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**Title: Pathogens, prejudice and politics: defining the role of the global health community in the European refugee crisis**

**Authors: Mishal S Khan PhD<sup>1,2</sup>, Anna Osei-Kofi MSc<sup>2</sup>, Abbas Omar MSc<sup>3</sup>, Hilary Kirkbride MD<sup>4</sup>, Anthony Kessel MD<sup>2</sup>, Aula Abbara MD<sup>5</sup>, David Heymann MD<sup>4</sup>, Alimuddin Zumla FRCP<sup>6</sup>, and Osman Dar FFPH<sup>3,4</sup>**

**Institutional affiliations**

1. Saw Swee Hock School of Public Health, National University of Singapore
2. Communicable Diseases Policy Research Group, London School of Hygiene & Tropical Medicine, London, UK
3. Chatham House, Centre on Global Health Security, London, UK
4. Public Health England, London, UK
5. Imperial College, London, UK
6. Division of Infection and Immunity, University College London and NIHR Biomedical Research centre, UCL Hospitals NHS Foundation trust, London, UK

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**Corresponding author:** Dr Osman Dar FFPH, Chatham House Centre on Global Health Security, 10 St James's Square, London, SW1Y 4LE Email: [osman.dar@phe.gov.uk](mailto:osman.dar@phe.gov.uk)

## Summary (173 words)

Involuntary migration is a critical global challenge from an economic, social and public health perspective. The number of displaced people reached an unprecedented level in 2015, at a total of 60 million worldwide, with over one million crossing into Europe last year alone. Migrants and refugees are often perceived to carry a higher load of infectious diseases, despite no systematic association. In this viewpoint article we propose three important contributions that the global health community can make to help address infectious disease risks and global health inequalities worldwide, with a particular focus on the refugee crisis in Europe. *First*, policy decisions should be based on a sound evidence-base regarding health risks and burdens to health systems, rather than prejudice or unfounded fears. *Second*, for incoming refugees, we must focus on building inclusive, cost-effective health services to promote collective health security. *Third*, alongside protracted conflicts, widening health and socioeconomic inequalities between the developed and developing world should be acknowledged as major drivers for the global refugee crisis, and fully considered when planning long-term solutions.

The United Nations High Commission for Refugees state that the number of displaced people globally rose by 16% between 2014 and 2015 – the greatest ever increase in a single year - reaching an all-time high of 60 million worldwide<sup>1</sup>. This figure includes approximately 38 million internally displaced persons, 20 million refugees and 2 million asylum-seekers. Since January 2015, over 1 million people have crossed the Mediterranean to Europe, including economic migrants hoping for a better life and refugees fleeing conflicts, political upheaval, ethnic discrimination and religious persecution. The continuing swell of refugees worldwide is creating an ever-increasing economic and social burden on host countries and presents new public health challenges, alongside the deeper humanitarian and social issues. With such mass involuntary migration - and the associated overcrowding, poor sanitation and limited access to clean water – often comes a substantial increase in risk of infectious disease outbreaks, depending on the context. For example, following an official declaration of cholera outbreaks in Iraq from September 2015 and with the continued degradation of health service and surveillance infrastructure in neighbouring Syria, the risk of disease contagion and large-scale outbreaks occurring in the wider region is increasing.<sup>2</sup>

The overwhelming burden of hosting large populations of displaced people, and managing potential infectious disease risks associated with their influx has, for decades, fallen on low and middle-income countries (LMICs). Between 2009 and 2013, for example, 86% of all refugees were hosted in LMICs, many of which already face a substantial infectious disease burden.<sup>1</sup> The number of refugees hosted by LMICs is more than five times the number hosted by the ten richest countries within the Organization for Economic Cooperation and Development (OECD) [see figure].<sup>3,4</sup> Turkey, Pakistan, Lebanon and Iran together host a staggering 5.2 million refugees.<sup>5</sup> Political, infrastructural and financial constraints in LMICs have frequently been obstacles to providing access to health services and infectious disease screening programmes for the refugee populations. Constraints in the host countries have often had to be mitigated through support from UNHCR and other international organisations.

With refugees now being forced to migrate into the developed world - most notably to Europe - the issue has rapidly risen up the global political agenda. The World Economic Forum now, unsurprisingly, ranks involuntary migration one of the greatest risks to the world economy.<sup>6</sup> However, in some of these developed countries, migrants and refugees have been coalesced into a single emotive security issue, with the risk that policies ignore other softer, but equally important issues such as collective health security that can only be guaranteed by social integration and more equitable access to health care.

Following recent terrorist attacks in Turkey, Lebanon, France and Belgium and media reports of sexual and physical assaults in Europe, there is a danger that exaggerated associations will be drawn between refugees, terrorism and criminality; and that as a result, policies and interventions in industrialised countries receiving refugees will be increasingly framed primarily in relation to risks to national security rather than equity and global health security.

We propose three broad contributions that could be made by the global health community to help assess, better inform and reduce potential infectious disease risks associated with incoming refugees, and improve social integration in relation to the refugee crisis in Europe.

*First:* ensuring that evidence is obtained about the true infectious disease risks from refugees and the burden they cause to health systems in order to prevent prejudicial concerns and unfounded stigmatisation.

Many refugees come from areas with high poverty levels and weak health systems, and several European countries are concerned about refugees bringing previously controlled infections within their borders. The arduous journey that many refugees have endured may increase their risk of infectious diseases, particularly measles and food and water borne diseases to which they are at increased risk if immunization programs in their countries of

origin have been interrupted.<sup>7</sup> However, despite the commonly held view of an association between migration and spread of infectious diseases, there is no systematic association with many of the infectious diseases of concern. For example, enteric fever is already reported in the European region with the vast majority of cases occurring in returning travellers rather than refugees or migrants. The risk of other infectious diseases including viral haemorrhagic fevers or the Middle East Respiratory Syndrome (MERS) is also low with most cases occurring in healthcare workers or travellers rather than refugees.<sup>7</sup> The threat of infectious disease outbreaks from current population movements into Europe may thus be substantially less than perceived.

Any misinformation exaggerating the health and infectious disease risks associated with incoming refugees must be firmly countered with data-driven epidemiology and a pragmatic approach to disease control, and the evidence must be clearly provided, and understood by politicians and the general public. To generate a strong evidence base, a coordinated approach to health needs assessments and surveillance should be developed, leveraging institutional networks such as the European Centre for Disease Control and its links to reference laboratories and individual national public health agencies. Estimating the infectious disease risk to Europe from cholera, for example, should take into account the well developed public water and sanitation systems, excellent health infrastructure, and well-integrated and responsive disease surveillance networks, all of which substantially reduce the chances of large outbreaks of cholera. Communicating infectious disease risk assessments to the general public and policymakers accurately is thus key to rationalising the broader debate around the issue.

For example, concerns about transmission of polio from Syrian refugees into Europe following the 2013-4 outbreak of polio were unfounded. Although cases traceable to Syria were identified in Iraq<sup>8</sup> no cases were identified in asymptomatic toddlers screened in Germany<sup>9</sup> Yet, both the medical<sup>10</sup> and lay press had extensively discussed the 'polio threat' in view of low vaccination rates in the UK and Germany. What these reports failed to

consider was the ability of the global system to respond appropriately. The global response in that instance was measured, and risk communication on the whole was effective, with the declaration of a Public Health Emergency of International Concern. The declaration brought the Global Polio Eradication Initiative (WHO) together with different organisations to perform multiple rounds of vaccination in affected areas and was effective at controlling the outbreak and minimising risk of spread.

Similarly, for another infectious disease of concern, tuberculosis (TB), the potential for spread and disease progression will likely be reduced in the European population - as compared to low resource settings - owing to improved nutritional status and housing conditions. Most refugees currently entering Europe come from Syria, which had a TB prevalence of 23 per 100,000 in 2011 and 19 per 100,000 in 2014<sup>11,12</sup>. TB prevalence in Syria is thus lower than the average rate in the European region of 39 per 100,000 population<sup>13</sup>, and substantially below numerous European countries [see table]<sup>3,4</sup>. Furthermore, transmission from refugees to local populations does not occur often due to limited contact and early diagnosis and effective care of TB will further minimise risk. Indeed, studies in low tuberculosis burden countries such as Denmark have indicated that transmission from refugees to local populations is limited, and that refugees are more likely to be infected by local populations than vice versa<sup>14</sup>.

Thus, the evidence indicates that the infectious disease risks to Europe are limited, and this needs to be effectively communicated to both host communities and the incoming refugees.

*Second:* we strongly recommend ensuring access to health care for all refugees and migrants through: regular health checks for both communicable and non communicable diseases (NCDs); hospitable and high-quality health care preventative and curative services

without discrimination on the basis of gender, age, religion, nationality or race; and cost-effective, culturally appropriate approaches maintaining human rights and dignity.

The WHO emphasizes that results of screening should not be a reason for deporting the refugee<sup>7</sup>. Refugees have suffered long and arduous stressful journeys enduring cramped, unhygienic environments which take a toll on their mental and physical health and existing NCDs. Many European countries, including the United Kingdom, request medical screening in the host country and then perform further screening of refugees on arrival; this includes targeted TB screening for those in the UK.<sup>15</sup> The US has an established program of mandatory screening refugees both pre-departure and post-arrival to determine immunization status, the presence of parasitic infections and other communicable diseases.<sup>16,17</sup> A review of the strategy of post-arrival screening amongst Iraqi refugees in the US performed between 2008 and 2009 identified rates of latent TB infection at 14.1% and, importantly, noted that despite the traditional focus of refugee medical screening, morbidity owing to NCDs was of higher prevalence.<sup>18</sup> This is mirrored in other refugee populations from the MENA (Middle and Near East) region, particular those of Syrian origin, where NCDs are more prevalent than infectious diseases.

WHO, thus rightly, does not recommend compulsory mass screening of refugee or migrant populations, though it does recommend health checks for both infectious diseases and NCDs and access to health services whilst maintaining the dignity of the refugees and migrants. There is no evidence that mass compulsory checks have a benefit or are cost-effective, and they carry the risk of causing anxiety to individuals and deterring refugees and migrants from seeking healthcare<sup>7</sup>. Screening programmes should be rationalised and prioritised for incoming refugees from high burden settings, for conditions where they have been demonstrated to be effective,<sup>19</sup> rather than attempting to cover all arrivals particularly where local services are being overwhelmed by volume. Post-arrival screening and assessment of



immunization status may be particularly important to reduce the risk of outbreaks, particularly if refugees originate from areas where vaccination programs are interrupted.

Promoting refugees' access to appropriate and culturally acceptable health services, and encouraging their integration is, we believe, fundamental to ensuring Europe's collective health security. This can only be achieved if incoming refugees feel welcome and not the subject of stigmatisation, or persecution.<sup>7</sup> Experience from around the world demonstrates that many refugee groups – such as Myanmar's Rohingya minority – have long been deprived of essential healthcare in their homeland, and arrive in host countries in extremely poor health. Exacerbating these poor baseline health conditions by providing inadequate health services at refugee reception or processing centres can thus become a risk to the collective health of host populations; for example conditions in Australia's Nauru and Manus Island detention centres for 'offshore processing' has resulted in outbreaks of infectious diseases.<sup>20</sup> In contrast, the strong vaccination surveillance system in Germany identified low measles immunisation rates amongst incoming refugees to Lower Saxony and measures are being taken to vaccinate arriving groups, illustrating how evidence can be used to reduce health inequalities among refugees and host communities. The European Vaccine Action Plan 2015-2020 (EVAP) details the importance of equitable access to vaccination and to encourage access for refugees and migrants with culturally appropriate services.<sup>7</sup>

High-income countries have all the ingredients (experience, knowledge and resources) to find cost-effective solutions to health challenges that might arise from incoming refugees, as well as the institutional strength and innovative capacity to integrate and harness the potential socioeconomic benefits of these incoming groups. Innovative solutions to strengthen the control of infectious diseases in refugee populations could include mobile diagnostic and surveillance units – similar to the 'Find and Treat' service for tuberculosis in the homeless and disadvantaged in London<sup>21</sup> with an integrated support function for psychosocial care, and new public-private partnerships for health surveillance, delivery of

health promotion messaging and phone-based incentives, and signposting of essential health services. There may also be lessons to be learnt from the large US refugee resettlement programme<sup>17,22</sup> and the Electronic Disease Notification System in operation since 2006 that has demonstrably improved the timeliness and accuracy of infectious disease notifications. Further studies should however, include economic analyses taking into account longterm outcomes for conditions such as latent TB infections detected amongst incoming refugees.

In Sweden, where over 100,000 refugees were taken in over 2015 alone, creative approaches to integrating refugee communities, improving health literacy and ensuring adequate access to health services are also being trialled. With many refugees, from Syria in particular, already medically trained, Sweden has introduced a number of fast-track schemes to integrate these refugee healthcare workers into the labour market, thus addressing problems associated with staff shortages, language barriers and cultural sensitivity.<sup>23</sup>

For interventions to be effective, however, improved coordination and cooperation is needed across European countries. An important step in this direction has recently been taken by European States and the European Commission with support from WHO Europe; the publication of a joint statement on addressing the health needs of incoming refugees to Europe<sup>24</sup> and the development of a patient health record that will be piloted at borders for evaluating refugees' medical needs and reconstructing their medical history.<sup>25</sup> A joint technical statement by UNHCR-WHO-UNICEF on vaccination for refugees entering Europe provides further support on harmonizing and developing consistent standards across the region. These efforts are important and build on the continuing work of the WHO Europe Public Health Aspects of Migration in Europe (PHAME) project<sup>26</sup> that has developed both evidence-based guidance and a series of tools to assist countries in assessing and addressing the health needs of migrant and refugee populations. Unfortunately, amongst European Union member states, the effectiveness of these initiatives continues to be limited by the

insufficient financial and political commitment to improve cross-border coordination around the health needs of refugees.

*Third:* helping political leaders understand and acknowledge that alongside conflict and violence, widening socioeconomic and health inequalities (i.e. the broader determinants of health) between and within countries – a global phenomenon - is one principal driver for refugee migration; development initiatives must thus focus on improving health systems, transparency, governance and political stability in the countries from which refugees derive. The recent European Union agreement to provide USD 1.9 billion to address the drivers of outward migration from Africa, implied some recognition of this.<sup>27</sup> Hopefully, some of that spend could be used to support more equitable structuring of economic and commercial agreements between the developed and developing world and a more equal sharing of profits. Turkey has now been promised a further USD 3.2 billion to stem the outward flow of refugees into Europe, but these funds are being directed more at border security and have not been sufficiently aimed at addressing this underlying driver - health and socioeconomic inequalities experienced by refugees in unstable environments.<sup>28</sup>

Leaders in European countries and other destination regions for refugees need to develop an improved awareness and understanding of this driver and resist measures that compound inequalities both abroad and at home. The recently concluded Department of Health consultation on extending charges to visitors, refugees and migrants accessing primary and secondary care services in the UK, conducted with limited public or professional engagement,<sup>29</sup> highlights some of the prevailing attitudes developing across Europe that threaten collective health security. It demonstrates a continuing erosion of the founding principles of the UK National Health Service, framed around reducing inequalities through universal health coverage, free at the point of access. If implemented as planned, the measures will likely lead to late diagnosis of medical conditions, including of infectious diseases (though these are exempt from further charges once a diagnosis has been made),

and worse health outcomes for refugees and migrants as the poorest groups delay accessing services to limit costs.

*In summary*, one fundamental long-term solution to the refugee crisis, and the associated potential infectious disease challenges for countries that receive refugees, is for those more economically fortunate countries to increase efforts to reduce the health and socioeconomic inequalities that drive populations to become refugees. But to ensure collective health security and prevent disease outbreaks in countries receiving refugee populations today, the short term solution must be to engage much better with those who have already arrived, and those who will continue to arrive for the foreseeable future. Measures to address health inequalities, through improved disease risk assessment, better access and a more culturally sensitive health service support both refugee integration and help reduce threats from infectious diseases. Such measures must be viewed as a key component within any broader security strategy.

The 1920 Aliens' Order barred entry into Britain of immigrants with a range of medical conditions. This was reversed during the World Refugee Year (1959-60), and allowed entry to refugees who had tuberculosis and other chronic illnesses.<sup>30</sup> Given the numbers of refugees worldwide has only increased in the years since, we now have an even greater collective responsibility to helping address the current crisis. The refugee situation is not all doom and gloom and there are many who have readily engaged and are actively contributing to improving the lives of displaced populations,<sup>31,32</sup> thereby reaffirming our own humanity and a shared commitment to a more equal world.

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**Figure (file sent separately)**

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