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Il villaggio globale:
popoli in migrazione e impatto in un'ottica di sanità pubblica

Sirmione, 30 novembre 2012

Outline della presentazione

Il villaggio globale: popoli in migrazione e impatto in un'ottica di sanità pubblica

- **Le parole chiave:**
  - **Villaggio globale**
    - Popoli, Migrazione
  - **Impatto, Sanità pubblica**
    - L'impatto "infettivologico"
    - .. ben sapendo che la questione è più ampia …

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Il villaggio globale

La locuzione **villaggio globale** è stata usata per la prima volta da Marshall McLuhan, uno studioso delle comunicazioni di massa, nel 1964, in un suo libro ("Gli strumenti del comunicare" - originale: *"Understanding Media: The Extensions of Man"*) in cui, nel passaggio dall'era della meccanica a quella elettrica, ed alle soglie di quella elettronica, analizzava gli effetti di ciascun "medium" o tecnologia sui cambiamenti del modo di vivere dell'uomo.

Per villaggio globale si intende un mondo piccolo, delle dimensioni di un villaggio, all'interno del quale si annullano le distanze fisiche e culturali e dove stili di vita, tradizioni, lingue, etnie sono rese sempre più omogenee e internazionali.

……

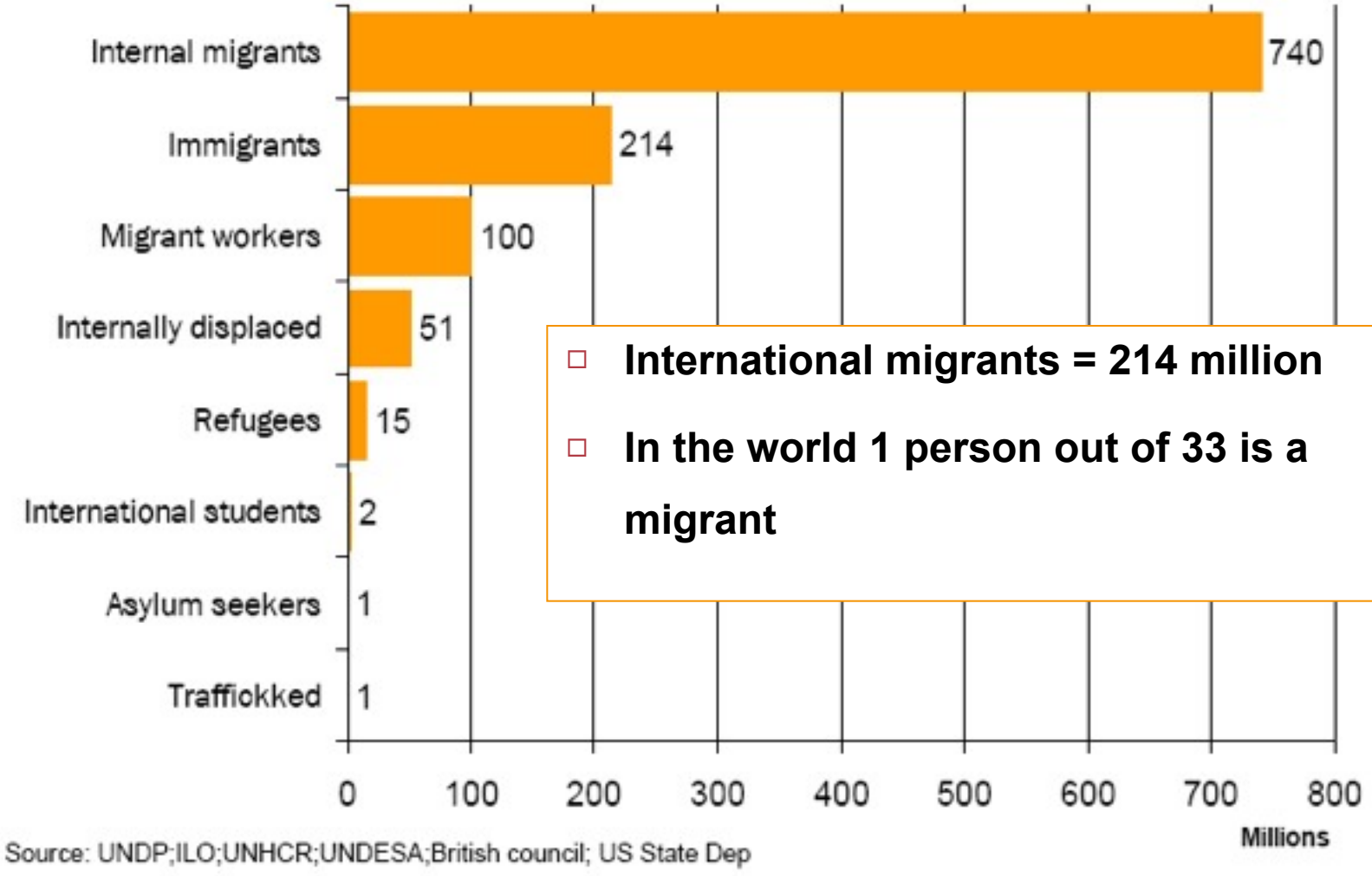
Indicata da taluni come un ossimoro (per la compresenza di riferimenti ad unità geografiche minori e totali), la locuzione è divenuta di vastissima diffusione al sorgere di nuove tecnologie (prima delle quali Internet) che consentirono una facilitazione ed un'accelerazione delle comunicazioni umane di grande rilievo, divenendo quasi un sinonimo delle interconnessioni per la comunicazione e dei risultati che consentono. **In questo senso, spesso senza riferimenti all'originario senso filosofico, la locuzione si applica sia per definire che il gigantesco globo si sia ridotto ad un ambito facilmente esplorabile al pari di un villaggio, sia che (almeno per la comunicazione) ciascun villaggio che lo compone abbia oggi abbattuto i suoi confini non più terminandosi, e dunque coincidendo con il globo**.

Il villaggio globale

http://www.google.it/imgres?um=1&hl=it&sa=N&tbo=d&biw=1311&bih=565&tbm=isch&tbnid=BPYn07SiVCPCpM:&imgrefurl=http://www.osservatorioanalitico.com/%3Fp%3D1116&docid=5m58hY3AlWuDQM&imgurl=http://www.osservatorioanalitico.com/wp-content/uploads/2012/11/flussi-migratori-1.jpg&w=484&h=255&ei=uCWyUOvcK4XesgbZ2oHIAg&zoom=1&iact=hc&vpx=328&vpy=288&dur=217&hovh=163&hovw=309&tx=179&ty=92&sig=111751164714568899416&page=3&tbnh=148&tbnw=281&start=55&ndsp=29&ved=1t:429,r:71,s:0,i:303

Il villaggio globale

“Migrante”: intendiamo tutti la stessa entità?



- **International migrants = 214 million**
- **In the world 1 person out of 33 is a migrant**

Courtesy of R. Borland, IOM, 2011

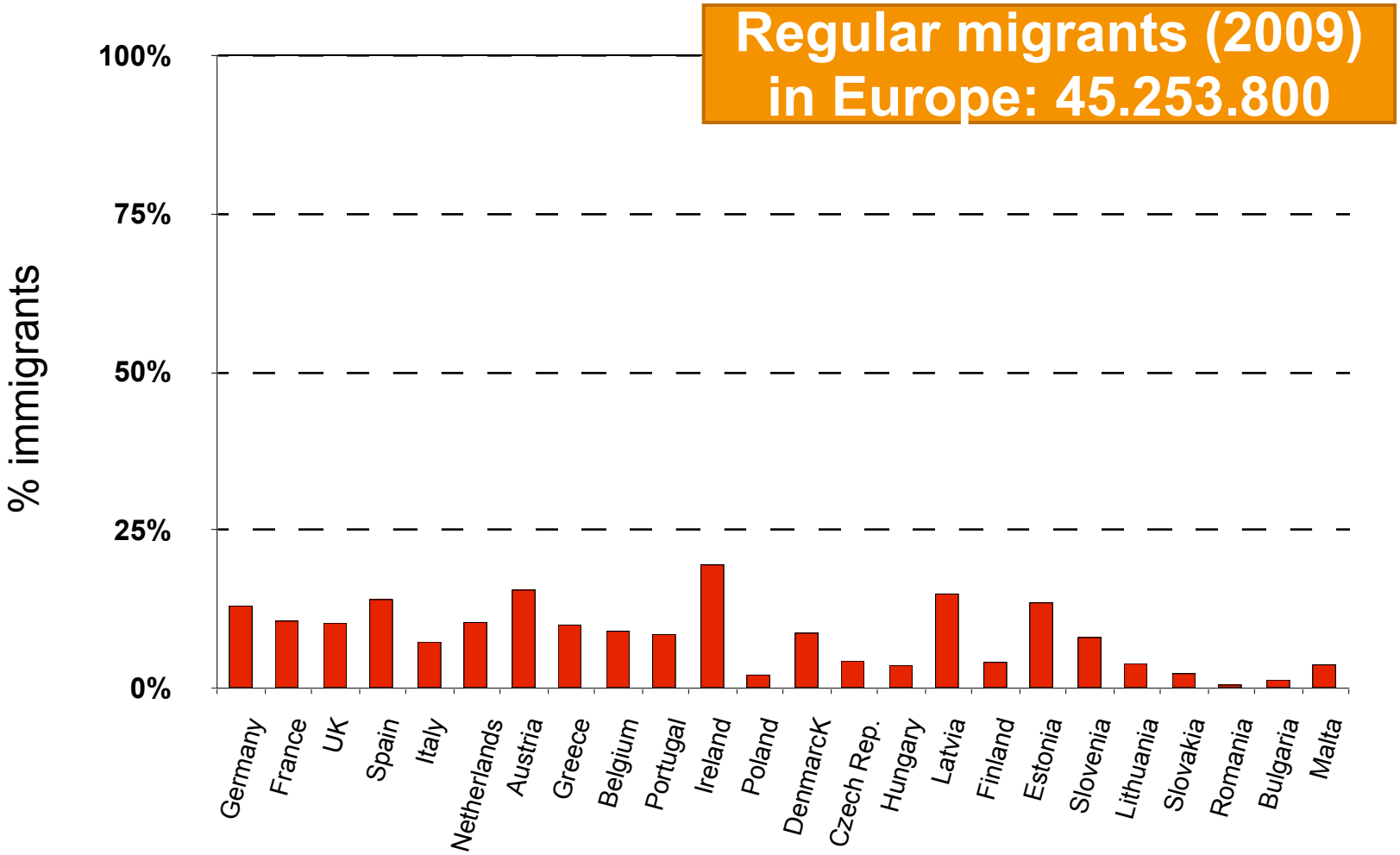
I migranti sono “troppi”?

Table 1: Perceived and actual percentage of the population made up of migrants, in four transatlantic countries, 2010

Country	Perceived	Actual
Italy	25	7
Spain	21	14
United States of America	39	14
Canada	39	20

Source: Transatlantic Trends, 2010: 6.

Migranti (%) nella Unione Europea, 2010



Italy: 7% migrants produce 11.1% of the italian GDP

www.iom.int

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Definitions

Health is ….

"*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity "*(WHO)

Migration health …

"addresses the physical, mental and social needs of migrants, and the public health needs of hosting communities" (IOM / WHO)

… and the home communities?

Courtesy of R. Borland, IOM, 2011

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  - **Impatto, Sanità pubblica (sulle comunità d'origine)**
    - Brain drain
    - …..

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L’impatto infettivologico di sanità pubblica

- Introduzione di patologie eradicate o nuove?
- Diffusione di nuove/vecchie patologie nella popolazione?
- Acquisizione di patologie da parte dei migranti?
- Preparazione della classe sanitaria?

L’impatto infettivologico di sanità pubblica:
1) Introduzione di patologie eradicate o nuove?

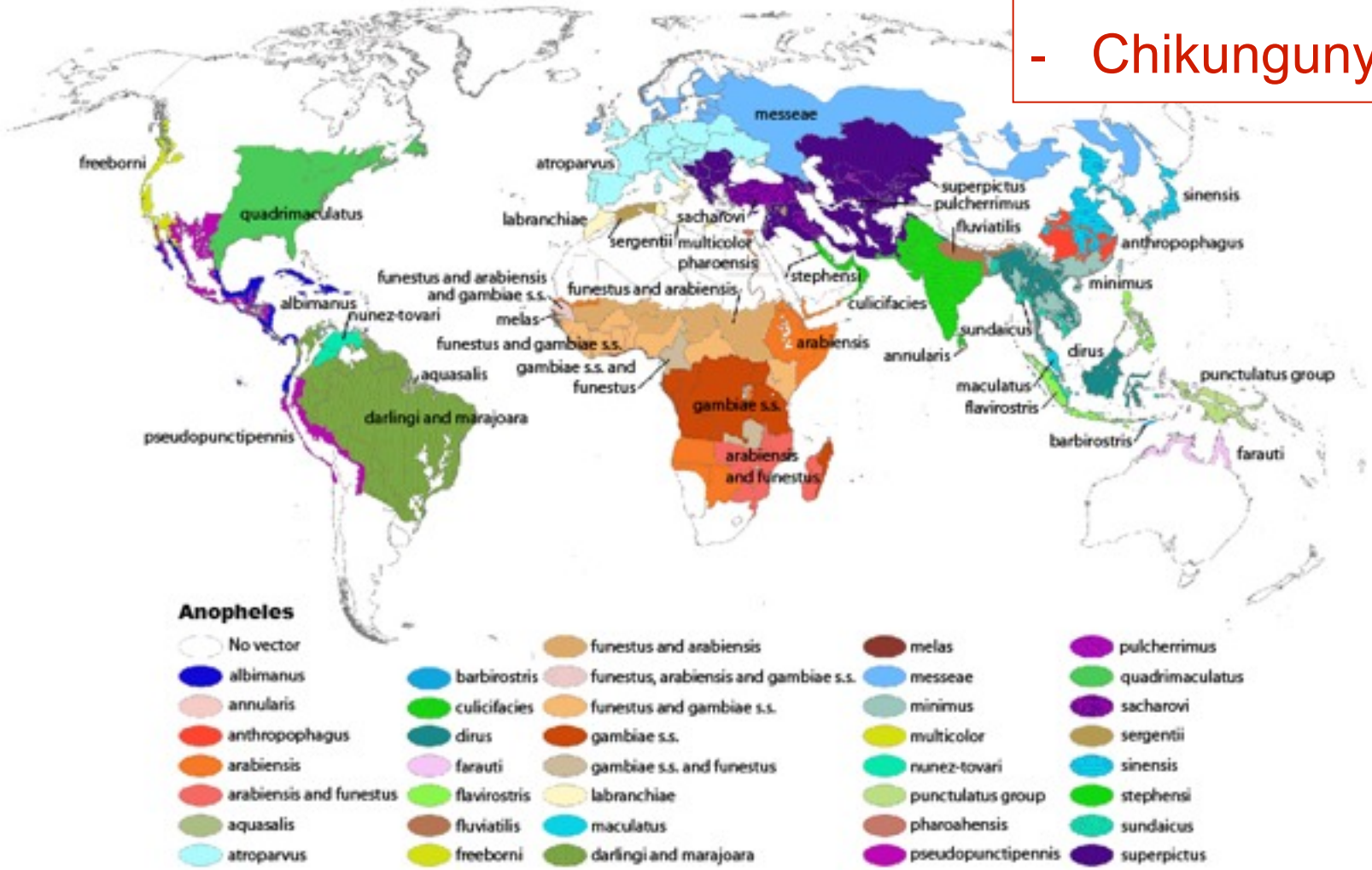
- Malaria
- Chagas
- Chikungunia

Global Distribution (Robinson Projection) of Dominant or Potentially Important Malaria Vectors

From Kiszewksi et al., Am. J. Trop. Med. Hyg., 2004; 70:486-498.

Vector borne infections:

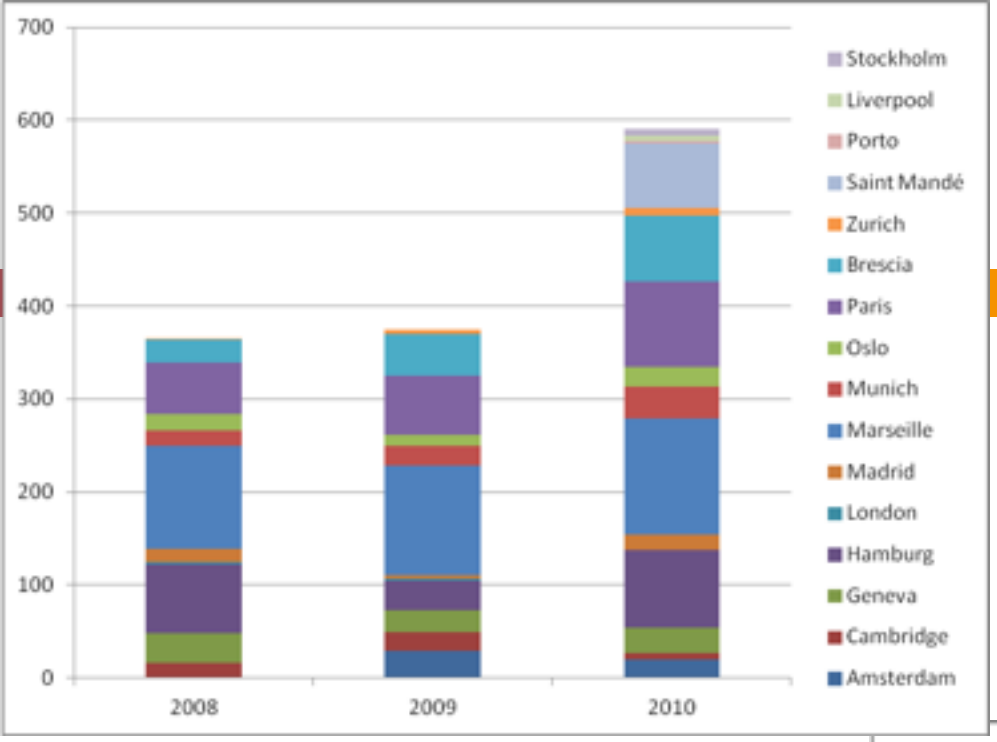
- Malaria
- Chikungunyia



http://www.cdc.gov/malaria/about/biology/mosquitoes/map.html

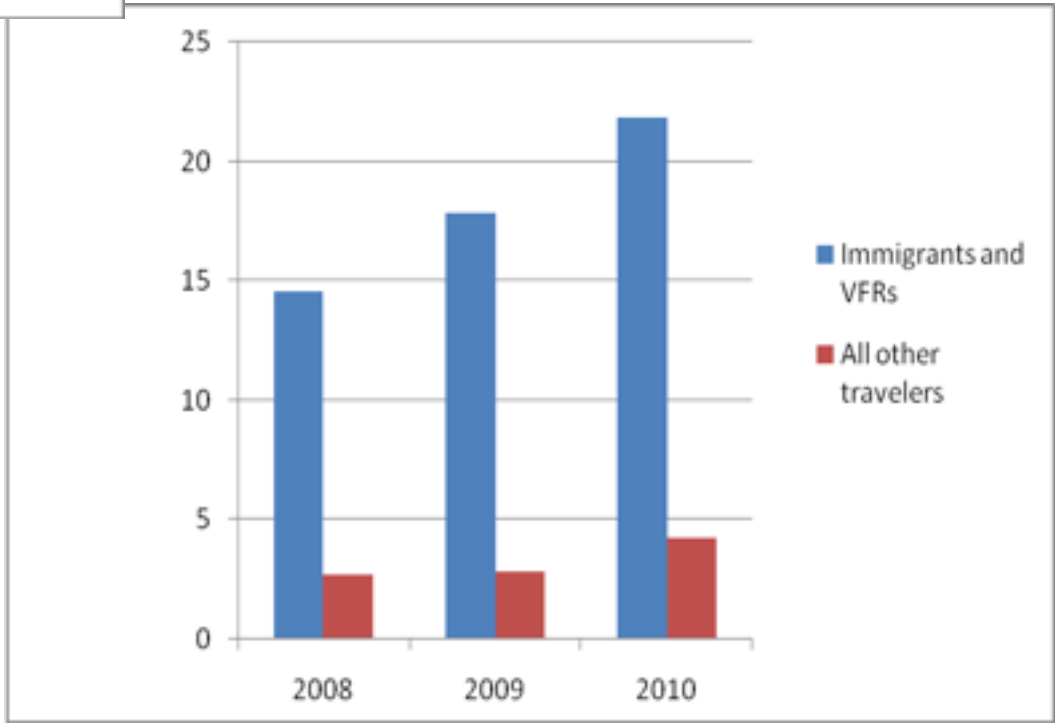
Travel-related imported infections in Europe, EuroTravNet 2010

Gautret P. et al, 2012



Number of malaria cases per year reported by EuroTravNet sites.
Malaria (all cases) by reporting site.

Proportion of immigrants/VFRs and other travelers with malaria among all ill immigrants/VFRs and other travelers returning to EuroTravNet sites



ORIGINAL ARTICLE Clin Microbiol Infect 10.1111/j.1469-0691.2011.03596.x

Travel-related imported infections in Europe, EuroTravNet 2009

S. Odolini[1], P. Parola[2], E. Gkrania-Klotsas[3], E. Caumes[4], P. Schlagenhauf[5], R. López-Vélez[6], G.-D. Burchard[7], F. Santos-O'Connor[8], L. Weld[9], F. von Sonnenburg[10], V. Field[11], P. de Vries[12], M. Jensenius[13], L. Loutan[14] and F. Castelli[1]

TABLE 1. Demographic characteristics of travellers

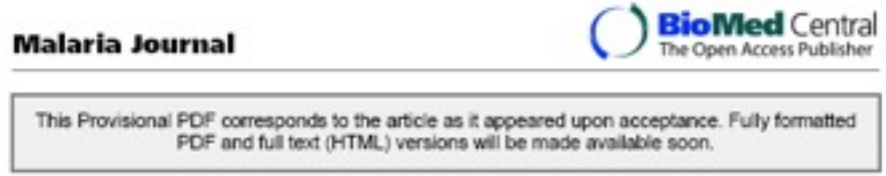
Site	2008	2009	p-value
Gender (%)			
Female	48.9	50.3	
Travel reason (%)			
Business	10.5	11.0	<0.001
Immigration	9.4	7.7	
Medical tourism	0.1	0.4	
Military	0.6	1.0	
M/V/AW/R	22.6	20.0	
Student	1.3	2.5	
Tourism	43.5	45.0	
VFR	11.9	12.5	
Risk level (%)			
Expatriate	6.9	8.6	<0.001
Pre-arranged or organized travel	22.6	26.6	
Risk travel[a]	69.8	63.7	
Missing	0.8	1.2	
Clinical setting (%)			
Immigration only	9.4	7.7	0.001
Seen after travel	82.0	84.4	
Seen during travel	8.5	7.9	
Inpatient	11.0	14.6	<0.001
Pre-travel advice (%)			
Yes	45.4	43.2	<0.001
No	22.4	26.1	
Do not know	32.2	30.7	

During the last few years, the number of imported malaria cases in Europe has decreased, possibly reflecting malaria control activities in endemic countries [4,5]. However, malaria in Europe remains an important travel medicine issue, given the large number of imported cases [6]. Moreover, there is potential for the reappearance of malaria in countries where it was previously eradicated, and limited outbreaks do occur in Europe, where *Anopheles* mosquitoes are still present, mainly in the Mediterranean area [7], making the slight, although not statistically significant, increase observed in our dataset in 2009 a phenomenon that requires attention. In August 2006, one case of indigenous *P. vivax*


RAPID COMMUNICATIONS

Autochthonous *Plasmodium vivax* malaria in Greece, 2011

FIGURE 1
Place of residence of reported malaria cases, Greece, May–September 2011 (n=36)



Malaria Journal
BioMed Central
The Open Access Publisher

This Provisional PDF corresponds to the article as it appeared upon acceptance. Fully formatted PDF and full text (HTML) versions will be made available soon.

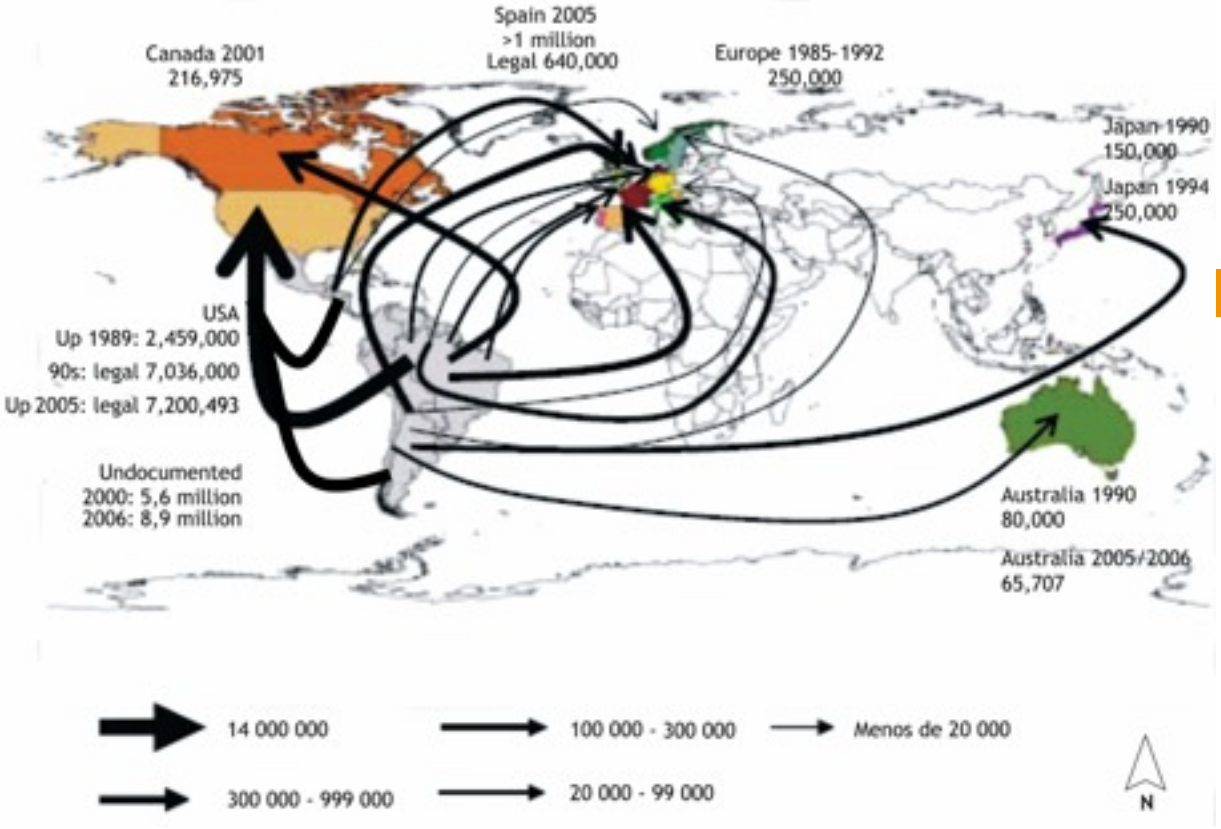
Autochthonous plasmodium vivax malaria in a Greek schoolgirl of the Attica region

Malaria Journal 2012, **11**:52 doi:10.1186/1475-2875-11-52

The Centers for Disease Control and Prevention (CDC) has received information that there have been five additional *P. vivax* malaria cases identified in Greece; four that are locally-acquired cases in Greek residents with no previous travel, and one case in an immigrant. Between January 1 and October 22, 2012, Greece has reported a total of 75 cases of malaria. Of those 75 cases, 47 were caused by *P. vivax* (16 are locally acquired, 2 are relapses, and the remainder occurred in immigrants). Cases among immigrants from *P. vivax*-endemic countries, could have either been imported or acquired locally. The immigrants reported being in Greece from as short as a few days before onset of symptoms to as long as 4 years before the onset of symptoms, therefore these cases could have been either locally transmitted or imported.

The four new locally-acquired cases occurred in locations where malaria had been previously identified. Three new cases were identified in an agricultural area of Evrotas, Lakonia. Another case was reported in Sofades, Karditsa

CDC, 20 novembre 2012



OPEN ACCESS Freely available online

PLoS NEGLECTED TROPICAL DISEASES

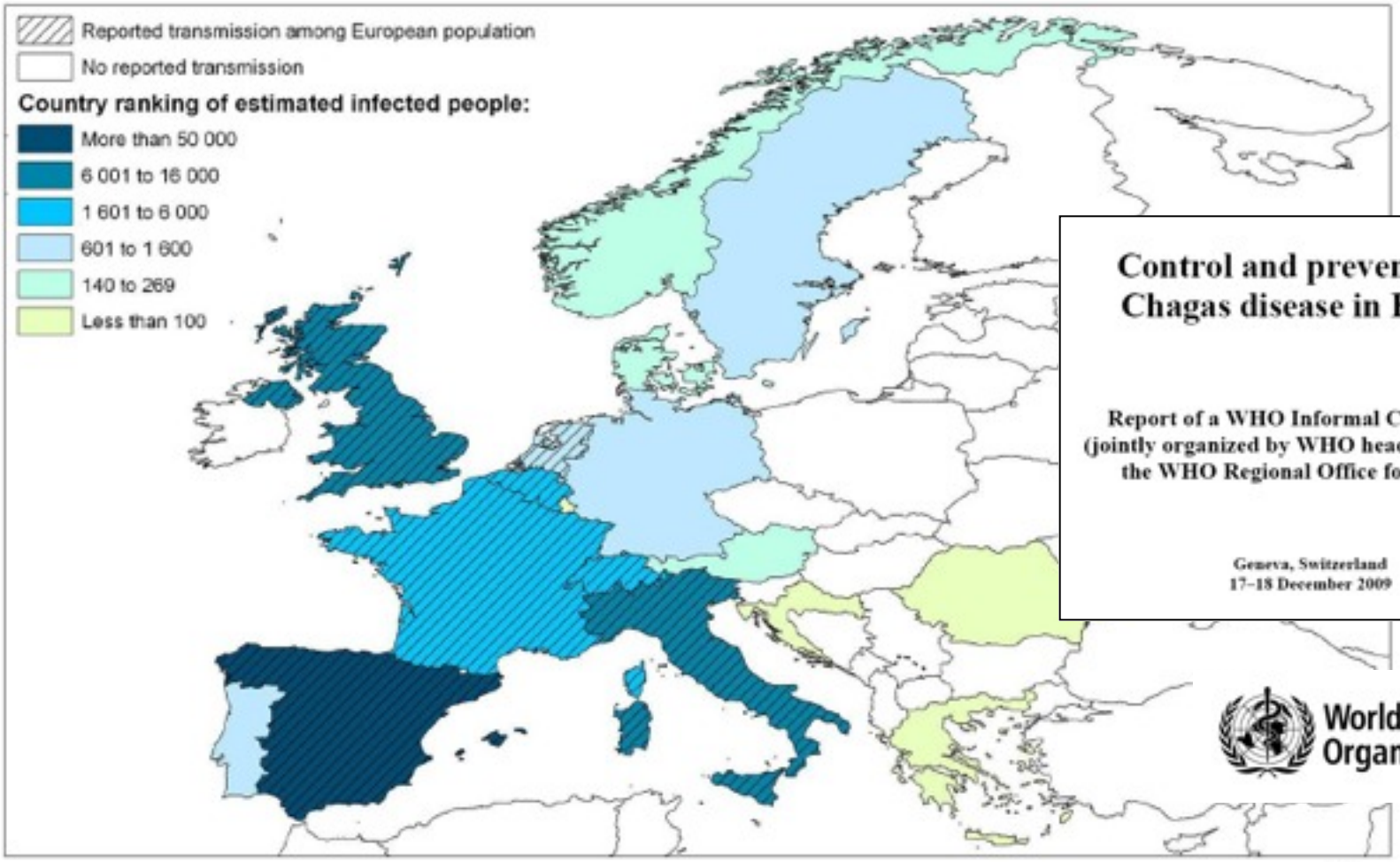
Expert Commentary

Chagas Disease Has Now Gone Global

Herbert B. Tanowitz[1,2,3,4]*, Louis M. Weiss[1,2,3], Susan P. Montgomery[5]

1 Department of Pathology (Division of Parasitology), Albert Einstein College of Medicine, Bronx, New York, United States of America, **2** Department of Medicine (Division of Infectious Disease), Albert Einstein College of Medicine, Bronx, New York, United States of America, **3** Global Health Center, Albert Einstein College of Medicine, Bronx, New York, United States of America, **4** Jacobi Medical Center (Diagnostic Parasitology Laboratory), Bronx, New York, United States of America, **5** Division of Parasitic Diseases and Malaria, Centers for Disease Control and Prevention, Atlanta, Georgia, United States of America

Map A3. Distribution of cases of *Trypanosoma cruzi* infection in Europe by country, and reported transmission (autochthonous, transfusional or congenital transmission of infection acquired among European travellers to disease-endemic areas) among the European population (data reported to WHO as of December 2009)

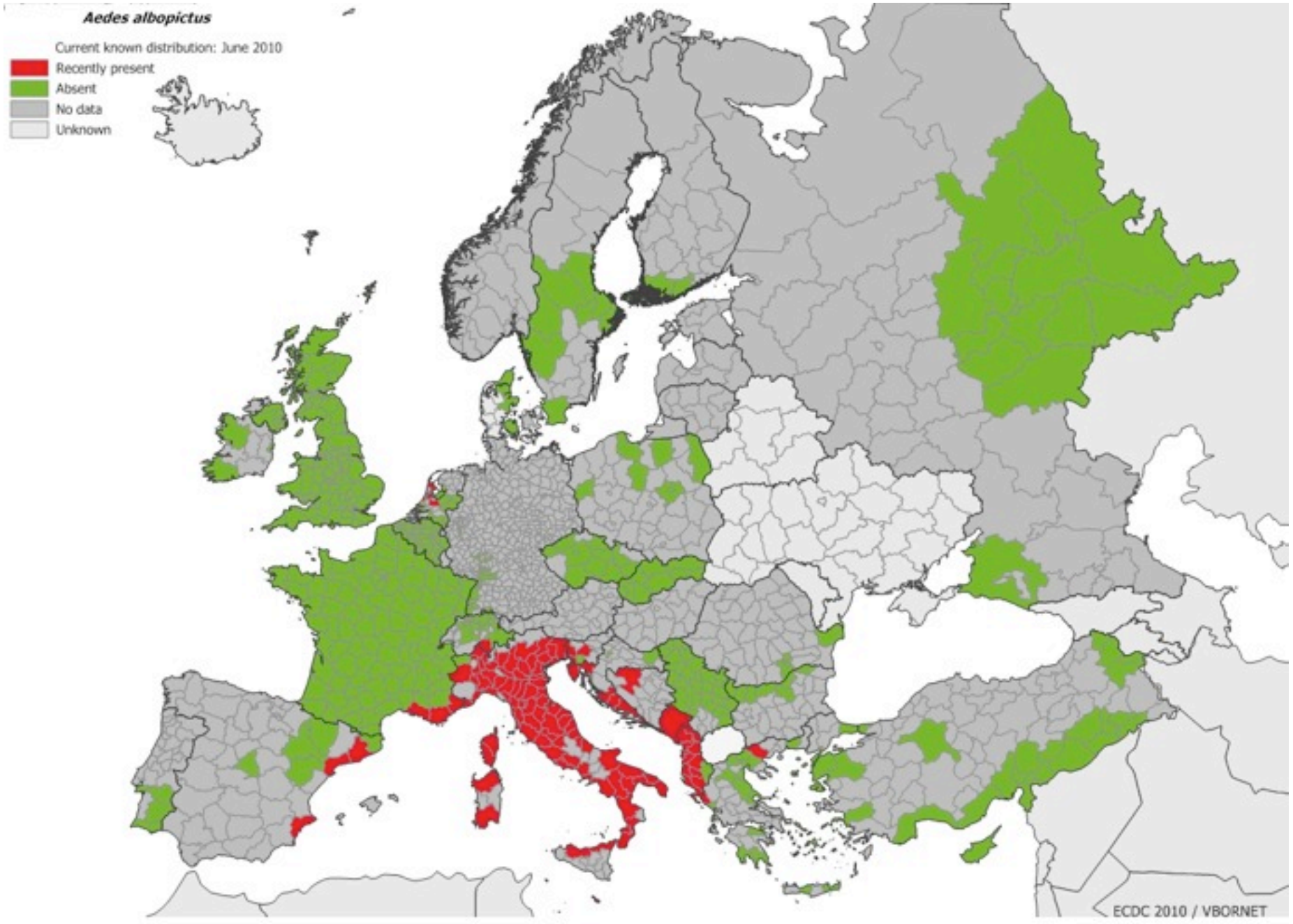


T. cruzi transmission modalities

(mainly during the indeterminate, low parasitaemia, phase of the disease

- Vector – borne
- Oral

- Blood transfusion (Single 500 ml unit risk: 12-20%)
- SOT (Kidney from infected donor: 35%)
- Immune-depression (Risk of reactivation: 30%)
- Mother to Child (Risk of transmission: 0.1-12%)

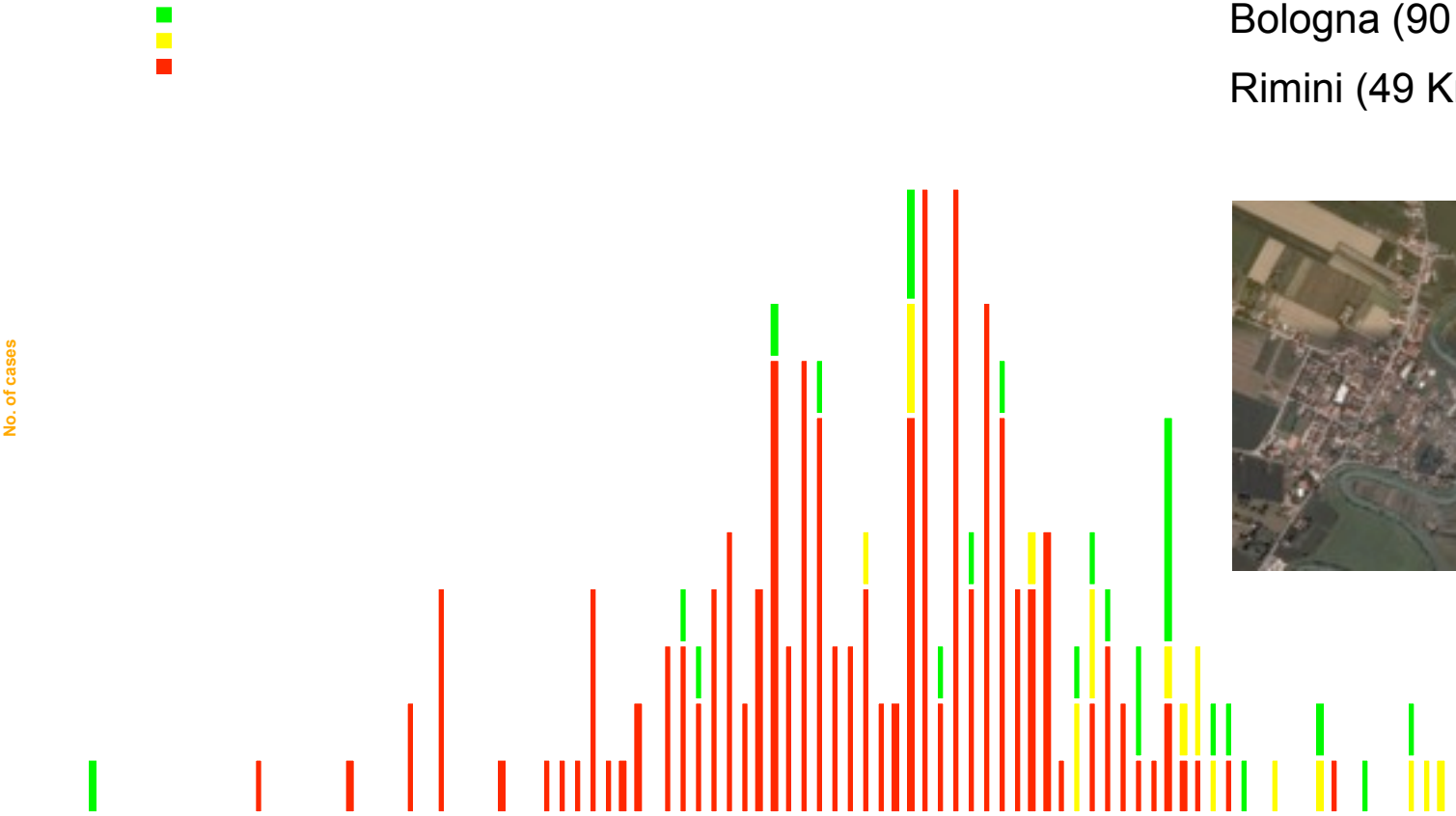


Current known distribution of *Aedes albopictus*

Epidemic Curve by Presumed Place of Infection

Secondary clusters:

Cervia (9 Km)	19 cases
Ravenna (23 Km)	9 cases
Cesena (19 Km)	15 cases
Bologna (90 Km)	5 cases
Rimini (49 Km)	6 cases



Rezza G, et al., Lancet. 2007 Dec 1; 370 (9602): 1840-6.

L'impatto infettivologico di sanità pubblica:
2) Diffusione di nuove/vecchie patologie nella popolazione?

- HIV
- STIs
- Tuberculosis

Infezione da HIV / MTS

- Status di single
- Difficoltoso accesso alle strutture di diagnosi e cura (problema di genere)
- Mercato del sesso / prostituzione
- Marginalizzazione sociale
- Provenienza da Paesi ad elevata endemia

Infezione da HIV/AIDS

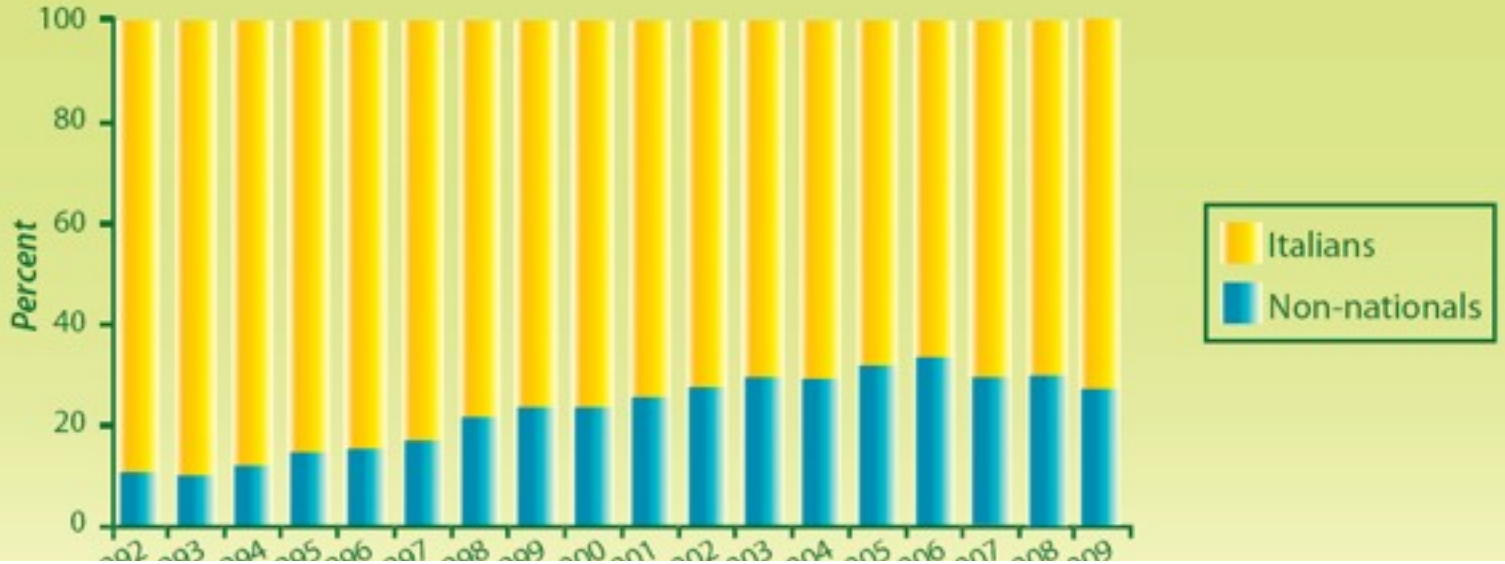


Tabella 13 - Tempo intercorso tra il 1° test HIV+ e la diagnosi di AIDS

Anno di diagnosi	Meno di 6 mesi n. casi	%	≥ 6 mesi n. casi	%
Area geografica di provenienza				
Italia	9.426	39,6	14.367	60,4
Estera	2.613	71,0	1.066	29,0
Non nota	170	64,6	93	35,4
Totale	12.209	44,0	15.526	56,0

Travel-associated sexually transmitted infections: an observational cross-sectional study of the GeoSentinel surveillance database

Alberto Matteelli, Patricia Schlagenhauf, Anna C C Carvalho, Leisa Weld, Xiaohong M Davis, Annelies Wilder-Smith, Elizabeth D Barnett, Philippe Parola, Prativa Pandey, Pauline Han, Francesco Castelli, for the GeoSentinel Surveillance Network

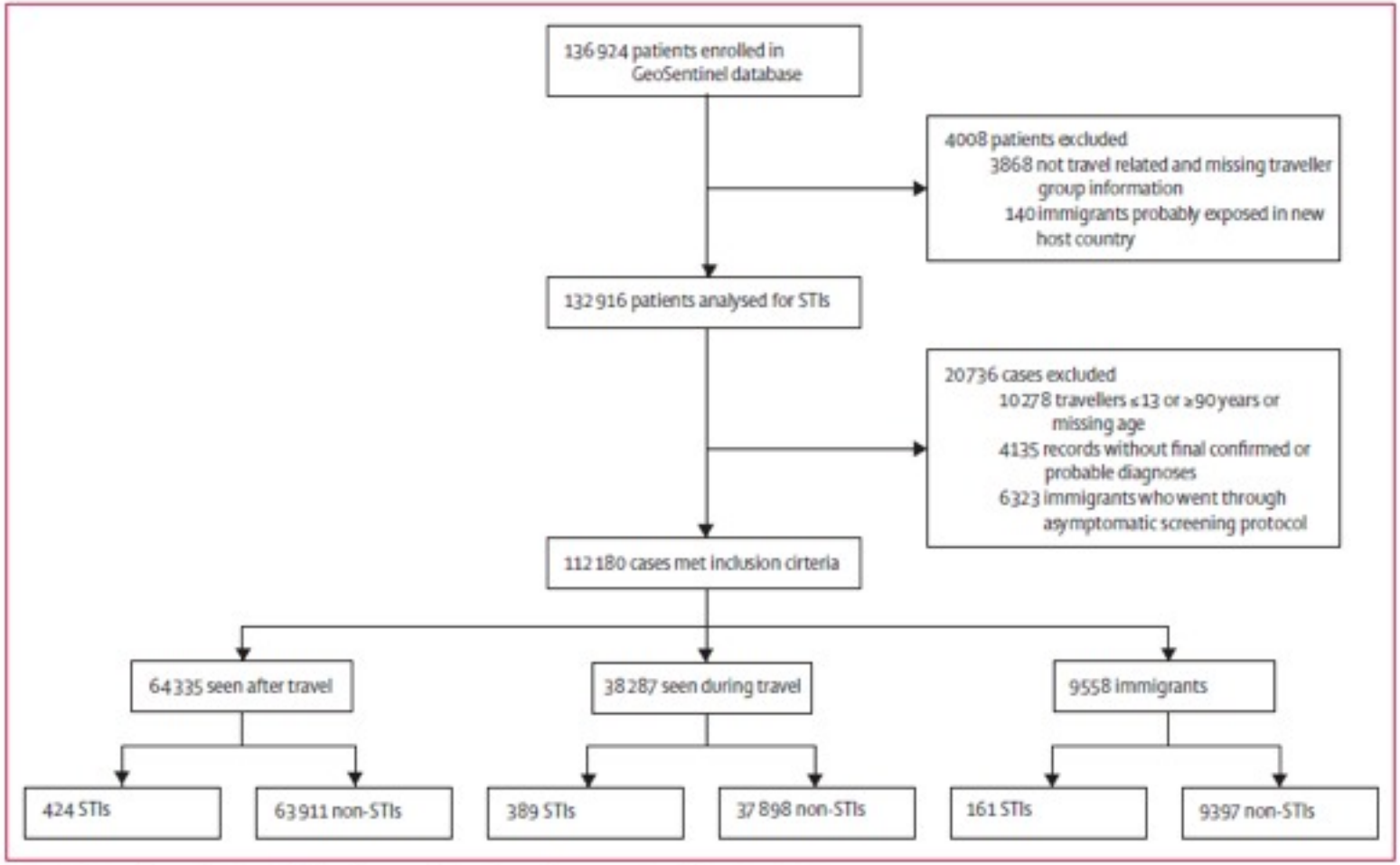


Figure 1: Flow chart of GeoSentinel database analysis of sexually transmitted infections (STIs)

www.thelancet.com/infection Published online November 23, 2012 http://dx.doi.org/10.1016/S1473-3099(12)70291-8

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	n/N (%)	Crude OR (95% CI)	p	Adjusted OR (95% CI)	p
Sex					
Female	122/31 574 (0·4%)	1	..	1	..
Male	299/32 344 (0·9%)	2·41 (1·95–2·97)	<0·0001	2·22 (1·79–2·75)	<0·0001
Reason for travel					
Tourism	213/37 394 (0·6%)	1	..	1	..
Business	74/9204 (0·8%)	1·42 (1·085–1·85)	0·01	1·22 (0·92–1·62)	0·159
Missionary or volunteer	38/8557 (0·4%)	0·78 (0·55–1·10)	0·156	0·91 (0·63–1·32)	0·625
Student	3/1331 (0·2%)	0·39 (0·13–1·23)	0·111	0·54 (0·17–1·71)	0·297
Health-care seeking	0/46 (0·0%)	..	0·998	..	0·998
Visiting friends or relatives	93/7371 (1·3%)	2·23 (1·75–2·85)	<0·0001	2·12 (1·62–2·78)	<0·001
Military	2/302 (0·7%)	1·17 (0·29–4·71)	0·832	1·31 (0·32–5·37)	0·706

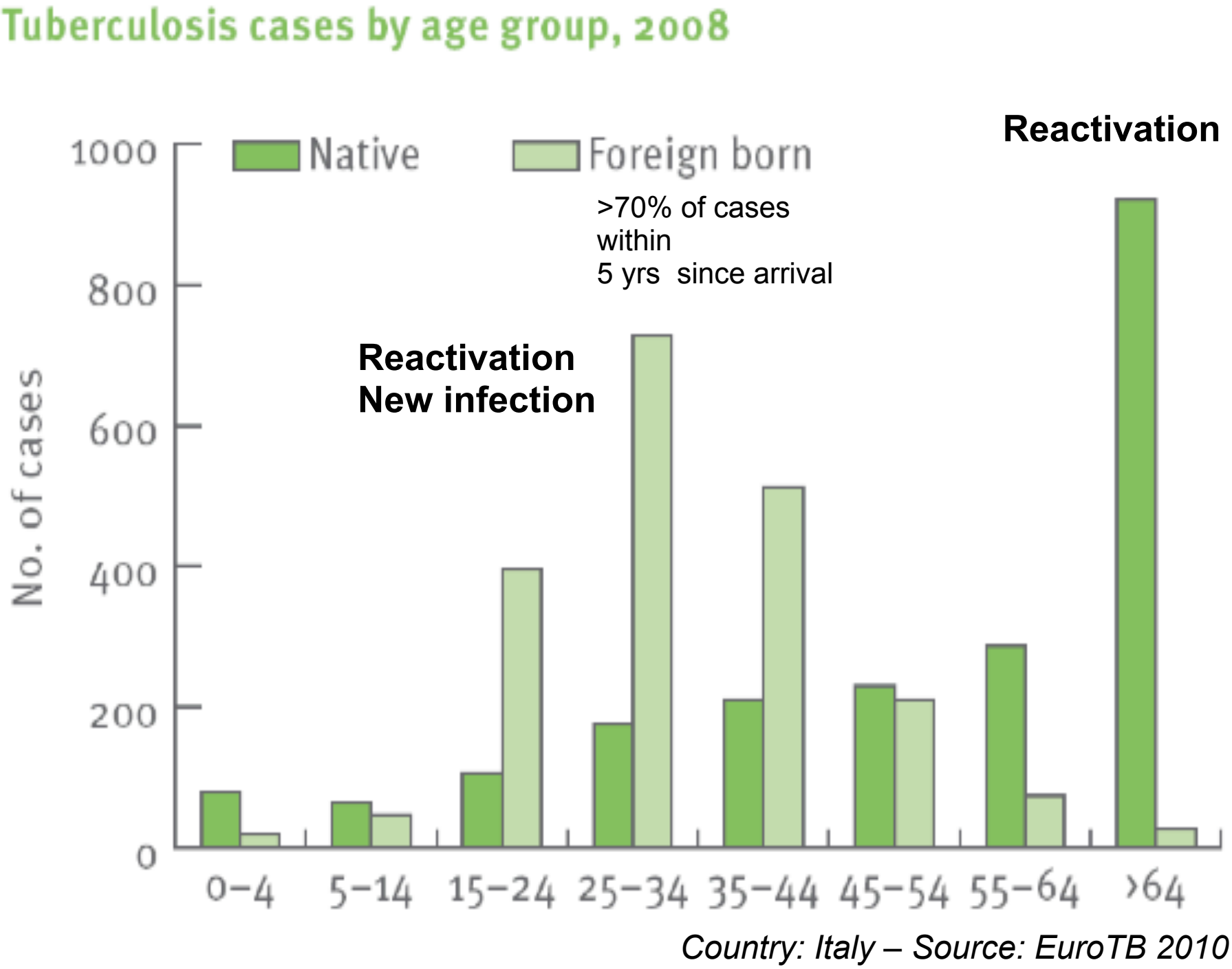
	n/N (%)	Crude OR (95% CI)	p
Sex			
Female	67/4393 (1·5%)	1	–
Male	93/5102 (1·8%)	1·20 (0·87–1·65)	0·26
Time from migration			
≤6 months	68/2715 (2·5%)	1	–
>6 months to ≤12 months	12/984 (1·2%)	0·48 (0·26–0·89)	0·020
>12 months to ≤5 years	43/2791 (1·5%)	0·61 (0·41–0·90)	0·012
>5 years	29/2755 (1·1%)	0·41 (0·27–0·64)	<0·0001
Region of origin			
Southeast Asia	14/1421 (1·0%)	1	–
South central Asia	4/1170 (0·3%)	0·35 (0·11–1·05)	0·061
Northeast Asia	5/458 (1·1%)	1·11 (0·40–3·10)	0·843
Sub-Saharan Africa	79/3276 (2·4%)	2·48 (1·40–4·40)	0·002
North Africa	18/573 (3·1%)	3·26 (1·61–6·60)	0·001
South America	16/1140 (1·4%)	1·43 (0·70–2·94)	0·331
Central America	7/397 (1·8%)	1·80 (0·72–4·50)	0·206
The Caribbean	4/343 (1·2%)	1·19 (0·39–3·63)	0·765
Eastern Europe	10/369 (2·7%)	2·80 (1·23–6·35)	0·014
Middle East	3/263 (1·1%)	1·16 (0·33–4·06)	0·817
Oceania	1/15 (6·7%)	7·18 (0·88–58·4)	0·065
North America, western Europe, Australia, New Zealand	0/130 (0·0%)	–	0·996
Region undetermined	0/3 (0·0%)	–	–

161 infections in 9558 travellers. Mean age was 35·8 years (95% CI 35·5–36·0) in people without STIs and 37·7 years (35·5–39·9) in those with STIs (p=0·082). STIs=sexually transmitted infections. OR=odds ratio.

Table 5: Univariate analysis of variables associated with STIs in immigrants

Interpretation The range of STIs varies substantially according to traveller category. STI preventive strategies should be particularly targeted at men and travellers visiting friends or relatives. Our data suggest target groups for pretravel interventions and should assist in post-travel screening and decision making.

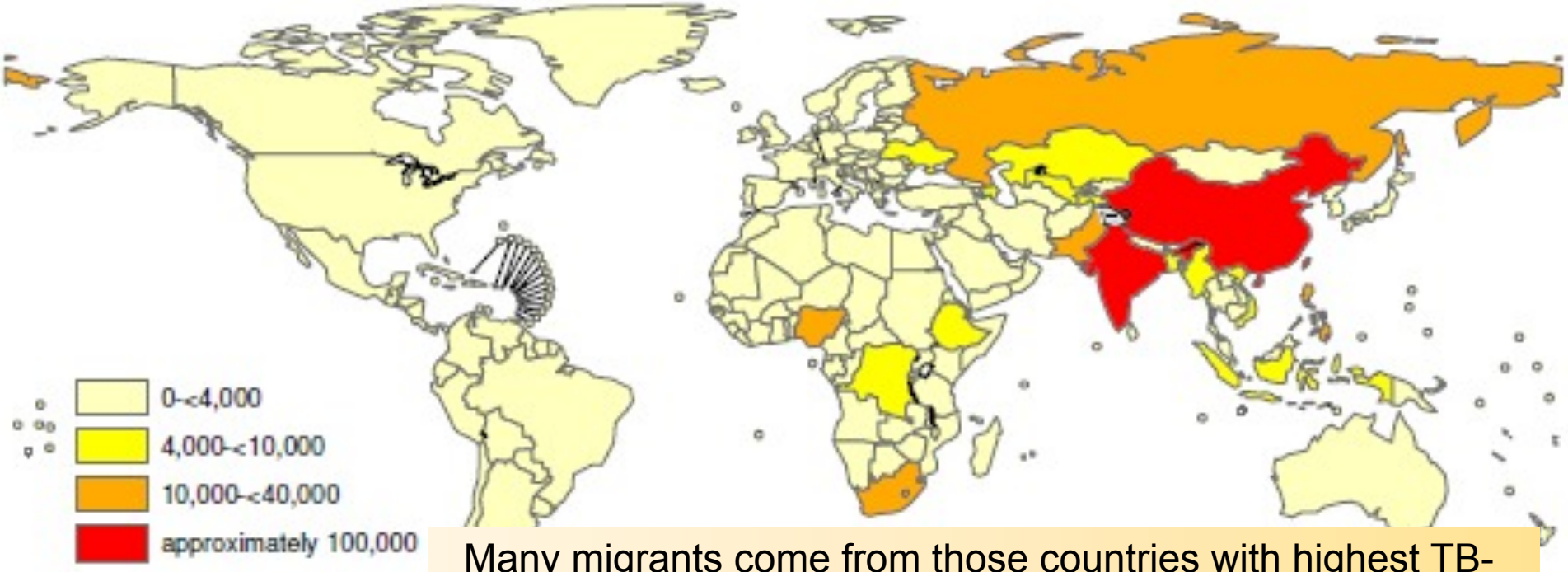
www.thelancet.com/infection Published online November 23, 2012 http://dx.doi.org/10.1016/S1473-3099(12)70291-8


Tuberculosis cases by age group, 2008
Native
Foreign born
Reactivation
>70% of cases
within
5 yrs since arrival
Reactivation
New infection
No. of cases
1000
800
600
400
200
0
0–4
5–14
15–24
25–34
35–44
45–54
55–64
›64
Country: Italy – Source: EuroTB 2010

Estimated absolute number of MDR-TB cases, 2009

World Health Organization

THE STOP TB DEPARTMENT



Many migrants come from those countries with highest TB-disease burden a substantial proportion of MDR and XDR TB cases

MDR-TB represented 2.7% of new cases in Italy in 2008

MDR-TB was 5-times more likely to present in migrants

Daniela Cirillo, WHO-Collaborating Center, Milan, Italy (personal communication)

What is the risk that immigration will increase transmission of MDR ?

More than 30 000 former Soviet citizens arrived in Norway since 2001. Only four of these were diagnosed with multidrug resistant tuberculosis on arrival, and their infections were not transmitted to other people in Norway

Dahle UR, TB in immigrants is not public health risk, but uncontrolled epidemics are. *BMJ 2005;331:237*

L’impatto infettivologico di sanità pubblica:
3) Acquisizione di patologie da parte dei migranti?

- HIV
- STIs
- Tuberculosis

HIV Infection among Illegal Migrants, Italy, 2004–2007

Maria Chiara Pezzoli, Issa El Hamad, Carmelo Scarcella, Francesco Vassallo, Fabrizio Speziani, Graziella Cristini, Carla Scolari, Barbara Suligoi, Anna Maria Luzi, Daniela Bernasconi, Miriam Lichtner, Giuseppina Cassara', Nino Manca, Giampiero Carosi, Francesco Castelli, and the PRISHMA Study Group[1]

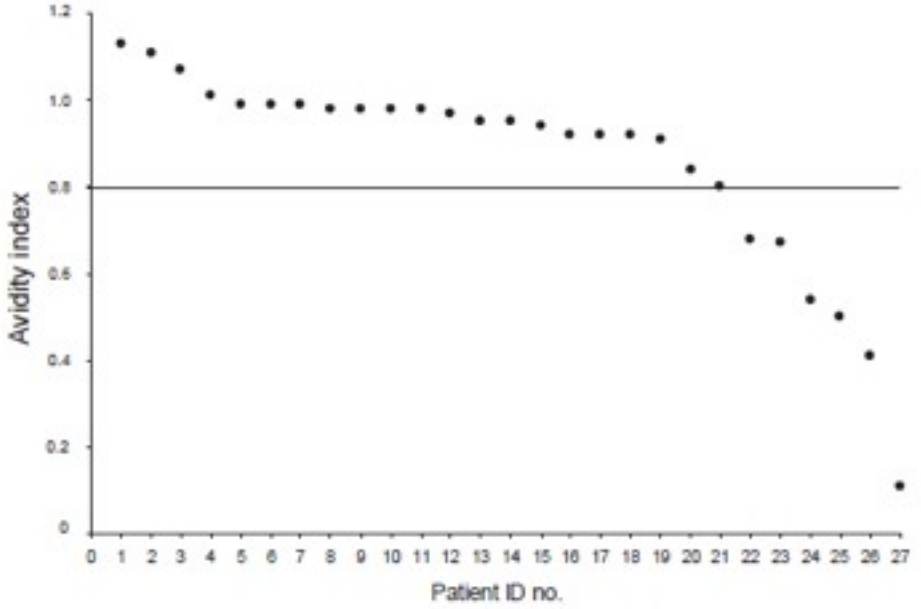


Figure. Antibody avidity indices for 27 HIV-infected migrants, Italy, 2004–2007. Horizontal line indicates the cutoff value. ID, identification.

To determine HIV prevalence and place of exposure for illegal migrants in Italy, we tested 3,003 illegal adult migrants for HIV; 29 (0.97%) were HIV positive.
Antibody avidity index results (indicators of time of infection) were available for 27 of them.
6/27 (22.2%) presumably acquired HIV after migration.

Table 2. Likely time and place of infection for 27 HIV-infected migrants, Italy, 2004–2007

Time of migration	Antibody avidity index ≤0.8 (infection acquired in past 6 mo), no. (%)	Antibody avidity index >0.8 (infection acquired >6 mo earlier), no. (%)
Past 6 mo	1 (3.7) (place of infection is undetermined)	4 (14.8) (likely place of infection is country of origin)
>6 mo before HIV testing	6 (22.2) (likely place of infection is Italy)	16 (59.3) (place of infection is undetermined)

Travel-associated sexually transmitted infections: an observational cross-sectional study of the GeoSentinel surveillance database

Alberto Matteelli, Patricia Schlagenhauf, Anna C C Carvalho, Leisa Weld, Xiaohong M Davis, Annelies Wilder-Smith, Elizabeth D Barnett, Philippe Parola, Prativa Pandey, Pauline Han, Francesco Castelli, for the GeoSentinel Surveillance Network

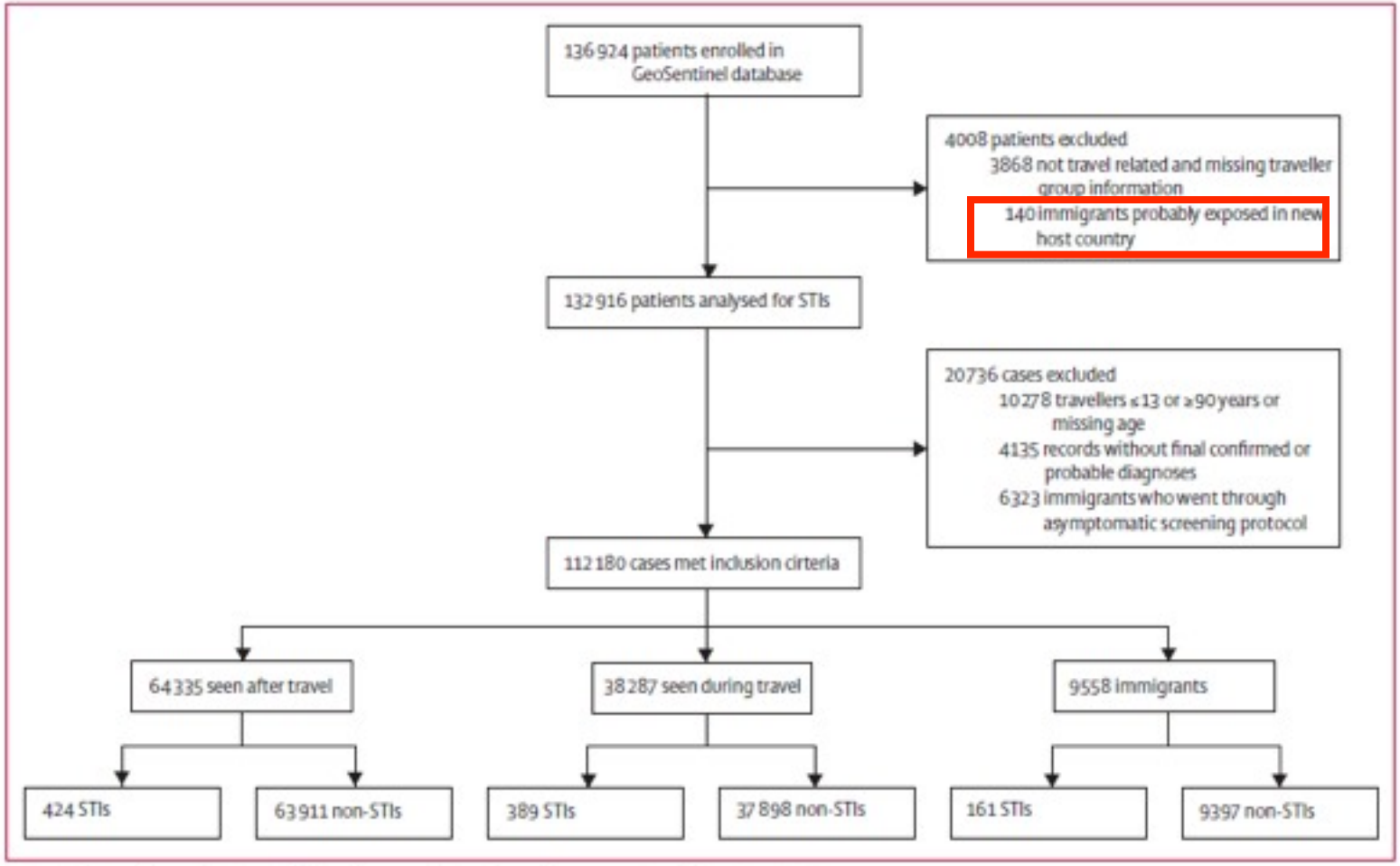


Figure 1: Flow chart of GeoSentinel database analysis of sexually transmitted infections (STIs)

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Clustering of TB among foreign borne persons

Clusters are more common among Senegalese than among Italians (OR=5.9, CI 1.4-23.9

Among senegalese clusters are associated to area of residence (OR=3.5, CI 1.3-9.3)

Only 3 mixed clusters identified: in two of them the index case was likely to be Italian

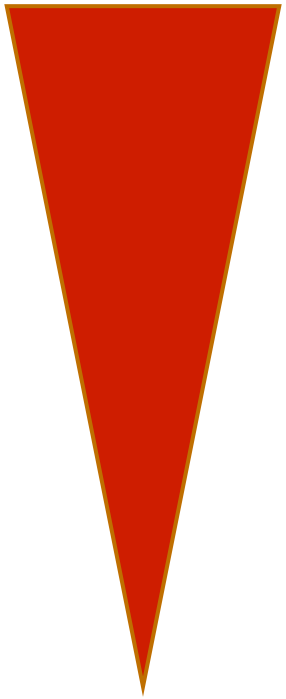
Matteelli A et al., Int J Tub Lung Dis 2003; 7: 967-72

L'impatto infettivologico di sanità pubblica:
4) Preparazione della classe sanitaria?

- Disease, illness, sickness
- Il *General Hospital*
- La sindrome di Salgari

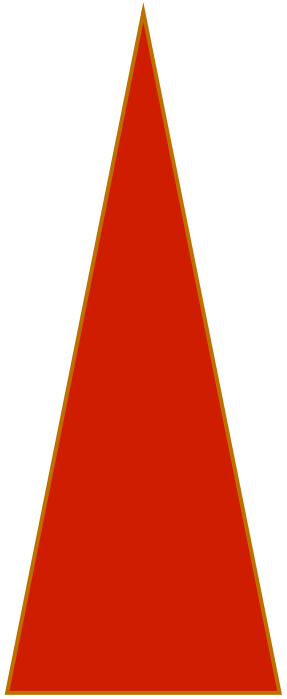
Disease, illness, sickness

The "medical" perspective



- *Disease*
- *Illness*
- *Sickness*

The "patient's" perspective



Il *General Hospital*

Forty Meals for a Drop of Blood …

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DOI: 10.1111/j.1708-8305.2008.00264.x

Increasing migration flow to Western countries poses formidable challenges from the epidemiological, clinical, and cultural standpoints. A case of Dhat syndrome is presented in a young Pakistani male migrant living in Italy, which required integrated medical and cultural approach to be solved after a through diagnostic workout that did not yield any result.

J Trav Med, 2009; 16: 64-5

(Forty meals make a drop of blood, 40 drops of blood make a drop of bone marrow, 40 drops of bone marrow make a drop of semen, the elixir of life, Veda, 1500 BC)

La sindrome di Salgari

BRIEF COMMUNICATIONS

Dead Blood under My Skin

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DOI: 10.1111/j.1708-8305.2009.00312.x

The diagnostic attitude of western physicians toward migrants' complaints is often an unstable balance between the obstinate search for exotic tropical diseases and the overappreciation of the cultural dimensions of symptoms. Such attitude may divert attention from organic diseases. The careful assessment of all levels of possible misunderstandings (*prelinguistic*, *linguistic*, *metalinguistic*, *cultural*, *and metacultural*) may help the physician to discriminate between *illness* and *disease*. The long and difficult itinerary leading to the correct diagnosis of congenital myopathy in a migrant from Senegal is described, together with the barriers encountered by the caring staff.

J Trav Med, 2009; 16: 284-5

“ … when you, doctors, consult us in your hospitals …. do you see only our body or our souls too?”

“ … you doctors hear us, but you do not listen to us. It is different….”

Birame, 25 yrs old, Senegal

Certamente non solo infettivologia …

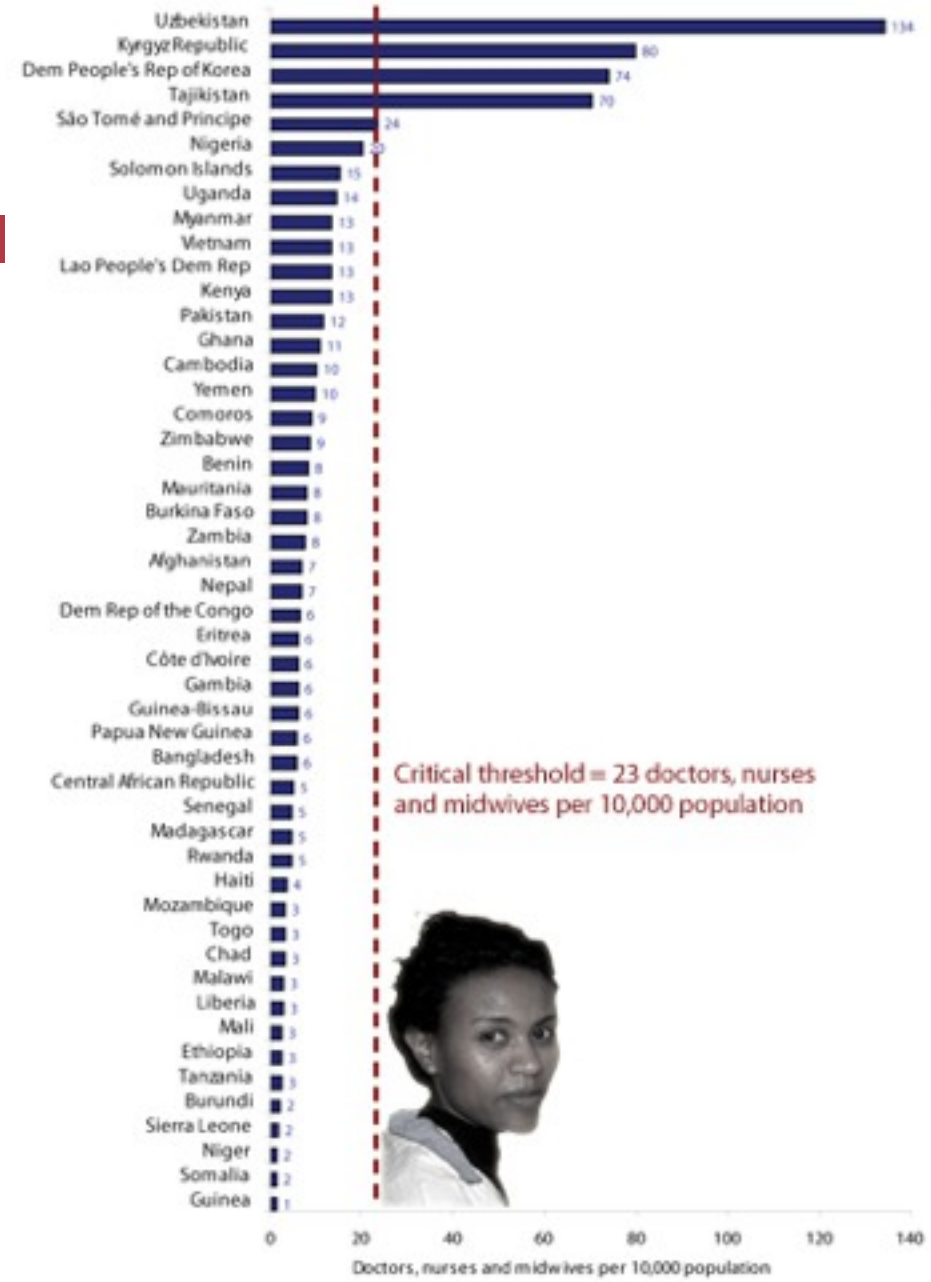
- Impatto economico sul sistema sanitario
  - Utenti
  - Contribuenti
- Impatto culturale (rapporto medico-paziente)
- Impatto sul comparto pediatrico / ostetrico
- Immigrati e medicina del lavoro (infortunistica)
- Immigrati come care-provider
  - Badanti ma non solo …
  - Professionisti della salute
- ……

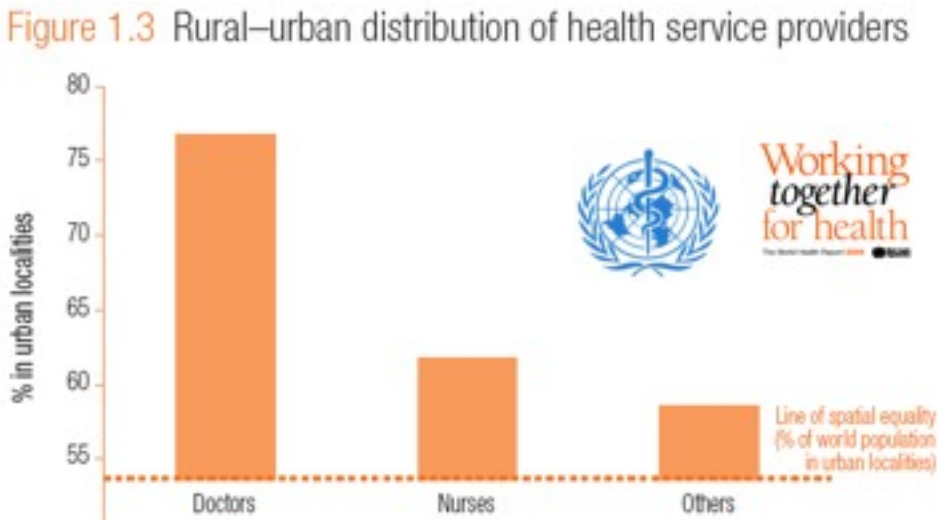
Outline della presentazione

Il **villaggio globale**: **popoli** in **migrazione** e **impatto** in un'ottica di **sanità pubblica**

- **Le parole chiave:**
  - **Villaggio globale**
    - Popoli, Migrazione
  - **Impatto, Sanità pubblica (sulle comunità ospiti)**
    - L'impatto "infettivologico"
    - .. ben sapendo che la questione è più ampia …
  - **Impatto, Sanità pubblica (sulle comunità d'origine)**
    - Brain drain
    - …..

Are there enough health workers?





Density of doctors, nurses and midwives in 49 priority countries

Human resources for health

Table 5.2 Doctors trained in sub-Saharan Africa working in OECD countries

Source country	Total doctors in home country	Doctors working in eight OECD recipient countries[a]	
		Number	Percentage of home country workforce
Angola	881	168	19
Cameroon	3 124	109	3
Ethiopia	1 936	335	17
Ghana	3 240	926	29
Mozambique	514	22	4
Nigeria	34 923	4 261	12
South Africa	32 973	12 136	37
Uganda	1 918	316	
United Republic of Tanzania	822	46	
Zimbabwe	2 086	237	
Total	82 417	18 556	

[a] Recipient countries: Australia, Canada, Finland, France, Germany, Portugal, United Kingdom, United States of America.

Source: *(11)*.

6.071 medici

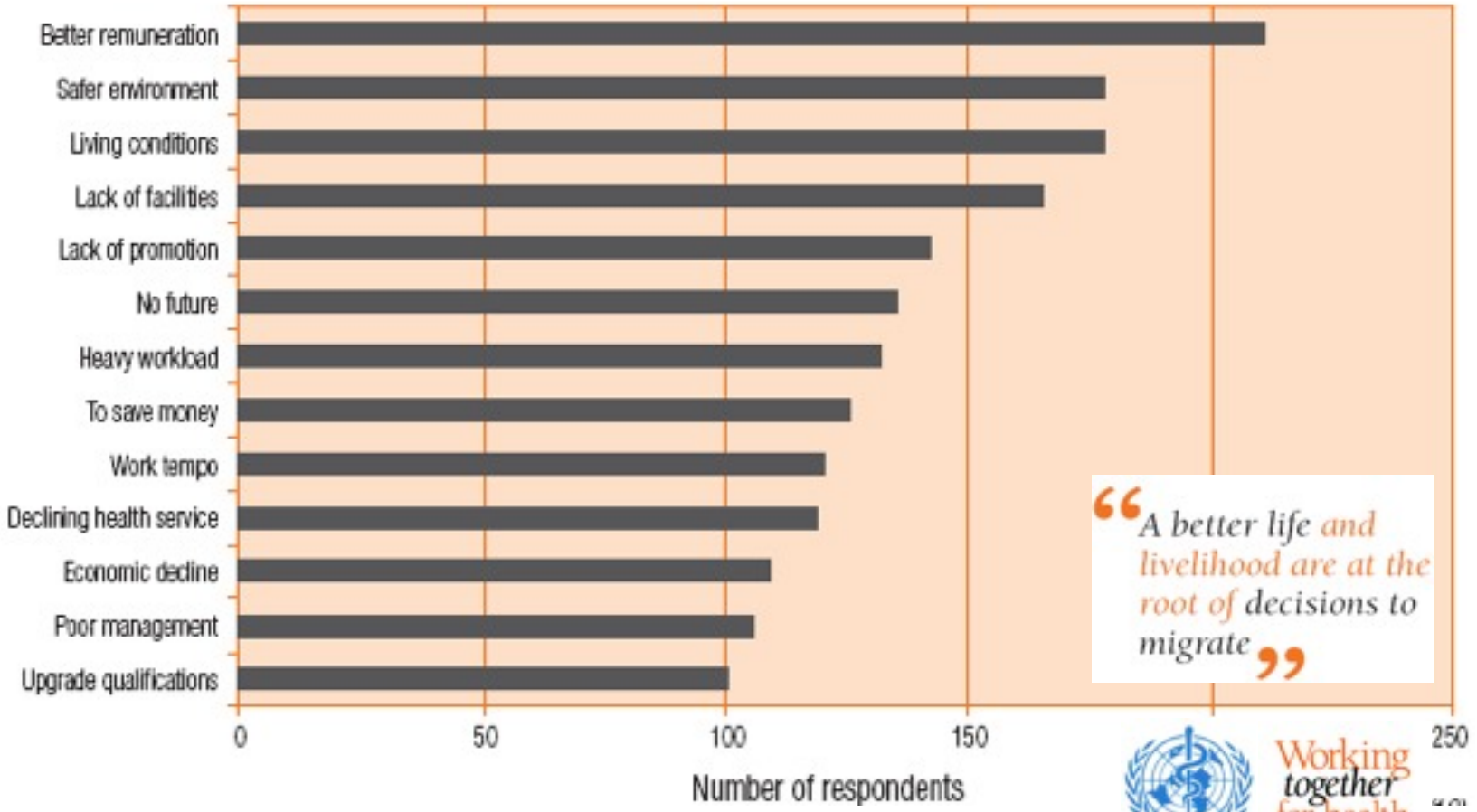
6.072 medici

Working together for health

A Londra, il 23% dei medici ed il 47% degli infermieri sono nati all'estero.

MIGRATION

Figure 5.2 Health workers' reasons to migrate in four African countries (Cameroon, South Africa, Uganda and Zimbabwe)



Conclusioni

- **Villaggio globale**
  - Piaccia non piaccia, è una realtà irreversibile
- **Impatto, Sanità pubblica (sulle comunità ospiti)**
  - Modesto sulla comunità ospite
  - Più impegnativo per le comunità migranti
- **Impatto, Sanità pubblica (sulle comunità d'origine)**