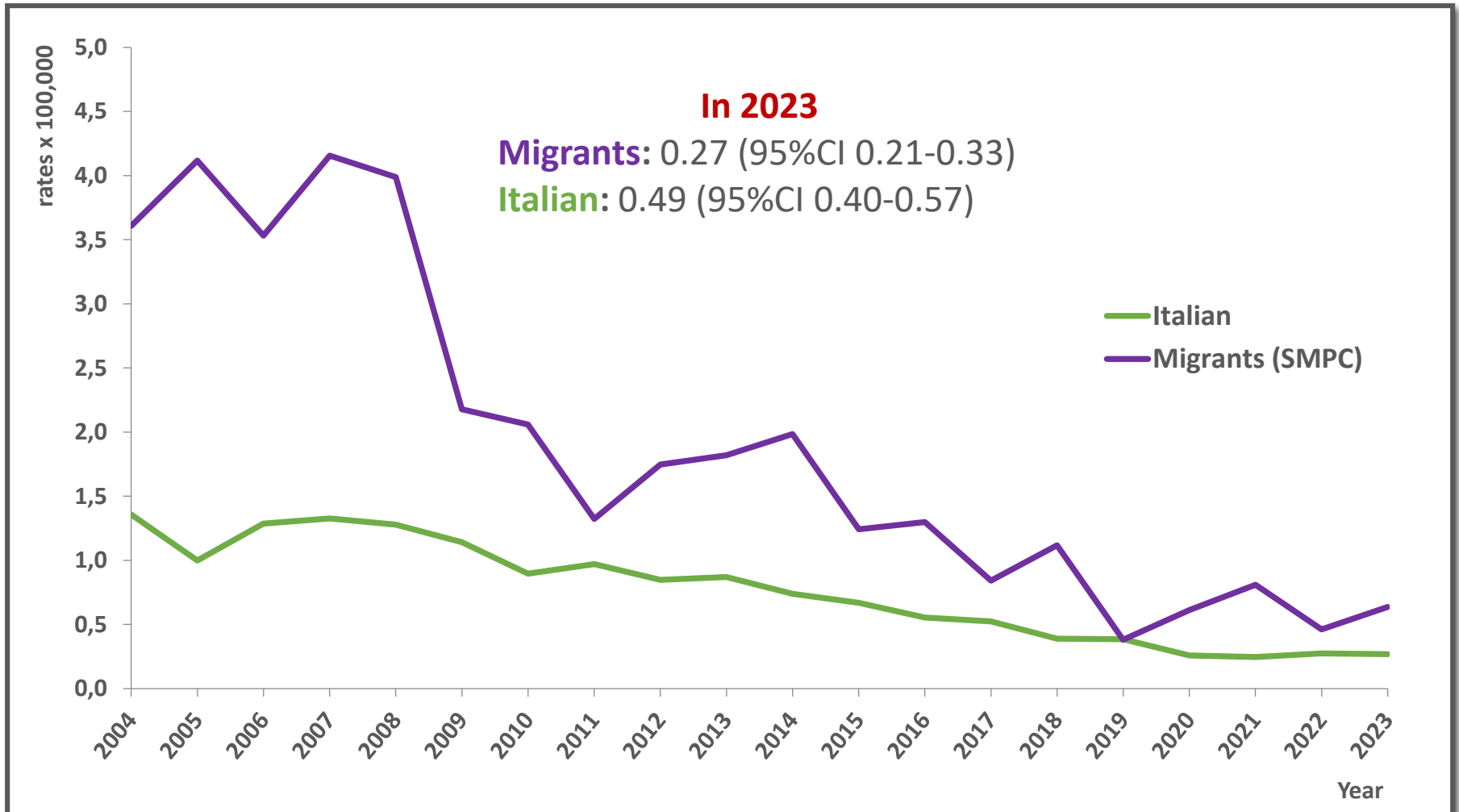
509 (93.7%) of them had made a travel to their Country of origin within 6 weeks of symptom onset

Median age: 8y; range: 0-60y

Destination	N° (%)
Morocco	321 (63.1%)
Pakistan	49 (9.6)
India	20 (3.9)
Bangladesh	18 (3.5)
Egypt	18 (3.5)
Tunisia	12 (2.4)
Other	71 (13.9)

Hepatitis B. Yearly trend in standardised incidence rates: Italian vs Migrants from Strong Migratory Pressure Countries (SMPC)

SEIEVA 2004-2023



to explain the decreasing trend among migrants ...

- ✓ in 2007 Romania and Bulgaria joined the EU ...
- ✓ vaccination anti-hepatitis B in the Countries of origin
- ✓ a possible vaccination in Italy
- ✓ “herd immunity”

Description of acute hepatitis B cases in migrants

SEIEVA 2004-2023

Characteristics	N° (%)
Gender	
male	598 (65.1)
female	321 (34.9)
Age	
median (range)	43 (0-83)
Geographical area of residence	
North	492 (53.5)
Centre	407 (44.2)
South-islands	21 (3.7)
Total	920 (100)

Time of stay in Italy, before symptoms' onset

median (range) **6 years** (0-44)

Only 2 cases had been in Italy less than 1 year

	Migrants	Italians
Household contact of an HBsAg+ carrier		
N° (%)	106 (19.0)	275 (8.1)
p-value	<0.001	

BORDER CHECKS *KEPT IN CHECK*

Italian guideline on
“Health checks and protection
pathways for migrants on arrival
and while hosted in reception centres”



Diseases and conditions

Infectious diseases:

- tuberculosis
- malaria
- HIV
- HBV/HCV
- sexually transmittable infections
- intestinal parasites

Chronic-degenerative conditions:

- diabetes
- anaemia
- hypertension
- cervical cancer screening

- pregnancy
- vaccinations

RECOMMENDATIONS related to infectious diseases

Screening

Testing offered to asymptomatic subjects coming from endemic areas or exposed to specific risk factors

- LTBI
- HIV
- **HBV**
- **HCV**
- syphilis, chlamydia, gonorrhoea
- strongyloides, schistosoma

Vaccinations

Children (0-14 years) never vaccinated or with uncertain documentation: vaccinations in compliance with the national timetable, according to the age (**including hepatitis B**)

Adults with uncertain or absent vaccination history:

- anti-polio, anti-diphtheria, anti-tetanus, anti-pertussis
- anti-measles, anti-mumps, anti-rubella, anti-varicella, except for pregnant women
- **anti-HBV** → if screening is performed, vaccination should be offered to those who tested negative for serological markers

Comments regarding incidence rates estimates

- ✓ a possible underestimate of migrant population (used as denominators for rates) due to the presence of irregular people
- ✓ in Italy, the National Health System ensures a universal health coverage with no restriction on undocumented migrants



an overestimate of rates is possible among migrants

Strength

- ✓ the analysed data come from a surveillance system existing since 1985 and without major changes
- ✓ this should allow unbiased estimates of the temporal trends

Conclusions

- ✓ no excess of risk of hepatitis C and E seems to exist in migrants with respect to the Italians

Hepatitis A

- ✓ in Italy the risk of acquiring hepatitis A is higher for migrants as compared to Italian
- ✓ many cases in migrants are among children, they should be offered vaccination before they leave for travels to their Country of origin

Hepatitis B

- ✓ the difference among the two incidence curves (migrants and Italians) seems to be decreasing, even though a difference still exists
- ✓ the decreasing trend in incidence related to the vaccination
- ✓ nevertheless vaccination should be improved, given the risk of migrants living with HBsAg-positive individuals

Recommendations

- ✓ to improve access to hepatitis A and B vaccination for the migrant population
- ✓ to eliminate any barrier that might limit access to health care



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Thank you very much

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