

1 **Migrant Health – A cause for concern?**

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7 The geopolitical drivers that influence human migration are complex and subject to
8 change often influenced by conflict. Within this editorial, the term migrant is used as
9 a generic for the heterogeneous population of asylum seekers, economic migrants
10 and refugees. Population flows into Europe have reached unprecedented levels
11 during the last few years. It is believed that some 355,361 new arrivals reached
12 Europe by sea during 2016 (figure 1; data2.unhcr.org/en/situations/mediterranean),
13 and predicted to reach 400 million by 2050. These are largely comprised of asylum
14 seekers from Syria, Afghanistan Iraq and Nigeria. Beside political and economic
15 impacts, health issues are a concern amongst newly arrived individuals. These
16 countries have higher infection rates for diseases such as tuberculosis, with
17 Afghanistan, Nigeria and Somalia having incidence rates of 125-332/100,000 of the
18 population. Migrant and refugee populations are particularly vulnerable as often they
19 have endured challenging journeys to Europe in less than desirable living conditions.
20 Indeed, these stressful circumstances can result in activation of previously latent
21 infection. Given these figures, it is not surprising that tuberculosis should be
22 considered among newly arrived asylum seekers. Within the European economic
23 area, some 25% of all cases of tuberculosis occur in foreign-born individuals [1].
24 Over 86% of European countries have implemented a tuberculosis screening
25 programme for newly arrived asylum seekers.

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27 Other health priority areas encompass communicable respiratory and
28 gastrointestinal infections, psychological trauma, drug abuse and pregnancy. Despite
29 the conditions that many migrants have endured during their journey to Europe, the
30 majority are generally in good health. Specific screening generally includes infectious
31 diseases such as tuberculosis, hepatitis B and C and HIV infection. More exotic
32 infections have been described such as a cluster of cutaneous diphtheria amongst
33 refugees arriving in Germany and Switzerland {Meinel, #23135}, but occur relatively
34 infrequently. Interestingly, several of these have been amongst those whose
35 migratory routes took them through Libya. Indeed, cases of *Plasmodium falciparum*
36 malaria have been reported amongst migrants who stayed in this presumed non-
37 endemic county [2]. Similarly, patients presenting with louse-borne relapsing fever
38 have been described in migrants transitioning through Libya, far beyond the lifespan
39 of the disease vector, clothing lice [3]. Both scenarios raise interesting and as yet
40 unresolved transmission possibilities, serving to remind those working with migrant
41 healthcare of the need for continued vigilance. Often newly arrived migrants are
42 detained in overcrowded conditions that can facilitate the transmission of infectious
43 diseases as seen with a recent outbreak of measles [4]. Many have poorly
44 documented vaccination histories, thus deployment of vaccines is a priority amongst
45 such groups [5]. Within this issue, the review by Castelli and Sulis (this issue) and
46 provides an overview of the phases of migration from first arrival to stable
47 resettlement and evaluates the infection risks associated with the intervening
48 transitional stages [5].

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50 Given the huge influx of migrants from the south and east, migratory pathways from
51 Latin America are often overshadowed. Within this group, presence of Chagas
52 disease caused by *Trypanosoma cruzi*, is a particularly concerning. In many, this will
53 be asymptomatic upon entry, but with potential to evolve to its chronic disease
54 consequences of cardiomyopathy, gastrointestinal involvement with potentially fatal
55 outcome. Monge-Maillo and Lopez-Velez (this issue), report that some 68,000 to
56 120,000 individuals with Chagas disease currently reside within Europe with the
57 majority undiagnosed [6] . Cost benefit analysis clearly demonstrated the economic
58 benefits associated with screening migrants from Latin America, particularly from
59 regions such as Bolivia and Paraguay [6, 7]. The remaining dilemma is whether such
60 a screening programme should apply to all migrants from Latin America, or be
61 targeted to particular high risk groups? The trade off in cost would need to be offset
62 against increased complexity for healthcare providers when deciding whether to
63 implement screening.

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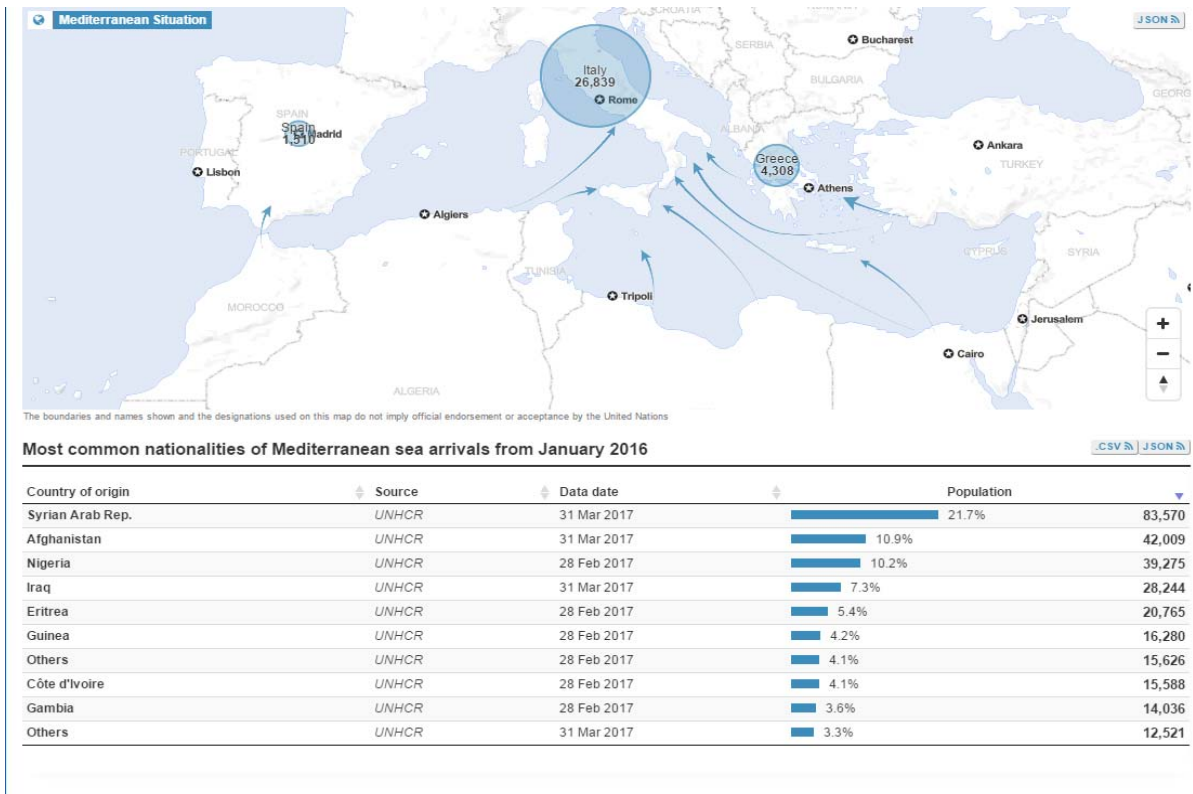
65 In conclusion, vaccination to prevent spread of communicable disease and screening
66 for sexually transmitted infections and diseases such as tuberculosis, viral hepatitis
67 and HIV, coupled with targeted screening based on country of origin are justifiable
68 and economically prudent. Beyond such measures, fear of introduction of exotic
69 infectious diseases appears to be unsubstantiated amongst migrant populations
70 beyond those risks shared by the whole population within our increasingly globalized
71 world.

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73 Transparency declaration: The authors have no conflicts of interest to declare.

74 **References:**

- 75 1 Sotgiu G, Dara M, Centis R, et al. Breaking the barriers: Migrants and
76 tuberculosis. *La Presse Médicale*. 2017.
- 77 2 Martelli G, Girometti N, Vanino E, Bottieau E, Viale P. *Plasmodium falciparum*
78 malaria in migrants who transited libya – where did they contract malaria?
79 *Travel Medicine and Infectious Disease*. 2015; **13**: 499-500.
- 80 3 Hoch H, Wieser M, Löscher T, et al. Louse-borne relapsing fever (*Borrelia*
81 *recurrentis*) diagnosed in 15 refugees from north-eastern africa in bavaria,
82 germany: Diagnostics, epidemiology and preventive control measures
83 *Eurosurveillance*. 2015; **20**.
- 84 4 Jones G, Haeghebaert S, Merlin B, et al. Measles outbreak in a refugee
85 settlement in calais, france: January to february 2016. *Euro surveillance* :
86 *bulletin Européen sur les maladies transmissibles = European communicable*
87 *disease bulletin*. 2016; **21**: 30167.
- 88 5 Castelli F, Sulis G. Migration and infectious diseases. *Clinical Microbiology*
89 *and Infection*. 2017; **23**.
- 90 6 Monge-Maillo B, Lopez-Velez R. Challenges in the management of chagas
91 disease in latin-american migrants in europe. *Clinical Microbiology and*
92 *Infection*. 2017; **23**.
- 93 7 Requena-Méndez A, Bussion S, Aldasoro E, et al. Cost-effectiveness of
94 chagas disease screening in latin american migrants at primary health-care
95 centres in europe: A markov model analysis. *The Lancet Global Health*. 2017.
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101 Figure 1: Migratory pathways and countries of origin (data correct as of 11.4.17

102 data2.unhcr.org/en/situations/mediterranean).

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