

The UCL Lancet Commission on Migration and Health: The health of a world on the move

*Prof Ibrahim Abubakar*¹ FRCP, Robert W Aldridge*² PhD, Delan Devakumar*¹ PhD, Miriam Orcutt*¹ MBBS, Rachel Burns¹ MSc, Prof Mauricio L Barreto³ MD, Poonam Dhavan⁴ MPH, Fouad M Fouad⁵ MD, Prof Nora Groce⁶ PhD, Prof Yan Guo⁷ PhD, Sally Hargreaves^{8,9} FRCPE, Michael Knipper¹⁰ MD, Prof J Jaime Miranda¹¹ MD, Prof Nyovani Madise¹² PhD, Prof Bernadette Kumar¹³ Dr.Philos, Davide Mosca⁴ † MD, Prof Terry McGovern¹⁴ JD, Leonard Rubenstein¹⁵ LLM, Prof Peter Sammonds¹⁶ PhD, Prof Susan M Sawyer¹⁷ MD, Kabir Sheikh^{18,19} PhD, Prof Stephen Tollman²⁰ PhD, Prof Paul Spiegel²¹ MD, Prof Cathy Zimmerman*²² PhD, on behalf of the Migration and Health Commission[#]*

1. UCL Institute for Global Health, London, WC1N 1EH, UK
2. UCL Institute for Health Informatics, London, UK
3. Centre for Data and Knowledge Integration for Health (CIDACS), Fundação Oswaldo Cruz, Salvador-Bahia, Brazil
4. International Organisation for Migration, Geneva, Switzerland
5. Faculty of Health Sciences, American University of Beirut, Beirut, Lebanon
6. Leonard Cheshire Centre, UCL Institute of Epidemiology and Healthcare, London, UK
7. School of Public Health, Peking University, Beijing, China
8. Institute of Infection and Immunity, St George's, University of London, UK
9. International Health Unit, Section of Infectious Diseases and Immunity, Imperial College London, London, UK.
10. Institute for the History of Medicine, Justus Liebig University Giessen, Giessen, Germany
11. CRONICAS Center of Excellence in Chronic Diseases, Universidad Peruana Cayetano Heredia, Lima, Peru
12. Centre for Global Health, Population, Poverty and Policy, University of Southampton, Southampton, UK
13. Norwegian Centre for Minority Health Research and Department of Community Medicine and Global Health, Institute of Health and Society, Faculty of Medicine, University of Oslo, Oslo, Norway
14. Program on Global Health Justice and Governance, Mailman School of Public Health, Columbia University, New York, NY, USA
15. Center for Public Health and Human Rights, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD 21205, USA and Berman Institute of Bioethics, Johns Hopkins University, Baltimore, MD 21205, USA
16. UCL Institute for Risk and Disaster Reduction, London, UK
17. Department of Paediatrics, University of Melbourne and Centre for Adolescent Health, Royal Children's Hospital, and Murdoch Childrens Research Institute, Parkville, VIC, Australia
18. Public Health Foundation of India, Institutional Area Gurgaon 122002, India
19. Nossal Institute of Global Health, University of Melbourne, Melbourne, Victoria 3010, Australia
20. MRC/Wits Rural Public Health and Health Transitions Research Unit, School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa

44 21. *Johns Hopkins Center for Humanitarian Health, Johns Hopkins University, Baltimore, MD,*
45 *USA and Department of International Health, Johns Hopkins Bloomberg School of Public*
46 *Health, Johns Hopkins University, Baltimore, MD, USA*

47 22. *Gender, Violence and Health Centre, London School of Hygiene & Tropical Medicine, London,*
48 *UK*

49 †Retired; # Full list of authors at the end of the report; *writing group;

50

51 *Word Count: Executive Summary (1043)*

52 *Word Count: Full text of report (24,612) excluding executive summary*

53 *Number of figures, panels and tables: 20*

54

55 **Executive summary**

56
57 With one billion people on the move or having moved in 2018, migration is a global reality —and has
58 also become a political lightning rod. Although estimates indicate that the majority of global
59 migration occurs within low- and middle-income countries (LMICs), the most prominent dialogue
60 focuses almost exclusively on migration from LMICs to high-income countries. Today, populist
61 discourse demonises the very same individuals who uphold economies, bolster social services and
62 contribute to health services in both origin and destination locations. Those in positions of political
63 and economic power continue to restrict or publicly condemn migration to promote their own
64 interests. Meanwhile nationalist movements assert “cultural sovereignty” by delineating an ‘us’ and
65 ‘them’ rhetoric which has created a moral emergency.

66 In response to these issues, the UCL-Lancet Commission on Migration and Health was convened to
67 articulate evidence-based approaches to inform public discourse and policy, undertaking a wide
68 consultation of diverse international expertise spanning sociology, politics, public health, law,
69 humanitarianism, and anthropology. The result of this work is a report that aims to be a call to
70 action for civil society, health leaders, academics, and policy-makers to maximise the benefits and
71 reduce the costs of migration on health locally and globally. The outputs of our work relate to five
72 overarching goals that we thread throughout the report.

73 First, we provide the latest evidence on migration and health outcomes to challenge common myths
74 and highlight the diversity, dynamics, and benefits of modern migration as they relate to population
75 and individual health. Migrants generally contribute more to the wealth of host societies than they
76 cost. Our report shows that international migrants have, on average, lower mortality rates than the
77 host country population. However, increased morbidity was found amongst several subgroups of
78 migrants, for example increased rates of mental ill health in victims of trafficking and people fleeing
79 conflict. Currently, the full range of migrants’ health needs are difficult to assess due to poor quality
80 data. We know very little, for example, about the health of undocumented migrants, disabled
81 people or LGBTI who migrate or who are unable to move.

82 Second, we examine multi-sector determinants of health and consider the implication of current
83 sector-siloed approaches. The health of people who migrate depends greatly on structural and
84 political factors that determine the impetus for migration, the conditions of their journey and their
85 destination. Discrimination, gender inequalities and exclusion from health and social services
86 repeatedly emerge as negative health influences that require cross-sector responses.

87 Third, we critically review key challenges to healthy migration. Population mobility provides
88 economic, social and cultural dividends for those who migrate and their host communities.
89 Furthermore, the right to the highest attainable standard of health, regardless of location or
90 migration status, is enshrined in numerous human rights instruments. However, national sovereignty
91 concerns overshadow these benefits and legal norms. Attention to migration focuses largely on
92 security concerns and where there is conjoining of the words ‘health’ and ‘migration’ it is either
93 limited to small subsets of society and policy, or negatively construed. International agreements,
94 such as the UN Global Compacts on Migration and on Refugees, represent an opportunity to ensure
95 that international solidarity, unity of intent and our shared humanity triumphs over nationalist and
96 exclusionary policies, leading to concrete actions to protect the health of migrants.

97 Fourth, we examine equity in access to health and health services and offer evidence-based
98 solutions to improve the health of migrants. Migrants must be explicitly included in universal health
99 coverage commitments. Ultimately, the cost of failing to be health-inclusive may be more expensive
100 to national economies, health security and global health than the modest investments required.
101

102 Finally, we look ahead to outline how our evidence can contribute to synergistic, equitable health,
103 social and economic policies and feasible strategies to inform and inspire action by migrants, policy
104 makers and civil society. We conclude that migration must be treated as a central feature of 21st
105 century health and development. Commitments to health of migrating populations should be
106 considered across all Sustainable Development Goals (SDGs) and in the implementation of the
107 Global Migration and Refugee Compacts. The Commission offers recommendations that view
108 population mobility as an asset to global health by demonstrating the meaning and reality of ‘good
109 health for all’. We present four key messages that provide a focus for future action.

110

111 **Key messages**

- 112 ● **We call on nation states, multilateral agencies, non-governmental organisations and civil**
113 **society to positively and effectively address the health of migrants by improving**
114 **leadership and accountability.** First, we urge the United Nations to appoint a Special Envoy
115 on Migration and Health and national governments to have a country-level focal point for
116 migration and health to ensure much needed coordination and that migrants are included in
117 all decisions about their health. Second, we propose that a Global Migration and Health
118 Observatory is established to develop evidence-based migration and health indicators to
119 ensure better reporting, monitoring, transparency and accountability on the implementation
120 of the migration and refugee Global Compacts.
- 121 ● **International and regional bodies and states should re-balance policy-making in migration**
122 **to give greater prominence to health by inviting health representatives to high-level**
123 **migration policy-making fora.** Health leaders and practitioners must fully engage in
124 dialogues on the macro-economic forces that affect population mobility and participate in
125 multi-sector budgeting and programme planning for migrants.
- 126 ● **Racism and prejudice must be confronted with a zero tolerance approach.** Public leaders
127 and elected officials have a political, social and legal responsibility to oppose xenophobia
128 and racism that fuels prejudice and exclusion of migrant populations. Health professionals’
129 and organisations awareness of racism and prejudice should be strengthened by regulatory
130 and training bodies including through accreditation, educational courses and continuous
131 professional development. Civil society organisations should hold leaders to account to
132 ensure the implementation of these obligations.
- 133 ● **Universal and equitable access to health services and to all determinants of the highest**
134 **attainable standard of health needs to be provided to migrant populations, regardless of**
135 **age, gender or legal status by governments.** Solutions must include input from migrants and
136 be specific to the diverse migrant populations. For those exposed to disaster and/or conflict,
137 mobility models and disaster risk reduction systems should be integrated. Targeted
138 interventions to improve the rights of migrant workers’ and their knowledge of workplace
139 health and safety and entitlement to healthcare are needed.

140

141

142 Introduction

143 Nearly one seventh of the world’s population is now living in a location different from the one in
144 which they were born.¹ A migrant is someone who has moved across an international border or
145 within her or his own country away from their habitual place of residence. Migration is not a new
146 phenomenon. People have migrated throughout human history and population mobility continues
147 to benefit many individuals and communities and contribute to social and economic advancement
148 globally.

149 Despite the long history of human migration, international dialogue has recently become more
150 prominent, although relatively limited attention has been paid to migration as a core determinant of
151 health. When individuals migrate, they enter new environments that have different health risks and
152 protection mechanisms.² Studies indicate that morbidity patterns among migrants are diverse and
153 dynamic because of numerous interacting influences, such as: an individual’s pre-departure health,
154 socio-economic and environmental conditions, local disease patterns and risk behaviours, cultural
155 norms and practices, and access to preventive or curative therapies throughout the migration
156 process.³

157 Health outcomes in migrants are heterogeneous, but evidence consistently shows the
158 disproportionate health, social and economic burdens of forced migration.⁴ Yet, despite widespread
159 recognition of the numerous migration-related health risks, mobile populations—even forced
160 migrants who are fleeing for their lives—are often met with punitive border policies, arbitrary
161 detention, abuse and extortion and commonly denied access to care. Governments that institute
162 immigration policies that legalise exclusion and rights abuse frequently cite ‘national security’
163 concerns to justify migration controls that extend beyond their own borders. These policies can go
164 as far as criminalising migrant status, and deterring asylum seekers by detaining them; even
165 separating children from their parents, as recently seen in US government immigration policies.⁵ All
166 too often, government policies prioritise the politics of xenophobia and racism over their
167 responsibilities to act forcefully to counter them.

168 Our current political economy is driven by Western industrial powers that draw on natural and
169 human resources in low- and middle-income countries (LMICs). Moreover, laws and regulations that
170 encourage relatively unrestricted trade in goods, services and capital are simultaneously being used
171 to control labour mobility to further the political and economic interests of the wealthy while often
172 leaving poor communities behind. For example, global trade and pro-business policies in lower-
173 income countries have drained natural resources, contributed to environmental degradation and
174 pushed people into hazardous, exploitative work to meet consumer demands for cheap goods such
175 as ‘fast fashion’.⁶

176 International conventions are in place to guide policy to support safer and more inclusive migration
177 and can be used to counter some of these negative forces. Migrants, as all human beings, are
178 equally entitled to universal human rights without discrimination. All migrants thus have the right to
179 the “highest attainable standard of health”, according to international law.⁷ All migrants are entitled
180 to equal access to preventive, curative and palliative health care.⁸ They also have rights to the
181 underlying social, political, economic, cultural determinants of physical and mental health, such as
182 clean water and air and non-discriminatory treatment.⁸ Human rights treaties also entitle migrants
183 to due process of law in border practices and freedom from arbitrary detention and restrictions on
184 movement. These rights do not simply impose legal obligations on governments but are essential
185 preconditions for social and economic integration, prosperity, and social cohesion in any society and
186 “human well-being in the modern world.”⁹ The substantial gap between the international legal
187 requirements guaranteeing the human rights of migrants and the implementation of these laws by
188 states provides important context for this Commission report.

189 In 2016, at the UN General Assembly, the Global Compact for ‘safe, orderly and regular migration’
190 and a further Compact to respond to acute and chronic refugee situations were initiated in line with
191 the 2030 Agenda for Sustainable Development target 10.7 (to ‘facilitate safe, orderly and
192 responsible migration’).^{10,11} Yet, these critical multi-lateral processes appear to be heading in a
193 precarious direction, as exemplified by the US Government’s withdrawal from the Compact on safe,
194 orderly and regular migration in 2017,¹² potential internment camps titled ‘migrant centres’¹³ and
195 the reticence of European Union countries in accepting an equitable redistribution of migrants.

196 **Our Commission’s Journey**

197 Worldwide mobility is our future—regardless of laws and walls, and our Commission was developed
198 in light of the opportunity to achieve the SDG commitments “to leave no one behind” and “to reach
199 first those who are furthest behind,”¹⁴ and in the context of States’ guarantees to protect the human
200 rights of migrants. Initially we brought together 20 Commissioners ensuring gender and geographical
201 representation to generate transdisciplinary evidence, contemporary thought and global expertise
202 that draws on multiple scientific perspectives. To achieve this aim Commissioners were drawn from
203 a range of scientific backgrounds including public health, sociological, policy, legal, anthropological
204 and humanitarian.

205 We initially structured our work around the key themes of Health systems; Labour migration; Forced
206 migration; Vulnerabilities; Law, human rights and politics; Socio-cultural factors and identity; and
207 Data and health outcomes. We undertook a series of rapid systematic reviews to identify key
208 literature in each area and building upon these, as well as two formal systematic reviews and meta-
209 analyses that informed the Commission and are published in detail alongside the report. Our work
210 was conducted over a two year period with a week-long in-person review of the first draft of the
211 Commission at the Rockefeller Foundation, Italy, in November 2017.

212 The principles that underpin our report are those of equity and healthy inclusion. The Commission
213 settled upon five goals to examine in-depth which provide a focus throughout the four sections of
214 the final report. First, we review current evidence on migration and health, challenge common
215 myths and describe the composition and characteristics of population mobility and assess uses and
216 limitations of migrant categories. Second, we examine multi-sector determinants of health and
217 consider the implication of current sector-siloed approaches, such as the dichotomous goals of the
218 health versus the security sectors. Third, we critically review key challenges to healthy migration by
219 analysing health and migration in relation to: culture and identity, rights, legal issues, and the
220 environment and climate change. Fourth, we examine equity in access to health and health services
221 and offer evidence-based solutions to improve the health of migrants. Fifth, we look ahead to
222 consider how our evidence can contribute to synergistic, ethical policies and feasible strategies to
223 inform and inspire action by governments, international agencies and health professionals to
224 promote health amidst global mobility.

225 To tackle this complex subject, we developed a ‘Migration and Health Determinants Framework’ to
226 consider the interactions between migration and the health of individuals, populations and global
227 health ([See supplementary appendix, Figure 1](#)). The Framework highlights key factors influencing the
228 health of mobile populations including: legal, social, health structures and systems; service access
229 and support; exposures and behaviours particular to migrants; and the epidemiological changes
230 (positive and negative) related to population mobility. These health influences are generally relevant
231 for each stage of a migration process. Our report thus offers evidence on how various factors might
232 benefit or be detrimental to individual and population health throughout a journey—including at
233 origin, transit, destination and return.

234 Migration and health is a diverse topic with an extensive existing literature. While we consciously
235 start with a broad and ambitious remit, it is not possible to cover all aspects of migration and health,
236 nor give an overview of all groups of migrants and the conditions they experience. There are many
237 other facets of migration and health that were beyond the specific remit or bounds of the five main

238 goals of this Commission but we plan to do more in the post-Commission phase in collaboration with
239 others across sectors who are working in this space. Recognising the recent Lancet series on Conflict
240 and Health, and the Syria Lancet Commission, we have not presented substantive amounts of
241 reference to policy documents or examples of best practice, or deeper analysis in the field of refugee
242 studies. We feel these areas and wider collaboration on forced migration will be key for the post-
243 Commission phase in achieving further research, policy and operational impact. Whilst we cite cases
244 of operational practice, we were unable to systematically explore grey literature or repositories of
245 migration and health operational and interventional practice.

246

247 **Section 1: The Case for Action – What do we** 248 **know about migration and health**

249

250 **Migration is a dynamic process**

251 Migration seldom involves a single long journey from one place to settle in another. The diversity
252 and complexity of migration patterns include people traveling long and short distances, within and
253 across borders, for temporary or permanent residency and often undertaking the journeys multiple
254 times. A clear delineation or rigid categorisation of different types of migration is rarely possible. The
255 categorising process attempts to classify a large, heterogeneous population according to limited
256 criteria, which are not generally suited to capture the complex social dynamics of human mobility or
257 necessarily the perspectives or needs of the people who are moving. Terms such as “voluntary” or
258 “forced” migration and categories such as “refugees”, “asylum seekers”, “international” and
259 “internal” migrants can partially help to understand migration dynamics. These same terms can also
260 be used to “other” and discriminate against migrants, as well as being generally administrative
261 definitions used to classify migrants for protection, assistance or research—rather than a true
262 representation of individual circumstances. For example, legal categories are instrumental for
263 migration control and management by states and international agencies providing support but may
264 not fully explain an individual’s circumstances. However, for the purposes of the evidence presented
265 in this report, we often use existing definitions ([See supplementary appendix, Table 1](#)), which enable
266 us to draw on current migration literature and data sources. At the same time, throughout the
267 report we will highlight the complex drivers of migration, and the difficulties and potential dangers
268 of assigning singular or narrow definitions. Migrant categories are not necessarily objective or
269 neutral; distinctions frequently reflect particular assumptions, values, goals and interests of the
270 parties who assign these labels.

271 It is also difficult to categorise people in relation to their reasons for migrating. There are a myriad of
272 negative drivers and positive aspirations (‘push’ or ‘pull’ factors) that motivate people to migrate.
273 Individuals, families and groups often have mixed motives for migrating, and their reasons can
274 change over the course of a single journey. For instance, people seeking safety from conflict may be
275 classified as refugees, asylum-seekers, undocumented or internally displaced persons, but before
276 and during transit—especially in protracted conflicts where aid resources are insufficient—migration
277 decisions may also relate to livelihoods and employment. ‘Distress migration’ or migration due to
278 entrenched poverty, food insecurity and household economic shock (e.g., illness, debt), is common
279 worldwide. Distress migration is linked to local unemployment, household financial crises, poor crop
280 production and in some instances, forced evictions, for example, linked to rising real estate prices,
281 large development projects and land confiscation.

282 Regardless of migration motives, economic contributions, or people’s rights, amidst populist

283 rhetoric, the amorphous labelling of people who move as ‘migrants’ has seemed to become a
284 condemnatory marker for populations who have fewer resources, such as refugees, asylum-seekers,
285 undocumented migrants and low-wage workers. Moreover, in an era of xenophobic politics, the
286 catch-all term ‘migrants’ obscures the net social, political and economic benefits of migration for
287 destination communities, and contributions to places of origin, that support families and
288 supplement development aid, which, in sum, promise greater global health.

289

290 **Health throughout the migration process**

291 Migration trajectories involve various phases, (figure 1) including: pre-departure circumstances at
292 places of origin; short or long-term transit, which may involve interception by authorities, non-
293 governmental groups or criminal gangs; destination situations of long- or short-term stay; and return
294 to places of origin for re-settlement or for temporary visits before re-migration.³ In each phase of a
295 person’s journey there are potential health risks and possible protective factors that can have a
296 short or long-term impact on their well-being. As previously noted, the journeys are often diverse
297 and rarely singular. For example, it is especially common for labour migrants to undertake circular
298 migration, transiting back and forth between their place of origin and destination or re-migrating to
299 a new destination. When people are transiting between locations, their health and safety depend on
300 the forms of transport (air travel, on foot across deserts, hidden in lorries) and the pathogenic or
301 environmental exposures (malaria, tuberculosis, heat exhaustion, dehydration) along the transit
302 routes.¹⁵ Return migration also poses both health risks and benefits. For instance, communities of
303 origin may benefit from new skills or improved health behaviours gained by returning migrants,¹⁶
304 but conversely, individuals who are injured or disabled during their journey may return to locations
305 with few services or support mechanisms. Importantly, policies to protect migrants’ and public
306 health will be most effective if they take advantages of opportunities to address people’s health
307 needs at the multiple phases of the migratory process.³ Maintaining the mental health and wellbeing
308 of migrants and the families they may leave behind is particularly important. Even in ideal
309 conditions, migration is stressful, and most people move in ways that are far from ideal; which
310 coupled with the causes of migration, can lead to mental ill health.

311

312 **Migration, gender and health**

313 Both population mobility and the health implications of migration are highly gendered. That is,
314 women, men and sexual minorities are likely to encounter different health risks and protection
315 opportunities at each phase of a migration journey - a journey they may have undertaken to flee
316 gender-based violence. The risks begin before departure, where women and children may be at risk
317 of violence and discrimination. Amongst those who are forcibly displaced, there is a particular risk of
318 sexual violence, coercion and sexual exploitation, such as recent accounts of widespread rape of
319 Rohingya women and girls,¹⁷ or when moving along irregular and dangerous routing ending in official
320 and unofficial detention centres such as the case of Libya.¹⁸ Even when reaching zones of apparent
321 safety, women and children have been exploited by humanitarian workers, a problem that remains
322 widespread suggesting that some protectors need to be protected against.¹⁹ A systematic review of
323 women and girls in conflict-affected settings indicated their extraordinary vulnerability to various
324 forms of human trafficking and sexual exploitation, frequently occurring as early or forced marriage
325 and forced combatant sexual exploitation.²⁰ Women and children are especially at risk when they
326 migrate without the protection of family or social networks. Unaccompanied girls and boys who
327 move in ways that are not readily detected by potential support mechanisms are particularly
328 vulnerable to neglect, trafficking, abuse and sexual exploitation, such as survival sex among Afghan
329 refugee boys who shelter in parks and makeshift camps in Greece.²¹ Child marriages appear to
330 increase among displaced populations,²² as parents are often forced to make impossible choices

331 about their daughters based on their fear of sexual violence by armed forces or combatants and
332 economic hardship.²³ Sexual minorities might be among the most neglected and at-risk populations
333 in circumstances of migration. The stigma associated with being lesbian, bi-sexual, gay, transsexual,
334 or intersex (LGBTI) can subject individuals to bullying and abuse or force them to remain invisible.
335 There appears to be little training for health and humanitarian aid professionals currently to meet
336 the health needs of sexual minorities.

337

338 **Challenging myths**

339 In our current political climate, the term ‘migrant’ raises a litany of myths and inaccurate
340 stereotypes. While often used for cynical political gain, stigmatising falsehoods about migrants
341 frequently become publicly accepted. We will respond to common myths by offering data-driven
342 facts.

343

344 **Are high-income nations being overwhelmed by migrants?** Dialogue on migrants often centres
345 around absolute numbers of migrants crossing international borders into high-income countries
346 (HIC). This rhetoric rarely acknowledges that there has been little change in the proportion of the
347 world’s international migrants, which has only risen from 2.0% to 3.3% from 1975 to 2015 globally
348 (figure 2A). And, while HICs have seen a greater rise, from 4.3% to 13.3% (1960 to 2015), it is
349 important to note that the proportion of the total population that were individuals who have been
350 displaced and are currently living in HICs is considerably smaller than in LMICs. Furthermore, the
351 figures in high income settings include, for instance, students²⁴ who pay for their education and
352 often return to their countries of origin and labour migrants who are net positive contributors to the
353 economy. Previous waves of migration as a proportion of the global population (e.g. Europeans
354 colonising the Americas & Australasia) have been vastly greater than these recent trends. Similarly,
355 the proportion of the world’s population that were refugees was relatively stable between 1960 and
356 2015 but HICs saw a slight decrease and it was low income countries (LICs) that experienced
357 fluctuations from 0.1% to 1.3% (figure 2B). These data illustrate that despite popular discourse to
358 the contrary, changes in migration are more complex than the simple narrative of a rise in numbers.
359 Overall, mobility patterns are highly regional and context specific with less wealthy nations bearing a
360 disproportionate burden of hosting vulnerable displaced populations.

361 **Are migrants a burden on services?** Macro-economic analysis on the impact of asylum seekers in
362 Europe concluded that they have a positive impact on host countries’ economies.²⁵ Today, rather
363 than burdening systems, migrants in HICs are more likely to bolster services by providing medical
364 care, teaching children, caring for grandparents and undergirding understaffed services. Migration
365 provides much-needed high and low-skilled workers into economies. The way healthcare markets
366 are constructed – from both supply and demand side – is inextricably connected with human
367 mobility. Hospitals, residential homes, childcare centres, domestic and professional cleaning services
368 are often staffed by migrants. Migrants comprise a substantial portion of the health workforce in
369 many HICs and contribute to a significant “brain gain” in net-migrant receiving countries.²⁶ For
370 example, 36% of doctors in the UK gained their medical qualification in another country.²⁷
371 Healthcare workforce migration from poorer to wealthier countries has been the subject of
372 extensive academic literature. Health professionals migrate because of low remuneration, poor
373 working conditions, work overload, and poor opportunities for professional advancement in their
374 home countries.²⁸ Higher income countries reap the benefits. It is LMICs such as Syria and Turkey,
375 who host a higher proportion of vulnerable migrants, where services are challenging to deliver for
376 the poorest members of society. While many migrants are able to access the labour markets, there
377 are also many who may not have this same access with immediate and long-term consequences on
378 livelihoods, social security, education and health. Our systematic review and meta-analysis of global
379 patterns of mortality however, provides strong evidence that international migrants - particularly

380 those who are more likely to have actively chosen to migrate such as economic, student, and family
381 reunion migrants - have a mortality advantage compared to host populations across the majority of
382 ICD10 disease categories.

383 **Are fertility rates among migrants higher than among host populations?** Despite populist rhetoric
384 that migrants have many more children than host populations, the growth and decline of migrant
385 populations in a country are affected by birth and death rates and inward and outward migration
386 from a country. Using large-scale longitudinal data from six countries (Germany, Sweden, United
387 Kingdom, France, Spain and Switzerland), researchers found that migrants have lower first-birth
388 rates than non-migrants with the exception of migrant Turkish women.²⁹ Moreover, birth rates
389 among migrants are barely at the level of population replacement (a total fertility rate below 2.1
390 births per woman) and often falling. Access to contraception also influences differences in fertility
391 rates. Poor access to contraception among migrants is often related to inconsistent policies,
392 guidelines and provision of services, such as in the EU, where migrants appear to have inadequate
393 access to sexual and reproductive health care, including family planning services.³⁰

394 Evidence about fertility and its relation with internal migration in LMICs is limited. Using
395 Demographic and Health Survey (DHS) data on the use of modern contraception by individuals'
396 migration category in five LMICs (Ethiopia, India, Kenya, Malawi and Tanzania) we showed that, in
397 each country, internal migrants used modern contraception methods more often than non-migrants
398 (figure 3). These results may be explained, in significant part, by people's educational and socio-
399 economic status, supporting evidence that migrants have lower first-birth rates than non-migrants—
400 and dispelling populist views about fertility among migrants. However, these data may not represent
401 patterns among more marginalised groups such as undocumented migrants, refugees, asylum
402 seekers or displaced populations in humanitarian crisis situations—where rape is common and there
403 is even greater need for readily accessible sexual and reproductive health care.³¹

404 **Are migrants damaging economies?** There is overwhelming consensus on the positive economic
405 benefits of migration which is insufficiently acknowledged. In settings that offer universal access to
406 minimum economic benefits, there has been much debate whether migrants receive more in social
407 assistance than they contribute in taxes. The evidence examining this issue generally suggests that
408 migrants make greater overall contributions, except in countries with a high proportion of older
409 migrants. In advanced economies, each one percent increase of migrants in the adult population
410 increases the GDP per person by up to two percent.³² Migrants increase income per person and
411 living standards through greater contribution to taxes than the social benefits they receive.³³
412 Furthermore, in Europe free movement has been demonstrated to address imbalances in the labour
413 market³⁴ by serving as an equilibrating force through the provision of labour where and when
414 needed. These benefits are not just accrued by the wealthiest in society, as evidence also supports
415 the increase in average income per person at the bottom and the top of income scales. Moreover,
416 the World Bank Group estimated that migrants sent a total sum of US\$613 billion to their families at
417 origin in 2017. Approximately three quarters of these remittances were sent to LMICs -an amount
418 that is more than three times larger than official development assistance - and these remittance
419 flows have been growing steadily since 1990.³⁵ In countries such as Liberia, Nepal and Tajikistan, up
420 to one-third of the gross domestic product comes from international remittances. Globally these
421 sums of money are large and transformatory for the lives of non-migrants. ([See supplementary
422 appendix, Figure 2](#)).

423 **Are migrants disease-carriers that pose risks to resident populations?** Suspicion against migrants to
424 be “carriers of disease” is probably the most pervasive and powerful myth related to migration and
425 health throughout history.³⁶ Although there are historical examples of the introduction of disease
426 into new settings through human mobility (e.g., the spread of infection from European colonial
427 settlers), the risk of transmission from migrating populations to host populations is generally low.
428 For example, studies on tuberculosis, suggest that the risk of transmission is elevated within migrant
429 households and migrant communities, but not in host populations.^{37,38} Nonetheless, several HICs

430 screen migrants for tuberculosis as part of pre-migration visa application checks.³⁹ While
431 tuberculosis screening systems may benefit individuals through early detection, screening is often
432 stigmatising and can spur xenophobic media messages,⁴⁰ despite the negligible risk of transmission
433 in countries with functioning public and universal health systems.³⁷ Migrant populations may come
434 from countries with a high burden of disease⁴¹ and it is not uncommon for disease outbreaks to be
435 found in situations of conflict, which dismantle already weak public health systems. Illness and
436 infections may also be acquired or spread via transit routes and transport means. For example, air
437 travel can facilitate rapid geographic spread of infections. However, even risk of air travel-related
438 outbreaks is low to modest if the destination setting has strong surveillance and inclusive public
439 health services,⁴² which are also crucial to prevent pandemics, whether associated with population
440 movement or not.⁴³ Epidemiological patterns and related risks are readily addressed by assessing
441 the infectious disease burden among populations and using data to design targeted interventions to
442 contain outbreaks and prevent new infections through immunisation. Because of the prejudice and
443 unfounded fear that can be generated by misuse of surveillance data, caution is required when
444 releasing potentially stigmatising disease prevalence figures for public consumption. We revisit this
445 issue throughout the report and discuss the misuse of data in panel 5.

446

447 **Composition of mobile populations**

448 Understanding the health of people on the move requires clarity about *who* is moving, *why* and
449 *where*, and the potential positive and negative effects. In this section, we offer an overview of:
450 international migrants; internal migrants; labour migrants; refugees; asylum-seekers; internally
451 displaced persons (IDP) and climate refugees - an emerging group that is likely to increase. Data will
452 be presented using the most widely applied migration categories, despite our previously stated
453 reservations about their weaknesses, reviewing numbers and their associated limitations,
454 geographical distribution, age and sex characteristics and key issues for each group.

455

456 **International Migration:** In 2017, there were an estimated 258 million international migrants—
457 which accounted for 3.4% of the world’s population.⁴⁴ Notably, most data on international migration
458 between 1960 and 2015 did not classify migrants by subgroup. Recent estimates by the International
459 Labour Organization indicate that labour migrants comprised 61% of all international migrants in
460 2015 —however this figure is based on limited data and this was the first year for which data were
461 available (figure 4a). Figure 4b outlines the number of international migrants by age, sex and region
462 in 2015. Europe has the largest number of international migrants (76 million), closely followed by
463 Asia (75 million) and North America (55 million). Globally, the largest number of international
464 migrants were in the 30-34 age group and 48% were female. To date, data come primarily from
465 population censuses, population registers and nationally representative surveys, often using place of
466 birth to determine international migrant status. For 47 countries, place of birth is not available, so
467 country of citizenship is used instead potentially leading to overestimation of international migrant
468 numbers, but conversely, these data can also underestimate by inappropriately excluding people
469 born abroad with local citizenship. Data collection on international migration would benefit from
470 better information on subgroups and categories of migrants that are currently not adequately
471 counted so that vulnerable groups are not omitted from needs assessments and budget allocations
472 for responses.

473

474 **Internal Migration:** While international migration receives the most political and public attention,
475 the majority of movement globally is internal migration. In 2009 the number of people who moved
476 across the major zonal demarcations within their countries was nearly four times larger (763 million)
477 than those who moved internationally.⁴⁵ Approximately 40% of urban growth in Asia, Africa and
478 Latin America results from internal migration from rural to urban areas.⁴⁶ In many LMICs, rural to

479 rural internal migration to work in the agriculture sector still accounts for the largest number of
480 people on the move.⁴⁷ In the past, evidence suggests that internal migration was dominated by
481 single men, however, recent trends show increases in women moving for work and to seek freedom
482 from discriminatory social and cultural norms.⁴⁸ From 2014 to 2050, the proportion of people living
483 in urban areas, largely due to migration from rural areas, in Asia and Africa are expected to increase
484 from 48% to 64%, and 40% to 56% respectively.⁴⁶ Producing global estimates on internal migrants is
485 methodologically challenging and routine data are rare.⁴⁹

486 There are considerably more internally displaced persons due to conflict and natural disasters than
487 asylum seekers and refugees globally. However, they also receive substantially less attention than
488 the latter, primarily due to the importance attached to national borders, citizenship and the
489 availability of better data collection for refugees. In 2016, there were 31.1 million newly internally
490 displaced people, with a total of 40.3 million people internally displaced globally.⁵⁰ Asia was the
491 region with the highest number of IDPs. Between 2009 and 2016, the number of individuals
492 displaced due to conflict were fewer than those resulting from disaster (figure 5).

493

494 **Labour Migration:** The International Labour Organization (ILO) estimates suggest that in 2013 there
495 were 150.3 million international migrant workers in the world. While official figures indicate that the
496 largest proportion of international labour migrants is in North America and Northern, Southern and
497 Western Europe, this is perhaps misleading. Regional labour migration among LMICs often goes
498 uncounted due to regional and bilateral labour and trade agreements and undocumented or
499 irregular border-crossing.^{51,52} LMICs are estimated to host roughly 13.6% (20.4/150.3) of total labour
500 migrants globally.^{51,53} Moreover, it is important to note that these figures will be under-estimates as
501 they exclude undocumented international migration between neighbouring countries and workers
502 in the informal economy. Among labour migrants globally, recent figures indicate that there are
503 more male migrant workers (55.7%) than female (44.3%).⁵¹ Women more commonly work in service
504 jobs (74%) and less often in manufacturing and construction work (15%).^{51,53} Increases in female
505 migration may be due in part to shifts in gender, social and migration norms, and in other part by
506 remittances,⁵⁴ which create greater opportunity for women to migrate. Adolescent girls also migrate
507 for work, driven by financial incentives,^{55,56} and hopes for greater freedom and empowerment.
508 However, there is growing recognition of the number of young women who end up in exploitative
509 work.⁵⁷ There is extraordinarily limited comparative national data on the patterns and prevalence of
510 internal labour migration, especially for harder to monitor forms, such as seasonal and often circular
511 migration.

512

513 **Forced Migration:** Two billion people currently live in countries affected by civil unrest, violence or
514 ongoing conflict.⁵⁸ Using data on historical refugee numbers which fall under UNHCR's mandate, the
515 proportion of international migrants who were refugees has remained below 10% following a peak
516 in 1985 at 9% (figure 4a). Consistent with the trend in proportions, the number of refugees declined
517 from 17.8 million to a low of 8.7 million from 1992 to 2005, followed by an increase to 19.9 million in
518 2017 (figure 6). Africa had the highest percentage of refugees under 18 in terms of the countries of
519 origin and countries of asylum application in 2015 ([See supplementary appendix, Figure 3](#)). Further
520 details on the regional variation in the number of refugees are provided in the [See supplementary](#)
521 [appendix, Figure 4 and Figure 5](#). Previously most forcibly displaced people were from LICs and lived
522 in camp-like settings, however, current refugees are more likely to live out of camps. Most refugees
523 reside in LICs and recent wars and forced displacement, in the Middle East in particular, have caused
524 millions of refugees to reside in urban and peri-urban settings, often with undocumented status. For
525 example, less than a fifth of refugees in Jordan live in camps.⁵⁹

526 There were an estimated 1.9 million claims for asylum in 2017 and total 3.1 million asylum seekers
527 whose refugee status was yet to be determined.⁶⁰ There is enormous variation in the total number

528 of asylum seekers by country of origin ([See supplementary appendix, Figure 6](#)) reflecting proximity
529 to source countries, and the proportion successfully securing refugee status. The numbers in other
530 categories of forced migrants who are undocumented, and often the most vulnerable, are not
531 available as these individuals are often not in contact with authorities.

532 Resettlement is a considerable challenge. Refugees with acute health and medical needs are among
533 the top priorities for consideration for resettlement referral by UNHCR, and some resettlement
534 countries expedite consideration of refugees facing acute health risks. In 2018 UNHCR determined
535 that about 1.2 million refugees around the world needed resettlement.⁶¹

536

537 **Human trafficking and modern slavery:** Human trafficking, forced labour and forced marriage, now
538 referred to collectively as ‘Modern Slavery’, is estimated to affect 40.3 million people globally,
539 according to recent estimates from the ILO.⁶² These new figures indicate there were 25 million
540 people in forced labour and highlight that there are also 15 million in forced marriage. This equates
541 to 5.4 victims for every 1000 people in the world.⁶³ Regionally, Asia appears to have the largest
542 number of trafficking victims, with 62% of all trafficked persons, followed by Africa (23%). Women
543 and girls are disproportionately affected, accounting for 71% of these victims, as are children, with
544 one in four victims under the age of 18. Females are commonly trafficked for sex work, domestic
545 service and as brides. Men and adolescent boys are more likely to be recruited—often deceptively—
546 for various forms of strenuous manual labour, including commercial fishing and construction.⁶⁴
547 Sexual minorities who are trafficked are often subjected to forced sex work.

548

549 **Climate Change Refugees:** Global climate change, driven by anthropogenic atmospheric and oceanic
550 warming, and its global impact on rising sea levels, shrinking cryosphere and ocean acidification, has
551 the potential to affect and disrupt well-known drivers and mechanisms of migration in the future on
552 an unknown but potentially dramatic scale. The Lancet Commission on Health and Climate Change:
553 policy responses to protect public health,⁶⁵ discusses the potential effects on migrants including
554 impact on urban health, extremes of heat, and the social impact of population redistribution due to
555 people who cannot move. A recent study suggests that by 2070 deadly heatwaves due to the
556 combined impacts of climate change and the vast expansion of irrigated agriculture could make
557 large parts of northern China, with a population of 400 million, uninhabitable.⁶⁶ Climate change will
558 also increase the frequency and intensity of hydrometeorological hazards.⁶⁷

559 According to a recent report by the World Bank, climate change has the potential to force more than
560 143 million people to move within their country by 2050.⁶⁸ The messages are that internal climate
561 migration may be a reality but not necessarily a crisis and that migration can be a sensible climate
562 change adaptation strategy if managed carefully and supported by good development policies and
563 targeted investments. There is large uncertainty in the impacts of climate change on migration
564 because migration is driven by complex multi-causal processes which also include social, economic,
565 political and demographic dimensions which impact on each other and can be driven by the effects
566 of climate change. The uncertainty is compounded by the fact that refugees from conflict, war or
567 persecution are protected by the 1951 Convention relating to the Status of Refugees and its 1967
568 Protocol, but in contrast no international law recognises climate refugees, who are mostly seen as
569 searching for better economic conditions. The World Bank report is limited to internal displacement,
570 which limits its scope. For Bangladesh, a country usually considered to be in the front line for climate
571 change impacts, the World Bank projects that by 2050 there will be 13.3 million climate migrants
572 (surpassing the number of other internal migrants).⁶⁸ In Panel 1, this projection is tested, using
573 detailed census data over the period is 2001-11. Migration attributed to hydrometeorological hazard
574 risks from all causes are projected up to 2050 and exceeds the World Bank figure of 13.3 million
575 internal climate migrants. So as with northern China, the combination of global climate change and
576 local anthropogenically-driven environmental degradation may trigger dramatic increases in

577 migration. For Bangladesh, there has been no automatic assumption that climate change will cause
578 mass migration in our analysis, but rather that mass migration is occurring now and will increase,
579 projected from current trends based on large-scale census data.

580

581 **Political, cultural, environmental and structural** 582 **determinants of migration and health**

583 **Political determinants of health**

584 Migration has become highly politicised, especially as certain politicians try to curry electoral favour
585 by migrant-blaming and undermining the welfare state. Stigmatising rhetoric has meant that the
586 rights of migrants are under attack by the same structures and processes that are supposed to
587 protect them, both in their country of origin -potentially leading some to move- and during their
588 migration journey. The views, words and actions by those in power both instigate discrimination and
589 restrict access to education, work, justice and health. The term “fake news” has recently been
590 created to describe inaccurate information deliberately created or used to mislead. In a world of
591 social media and populist discourse, fake news is used against migrants to undermine trust and
592 divide communities. A previous Lancet Commission on Global Governance, outlined the major
593 influences and governance deficits which affect health and the power disparities that govern health
594 inequity.⁶⁹ This previous Commission highlighted how the goals of the health sector, which are
595 inclusive towards better health for all, commonly come into policy conflict with the interests of
596 influential global actors who prioritise national security, sovereignty, and economic goals. When
597 considering the health of migrants in light of the Global Governance report, the convergence
598 of health and migration is situated at the heart of these opposing governance goals. For example,
599 the Global Governance commission highlighted current democratic deficits—or
600 the insufficient participation of civil society, health experts, and marginalised groups - in the
601 decision-making processes. Migrants often suffer from exclusion, and despite their participation as
602 workers, parents, consumers and investors in the economy, they are frequently left out of
603 democratic processes. The previous Commission report also indicated that these democratic deficits
604 are compounded by weak or absent government or public ‘accountability mechanisms’ to fix the
605 failings in this exclusionary system. Moreover, the authors point out there is a leadership vacuum on
606 health and this is particularly true for migrant health. For instance, in the UN system, these global
607 concerns cross thinly through many UN mandates with no clear leadership or coordination with all
608 relevant external actors. With these profound governance gaps, voices are few and far between to
609 combat the current highly-charged political rhetoric that demonises migrants.
610

611 **Culture, ethnicity and identity**

612 Understanding issues of culture, ethnicity and identity is crucial for achieving equity in health.⁷⁰ Past
613 and present migration dynamics have contributed significantly to the cultural and ethnic diversity of
614 many societies, highlighting the importance of the cultural dimensions of health and medical care.
615 Although culture is difficult to define it may be outlined as: a linked group of customs, practices and
616 beliefs jointly held by individuals, social networks and groups, that help define who they are, where
617 they stand in relation to those within and beyond the group, and that give meaning and order to life.
618 A central feature of culture are “the shared, overt and covert understandings that constitute
619 conventions and practices, and the ideas, symbols, and concrete artefacts that sustain conventions
620 and practices, and make them meaningful.”⁷⁰ Anthropologists describe culture as “a process through
621 which ordinary activities and conditions take on an emotional tone and a moral meaning for
622 participants”⁷¹; this includes perceptions, beliefs, and practices related to health, suffering and

623 disease. Culture is thus never static but evolves in relation to a range of social, economic and
624 political factors and experiences of individuals and groups. At the individual level, cultural beliefs,
625 habits and values can be manifested differently among members of the same culturally defined
626 group.

627 Both migration and culture are processes that define an individual's identity and are both dynamic in
628 nature. Migration and "living as a migrant" in a transit or host community entails multiple occasions
629 and stimuli for cultural adaptation and change, on individual and collective levels. Identity can
630 initially be based on one's place of origin (e.g. ethnicity, nationality). As a migrant, aspects of oneself
631 are regularly re-shaped as new identities emerge and new labels are imposed (e.g. "migrant",
632 "foreigner", "undocumented"). New locations raise challenges and individuals develop strategies to
633 respond to opportunities or constraints, including how they care for their own health and that of
634 their family, and how they interact with health systems. For individuals who migrate, their past
635 combines with migration-related experiences to shape how they perceive their health, wellbeing,
636 risk and disease, and their health seeking behaviour. On arrival at a destination, assimilation and
637 acculturation may alter their risk profile to mirror patterns of local residents or their fellow migrants.
638 Independent of specific ethnicity or country of origin, this may mean higher morbidity due to the
639 deleterious interaction of multiple adverse structural factors, including marginalisation, poverty, the
640 impact of immigration laws and legal status, and poor access to care.⁷² Analysing the dominant
641 discourse in host countries around migrants helps us to understand how these populations tend to
642 be 'othered'. For example, questioning the "deservingness" of certain groups of migrants for
643 healthcare, that eventually supported actual practices and structures of exclusion.⁷³ Such measures
644 are both fuelled by and contribute to the anti-migration environments, which make individuals feel
645 uncertain about their future, their safety and the security of their family.

646 At all stages of the migration process, individuals and groups may be affected by the toxic
647 consequences of social exclusion and discrimination on the grounds of ethnicity, race, nationality or
648 migrant status. For some migrants, ethnic discrimination or persecution is already their reason to
649 leave. In transit or in receiving countries, migrants are often subject to pejorative discourses fed by
650 cultural stereotypes and racism. The creation of group identity through distinct cultural artefacts,
651 language, and an assumed common origin or history is an essential feature of culture. However, this
652 diversity can be utilised as a tool for discrimination which can be created or increased by those who
653 seek to divide communities. Its detrimental consequences, including the impact of raising
654 unfounded fears of increased infectious diseases, violence and demands on health resources within
655 the host group, are well-known from past and recent history. Migrants' burden of discrimination is
656 often doubled as they carry group characteristics that may be associated with additional prejudice
657 and exclusion, for example related to intersectionality with gender or disabilities.

658 Discrimination towards migrants is commonplace and often conflated with racism. Anti-migrant
659 discrimination and racism overlap, sharing features of prejudice against the 'other', and are forms of
660 xenophobia, but are distinct entities. Racism is based on the belief that one race or ethnicity is
661 superior, justifying discriminatory actions. Anti-migrant discrimination is directed against migrants
662 and tends to be a combination of prejudice against the other with fear over the loss of something to
663 the migrant (e.g. a job, a service). Crucially, discrimination against migrants is usually racism, that is,
664 it is directed towards people who appear physically or culturally different and can occur between
665 migrant and host community but can also occur by one migrant group against another.^{74,75} Why is
666 this distinction important? In political discourse, racism is usually socially prohibited and sometimes
667 illegal. Discrimination against migrants however is 'acceptable' for many and is commonly used in
668 populist rhetoric. Anti-migrant language is a tool that provides the opportunity to divide populations
669 on ethnic grounds to advance the majority view and to mobilise fear and hatred. For example, Victor
670 Orban, Prime Minister of Hungary when speaking about migrants in 2018 stated, "we do not want
671 our own colour, traditions and national culture to be mixed with those of others".⁷⁶ In the United
672 States for example, anti-immigrant policies were associated with higher levels of perceived

673 discrimination in migrant and non-migrant Latino groups, providing a basis for the unequal
674 treatment of both migrant and ethnic minority groups.⁷⁷ A further study from the United States
675 showed the health impact; areas with higher anti-immigrant prejudice were associated with
676 increased mortality generally amongst minority ethnic groups, but in this study the migrants
677 themselves had lower mortality.⁷⁸ This may also have intergenerational consequences. A prominent
678 raid against Latino migrants was associated with subsequent poorer perinatal outcomes (increased
679 risk of low birthweight) amongst members of the Latino community.⁷⁹ Another example from the UK
680 was the ‘hostile environment’ towards migrants created by the Conservative government leading to
681 migrants and British citizens being denied healthcare. This was recently highlighted in the ‘Windrush
682 scandal’ in 2018, where British citizens who came to the UK from the Caribbean more than 45 years
683 ago were deported and denied rights and benefits.

684 The socio-political context that leads to inequalities in health creates an accumulation of
685 disadvantage throughout the lifecycle—and potentially over generations- and migrant-related
686 discrimination is a profound determinant of health, especially mental health and social well-being.
687 Studies have shown the substantial mental health implications of living in a state of persistent
688 unpredictability and uncontrollability over one’s future.⁸⁰ Fear of deportation, discrimination and
689 targeted condemnation can influence willingness to seek care and maintain follow-up appointments,
690 including to receive medical test results and follow treatment regimens. Studies indicate that the
691 wider consequences of discrimination are substantial. For example, it is estimated that, on average,
692 Australia loses up to 3.02% of GDP (\$37.9 billion) annually as a result of individuals being exposed to
693 some form of racial discrimination.⁸¹

694 A number of countries have implemented interventions to address discrimination. For example,
695 Canadian schools have implemented cross-cultural youth leadership programmes and anti-racism
696 education curricula to equip students and staff to deal more effectively with racism.⁸² In South
697 Africa, the Roll Back Xenophobia programme used community radio to help combat negative
698 stereotypes of migrants and promote social inclusivity.⁸³ However, efforts to raise awareness of and
699 support the needs of particularly at-risk migrant communities fight an uphill battle against
700 nationalist forces, exclusionary systems, parsimonious resourcing and service-level biases.
701

702 **Environmental influences and hazards**

703 Extreme environmental events and ensuing disasters can cause displacement of populations. These
704 may be naturally occurring hazards, such as tsunamis, floods, earthquakes, volcanic eruptions;
705 pandemics of infectious diseases; or conflict and disaster; all of which form a complex driver of both
706 internal and international migration. Importantly, the most significant components of risk in a
707 disaster are the vulnerability and exposure, rather than the environmental hazard itself.⁸⁴ In this
708 context, vulnerability refers to the susceptibility of an individual or population to the adverse impact
709 of the hazard, the components of which are physical, social, economic or environmental. While
710 disasters may result in an increase in vulnerability, they are also a consequence of the underlying
711 vulnerability of communities, infrastructure and processes due to poor preparation and mitigation.

712 For example, the increase in extreme weather events has been linked to anthropogenic climate
713 change^{65,85}, but there has been a reduction in global disaster deaths as a proportion of the
714 population, which is attributed to progress in Disaster Risk Reduction (DRR) actions⁸⁶ reducing the
715 vulnerability of communities, infrastructure and healthcare systems, and through the establishment
716 of early warning systems. Reactive policies to a crisis which fail to address vulnerability amplify the
717 social, economic and environmental drivers that turn natural hazards into large-scale disasters.⁸⁷ The
718 majority of disaster deaths occur in fragile and conflict-affected states where DRR is almost absent.⁸⁸
719 DRR aims to increase resilience and reduce the risk of disasters.

720 Large disasters typically cost between 0.2 and 10% of annual GDP depressing the economy⁸⁹ and
721 these costs may be considerably higher for the lowest income countries, such as the case of the
722 2010 Haiti earthquake where economic losses equalled GDP.⁹⁰ They may exacerbate economically-
723 driven migration trends, in the medium to longer term from rural to urban areas⁹¹ and sometimes
724 internationally.⁹² But for localised disasters, where effective aid equals disaster losses, there may be
725 no net migration.⁹³ Evidence from a longitudinal study over 15 years in Indonesia showed that
726 permanent migration mostly did not occur in response to disasters, with the exception of
727 landslides.⁹⁴ However, there is contrasting evidence from both Caribbean islands, which experienced
728 significant post-disaster international migration, and tsunami-affected Japan where large numbers
729 of local working-age people and families from the Tohoku coast have permanently relocated to
730 Tokyo and other large cities.⁹⁵ Rising sea levels are likely to cause permanent migration of coastal
731 populations in developing countries with the lowest likelihood of protection, however the people
732 living in these settings also have strong abilities and desires to make their own mobility decisions.⁹⁶
733 There is also evidence of migration into disaster areas in response to government programmes
734 creating jobs or economic migrants filling jobs of displaced people. These inward migrants have
735 heightened vulnerability owing to lower social capital and disaster awareness.

736 Slow-onset changes in land use and availability due to sea level rise, coastal erosion, precipitation or
737 agricultural degradation and sector loss, will influence the pre-existing economic drivers of
738 permanent migration.⁹⁷ These changes may be man-made, for example overuse of land or
739 deforestation that renders it infertile. Drought is a common cause of migration. For example, the
740 drought in Orissa, India in 2001 resulted in 60,000 people migrating, mostly to the adjoining state of
741 Andhra Pradesh in search of employment.⁹⁸ Migration involves substantial costs and those with
742 fewest resources have the least capacity to move away, and so are the most vulnerable to harm.
743 Furthermore, environmental change has the potential to even further diminish people's resources,
744 exacerbating the vulnerability of a population, resulting in a sub-section, with the least ability to
745 move, who may become 'trapped.'⁹⁹ This 'non-migration influenced by environmental change' is of
746 great humanitarian concern.

747 It is essential for areas at a high risk of natural disasters to develop strong DRR actions to mitigate
748 future potential hazards and minimise life loss. An example of where this is important are the
749 Rohingya settlements in Bangladesh. The Rohingya are the world's largest stateless population,
750 stripped of citizenship in 1982 by the government of Myanmar. In late August 2017, renewed
751 violence by the military of Myanmar spurred a rapid mass exodus of Rohingya (655,000 people in
752 three months) to the south eastern region of Bangladesh.¹⁰⁰ These locations, such as Cox's Bazar and
753 Bandarban, are extremely susceptible to cyclones, flash flooding, and rainfall-induced landslides and,
754 coupled with the temporary, makeshift shelters often created by cutting into mud hillsides, render
755 the Rohingya extremely vulnerable. There is an urgent need to conduct multi-hazard vulnerability
756 mapping of the refugee camp and surrounding areas, conduct mapping of human mobility patterns,
757 improve drainage capacities of refugee settlement areas, develop evacuation and relocation
758 processes, examine resilience of existing healthcare centres to potential hazards, and generate a
759 post-disaster plan.¹⁰¹ Reactive policies to a crisis which fail to address vulnerability amplify the social,
760 economic and environmental drivers that turn natural hazards into large-scale disasters.¹⁰²

761 **Education for migrant children and adolescents**

762 Education is essential for children and adolescents and is a determinant of future health and well-
763 being. Education includes formal schooling, and acquisition of cognitive, social and other soft skills
764 that foster intellectual and social growth. Migration disrupts a child's formal education, including
765 difficulties accessing school— with the potential for lost generations of educated adults, particularly
766 for irregular child migrants and unaccompanied children. For example, in a study of access to public
767 schools in 28 developed and developing countries across the world, 40% of the developed and 50%
768 of the developing countries did not allow immediate access to irregular migrant children.¹⁰³ Migrant

769 children may also be excluded from school in some countries because they have not undergone
770 health screening,¹⁰⁴ or they may miss school days because of their limited access to services to treat
771 even simple illnesses. Migrant children in school may suffer poor educational attainment or decide
772 to drop out because of language barriers, unsuitable materials or teachers who are inadequately
773 trained to support student integration. For those with disabilities, obtaining an education can be
774 especially challenging because few countries will prioritise adapting education, school structures or
775 providing the necessary staff to ensure children with disabilities can obtain a good education.¹⁰⁵
776 Migrant students are more likely than natives to be placed in groups with lower curricular standards
777 and lower average performance levels.¹⁰⁶ An analysis of Demographic and Health Surveillance data
778 from Ethiopia, India, Kenya, Malawi and Tanzania on the association between mean number of years
779 of education and internal migration status indicates that, on average, migrants have more years of
780 education than non-migrants, with the exception of rural to rural migrants (figure 7). It is also
781 notable that there are differences between females and males educational attainment among all
782 groups, with males more likely to stay in school longer—especially among urban residents.

783 Internal migration in China is subjected to the ‘Hukou’ system, which is a household registration
784 system that determines service entitlements by internal divisions based on residency.¹⁰⁷ These
785 regulations may mean that internal Chinese migrants, do not have access to their own public
786 education system—or other services—because the child is not registered in the region they live.¹⁰⁸
787 However, where migration is managed well, children can integrate relatively quickly into a new
788 system, with younger children assimilating particularly well. All children and adolescents, regardless
789 of their status, should have access to education. According to the Convention of the Rights of the
790 Child, states are responsible to make primary and secondary education available and accessible to all
791 children, regardless of migration status. Primary education must be free and compulsory and states
792 must take progressive steps to make secondary education free as well. The Convention on the Rights
793 of Persons with Disabilities also requires that governments ensure equal access to basic services
794 including education for people with disabilities. A practical example of the inclusion of child migrants
795 is the Reaching All Children with Education programme in Lebanon, which sought to integrate large
796 numbers of migrant Syrian children into its public school system, while simultaneously improving
797 access for Lebanese children. The programme increased the number of school places, waived fees
798 and provided education grants, with encouraging results emerging.¹⁰⁹

799 **Health and safety of labour migrants**

800 Migrant workers’ earnings can sustain households and influence entire economies. For some labour
801 migrants, primarily highly-skilled individuals with sufficient education, employment, financial, or
802 citizenship credentials, migration poses few risks. In these circumstances, migration is generally
803 advantageous for livelihoods, health and well-being. However, the majority of labour migrants are
804 less well-situated, often originating from LMICs and seeking work in response to financial or safety
805 needs.

806 Distress or economic migration puts migrant workers at particular risk of unsafe transit and
807 pressures—or coercion—to engage in unsafe work conditions. Low wage labour migration is closely
808 linked to globalization and supply and demand, especially for cheap labour. Migrant workers in these
809 jobs are often amongst the most invisible of migrant populations. Not only are they likely to work in
810 informal or even illegal sectors, but they are also less likely to take part in the formal economy,
811 engage with the local community or use official resources. Their safety is also often hindered by
812 limited social, economic or legal status to assert their rights.

813 Labour migrants rarely migrate on their own without the assistance of labour intermediaries, both
814 formal agencies and informal migrant networks. Labour brokers play a fundamental role to link
815 individuals to jobs, however it is not unusual for recruiters to charge exorbitant fees, causing
816 migrants to incur substantial debt. Recruitment agents, including a migrant’s own social network,
817 often facilitate third-party contractual arrangements, day labour, piecework, and similar precarious

818 employment and pay arrangements that lead to long hours, exhaustion and serious health hazards.
819 For example, Bolivian migrant workers in Argentina explained that their social networks had led
820 them to jobs in harsh working conditions in textile workshops.¹¹⁰

821 Although labour migration has served to advance global markets and offer greater livelihood
822 opportunities, there is growing recognition of the often exploitative and hazardous nature of many
823 low-skill work sectors and their adverse effects on health and well-being, particularly in emerging
824 economies. The health and well-being of migrant workers are directly related to their working and
825 living conditions and influenced by broader social conditions (table 1). Harmful labour situations are
826 not uncommon for many migrants, especially those in low-wage sectors, as employment
827 destinations frequently involve hazardous working arrangements, dangerous tasks and unsafe
828 and/or unhygienic living conditions. For example, commercial fishing is considered to have some of
829 the most hazardous work conditions—especially in situations of exploitation or ‘sea slavery’. A study
830 among trafficking survivors in the Thai fishing industry reported higher injury rates (46.6%) than
831 injuries amongst non-trafficked fishermen (20.6%). Additionally, 53.8% of trafficked fishermen were
832 subjected to severe violence, whereas 10.1% of non-trafficked fishermen were beaten.¹¹¹

833 As for all migrants, health protections such as health entitlements or health insurance, occupational
834 safety and health (OSH) regulations and reliable social support are often not easily accessible,
835 particularly for low-wage sectors and irregular work. In addition to the common barriers to care
836 experienced by migrants, migrant workers worry about missing work time to seek medical care.
837 Especially when workers are paid by piecework or are struggling to pay off debts, missing work is
838 extremely difficult. Moreover, if the medical recommendation for injuries or illness is rest and time
839 off, day-wage workers are unlikely to heed this advice. In locations where there are regional accords
840 for cross-border labour migration, it is still not unusual for workers to avoid seeking medical care for
841 fear of being dismissed for injury or illness or for missing work. Migrant workers may be covered by
842 insurance in certain instances. However, even those who are insured may not understand that they
843 are insured or that they have the right to seek care without paying. For example, in a study of
844 Bangladeshi domestic workers in Singapore,¹¹² 72% did not know if they had received information
845 about company-paid insurance, and of those that had received information, 68% did not receive it in
846 their native language.

847 A diverse group of labour migrants experience major health risks which are often related to
848 employment policies inadequate to ensure worker health and safety. Most low-wage sectors are
849 poorly regulated or inspected for protections against occupational hazards and stressors, including
850 fair wages, financial insecurity, poor psychosocial work environments, exploitation, and verbal or
851 physical abuse.^{113,114}

852 Recognising the important contribution of migrant workers, migrant health has been included in the
853 SDGs, and highlighted in key international frameworks, for example the WHO Model for Action to
854 support healthy workplaces, the WHO Global Plan of Action on Worker’s Health 2008-2017, and the
855 Global Framework for Healthy Workplaces.¹¹⁵ However, migrants often don’t qualify for medical
856 subsidies and are frequently not covered by the healthcare financing schemes that protect
857 citizens.¹¹⁶ Where such entitlements do exist, work to date suggests that interventions should be
858 directed towards improving migrant workers’ knowledge of workplace health and safety and about
859 their healthcare entitlements in order to improve their uptake. There have also been questions
860 about whether the welfare state is a driver of migration, but research in the US found little evidence
861 for welfare generosity linked to internal migration across states.¹¹⁷

862 Migrant workers’ human rights to health are often severely restricted. Three UN agencies jointly
863 found that “Migrant workers are among the most vulnerable workers in the world, often subject to
864 exploitation, discrimination and abuse, lacking access to mechanisms for remedy and redress and in
865 constant fear of deportation.”¹¹⁸ Only a minority of migrant workers globally who suffer
866 occupational injuries receive medical treatment.¹¹⁹ A report on the ten most significant human rights
867 violations affecting global business included: recruitment of migrants and refugees into forced

868 labour; a lack of information on labour practices deep within the supply chain; and inadequate
869 oversight of suppliers.¹²⁰ From a human rights standpoint, the right to health requires states to
870 ensure occupational health and safe working conditions in accordance with the ILO occupational
871 health conventions 155 and 161 and regardless of immigration status. SDG 8, on decent work and
872 economic growth, calls on governments to “protect labour rights and promote safe and secure
873 working environments for all workers, including migrant workers...”¹²¹ and the UN General Assembly
874 has called for adequate workplace health and safety and protection against violence and
875 exploitation of migrant workers.¹²² Nonetheless, states with significant numbers of migrant workers
876 often obstruct migrant worker freedoms and safety. For example, in the Gulf Cooperation Council
877 (GCC) states, the *kafala* or sponsorship system restricts workers’ ability to change or leave their job
878 without their employer’s permission, or challenge any unfair treatment by the employer (See access
879 to health systems section and [see supplementary appendix, Table 2](#)).¹²³ These restrictions have
880 allowed private sector employers to pay usurious wages, engage in unprotected hazardous work and
881 force workers to live in crowded, squalid, and unhygienic living quarters.

882 **Section 2: Achieving Safe and Healthy** 883 **Migration**

884 There is a strong case for action on migration and health and current evidence indicates that
885 safeguarding the health of migrants will have positive effects for global wealth and population
886 health. Countries have a moral and legal obligation to respect the human rights of migrants,
887 although these obligations are not always respected by states. Over the last century, multilateral
888 agencies and nation states have moved the migration and health agenda forward through various
889 notable instruments and events (figure 8). One of the key challenges in progress on advancing the
890 migrant health agenda is the cross-cutting nature of the migration health topic that demands
891 sustained multi-sectoral and inter-sectoral partnerships and policies for meaningful action. Recent
892 policy developments at global, regional and national levels demonstrate evidence-based practices
893 on how to overcome such challenges. There have been successes through whole-of-government and
894 whole-of-society approaches, for example, in national migration health policy development by
895 countries such as Sri Lanka and Chile; multi-stakeholder coordination platforms including civil society
896 and academia, for example, the Joint UN Initiative on Migration and Health in Asia and the Joint
897 Initiative on the Health of Migrants and their families in Mexico and Central America, and
898 implementation of comprehensive refugee responses, for example, Uganda where provision of
899 comprehensive health care to refugees is integrated within health facilities also serving host
900 communities.

901 Most of these instruments include important principles supporting health of migrants and propose
902 several measures for consideration by member states and stakeholders to achieve “health for all”
903 migrants. It is time for the health community to strongly advocate for all those who migrate to
904 ensure safety and access to health for all and to hold governments accountable to the migration
905 policy instruments and conventions.

906 In the first half of this section we review these policy instruments and conventions and the
907 mechanisms by which states can be held accountable for a migrants’ right to health. In the second
908 half we explore how, in addition to these conventions, health services in particular can be developed
909 to protect and improve the health of migrants.

910

911 **Strengthening respect for migrants' rights**

912 **Migrants' right to health**

913 The right to the highest attainable health extends to all individuals who migrate, regardless of their
914 circumstances of migration or their legal status. International human rights treaties, most notably
915 the International Covenant on Economic, Social and Cultural Rights, guarantee “the right of
916 everyone to the enjoyment of the highest attainable standard of physical and mental health”.^{7,8}

917 States are obligated to: *respect* the right to health by not interfering in its realisation, such as
918 through policies that exclude certain persons from health programmes; *protect* the right to health by
919 ensuring that third parties do not interfere with the right, such as by discriminating against migrants;
920 and *fulfil* the right by ensuring the provision of health services that meet essential elements of
921 availability (economic, physical and geographical, non-discriminatory accessibility; cultural and other
922 forms of acceptability) and adequate quality (AAAQ). But these rights do not necessarily translate
923 into entitlements and often states are implicit in this discrimination.¹²⁴

924 For refugees, the Convention Relating to the Status of Refugees and its Protocol guarantees the right
925 to “the same treatment with respect to public relief and assistance as is accorded their nationals”
926 (Article 23), which has been interpreted to mean access to health services equivalent to the host
927 population.¹²⁵ However healthcare for refugees is often limited because of inadequate resource
928 allocation by front-line refugee-hosting countries and because states with large numbers of
929 refugees, such as Jordan and Lebanon, are not signatories to this treaty. Difficulties can also arise for
930 refugees resettling in non-signatory states where the law does not guarantee their right to access
931 healthcare, social services, education or employment.

932 For internally displaced persons and irregular migrants, access to healthcare is often severely
933 constrained. Many states grant irregular migrants access only to emergency care, a practice that is
934 both overtly discriminatory and is inconsistent with good public health practice for the host
935 population and for migrants. In Europe, some states have demonstrated that a humane response to
936 migrant health is possible¹²⁶ and expanded access to health services for migrants, especially for
937 asylum seekers and children without regular status, but there remain major disparities in
938 entitlements to access based on legal status. ([See supplementary appendix, Table 3.](#))

939 **Ensuring limits to health-related restrictions on entry**

940 According to UNAIDS, as of June 2015, 35 countries imposed some form of travel restriction of
941 people living with HIV.¹²⁷ Of these, five countries completely bar the entry of HIV-positive people,
942 four countries require proof of HIV negative status even for short-term stays, and 17 countries
943 deport people who are found to be HIV positive ([See supplementary appendix, Table 4](#)). States
944 impose other health-related restrictions on entry based on infectious disease, communicable
945 disease, drug dependence, mental illness, pregnancy of migrant workers,¹²⁸ or cost of care, and/or
946 permit deportation on these grounds ([See supplementary appendix, Table 5](#)).

947 These restrictions on entry or deportation for diseases with low risk of casual transmission, such as
948 HIV/AIDS, leprosy, and hepatitis C, are impermissible on both public health and human rights
949 grounds.^{129,130} The policies violate migrants' right to health and the ability of migrants with
950 disabilities to enjoy the right to freedom of movement, choice of residence, and nationality on an
951 equal basis with others.^{131,132} Linking health status to migration enforcement reinforces distrust of
952 the health system and limits migrants' ability to access healthcare on a non-discriminatory basis.^{8,133}

953 In practice, health-related enforcement regimes can pressure health workers to act as immigration
954 control agents—violating their professional ethical requirements as practitioners - an issue that has
955 been taken up by civil society organisations like Docs Not Cops. Deportation can interrupt treatment,
956 and deportation on the grounds of pregnancy also violates women migrant workers' rights to

957 privacy, bodily autonomy and reproductive choice and their right to equal treatment, equal
958 employment rights, and freedom of movement.^{8,7,131,134} Protection of the public is often invoked as
959 a basis for these policies. But if public health is invoked as a basis for denial of entry or deportation,
960 the Siracusa Principles relating to limitations on civil and political rights demand that the policy be
961 necessary to protect public health, be based on evidence, be the least restrictive means available to
962 accomplish the public health objective, and be applied without discrimination.^{8,135} Further,
963 screening for highly contagious diseases must be conducted voluntarily and with informed consent,
964 pre- and post-test counselling, and protection of confidentiality.¹³⁶ Mass screening at entry for
965 conditions such as HIV, pregnancy and disability is never permissible.¹³⁶ Care must be taken that
966 where pre-entry screening programmes operate, they do not represent a barrier to individuals
967 seeking to migrate.

968 Several HICs impose residence restrictions based on claims of high treatment costs, especially for
969 migrants with certain chronic diseases or disabilities. For example, Australia's Migration Act and
970 Regulations grant the Minister for Immigration and Border Protection the discretion to reject
971 permanent residency applications if an applicant has a health condition whose treatment is 'likely to
972 result in significant health care and community service costs to the Australian community,' although
973 applicants on certain visas (including certain humanitarian, family and skilled work visas) can apply
974 for a waiver of the requirement.^{137,138} The five most common reasons for failing this criterion are
975 intellectual impairment, functional impairment, HIV, cancer and renal disease.¹³⁹ These restrictions,
976 however, violate the rights of persons with disabilities to liberty of movement and to freedom to
977 choose their residence on an equal basis with others.¹³² As such, the implementation of the law must
978 be reasonable and proportionate to achieve a legitimate end. All too often, cost-based restrictions
979 are applied across the board without individualised determinations and in an arbitrary manner. They
980 also often do not adequately consider the potential economic, social and cultural contributions that
981 migrants with disabilities make to their host communities and countries, instead considering them
982 only in terms of cost to the state.¹⁴⁰

983 **Protection of refugees and asylum seekers**

984 The Refugee Convention and Protocol provides specific protections to refugees. Its centrepiece is
985 Article 33, prohibiting *non-refoulement*, or the return of a refugee to a country where his or her life
986 or freedom would be threatened on account of race, religion, nationality, membership in a particular
987 social group, or political opinion. The Convention and Protocol also prohibit states from penalising
988 refugees seeking protection for unauthorised entry or presence, whether through criminal
989 prosecutions, arbitrary detention or the imposition of other penalties, so long as they present
990 themselves to authorities and show good cause for entry.¹⁴¹ States may not discriminate against
991 refugees on account of race, religion or country of origin. Equivalent protections apply to internally
992 displaced persons, including freedom of movement and the right to leave country and seek asylum
993 elsewhere. Although 43 states have neither signed nor ratified the Convention and Protocol,
994 including countries such as Lebanon, Jordan, and Bangladesh that host important refugee
995 populations, these states are indirectly obligated to respect the principle of *non-refoulement* and
996 other rights of asylum seekers and refugees through other relevant international instruments like
997 the International Covenant on Civil and Political Rights.

998 Among other rights guaranteed by the Convention, Article 17 requires receiving states to provide
999 refugees with the same right to wage-earning employment as nationals of a foreign state in the
1000 same circumstances, and the non-discrimination provisions of human rights law do not permit
1001 distinctions in work based on nationality or migrant status. Yet only half of the signatories to the
1002 Convention and Protocol grant refugees the right to work.¹⁴² As a result, refugees must work
1003 unlawfully if at all and, as a result, often suffer other rights violations and are at increased risks of
1004 trafficking.

1005 Gaining adherence to the requirements of the Refugee Convention and Protocol has been
1006 challenging, as they do not include a mechanism for reviewing state compliance, so accountability is
1007 lacking. Further, to avoid their duties to refugees and asylum-seekers under the Convention, states
1008 often erect barriers to asylum seekers crossing into the country. These include providing incentives
1009 to contiguous states to prevent asylum seekers traveling through those states from reaching the
1010 border, detaining asylum seekers for long periods of time, and criminalising unauthorised entry.
1011 Another strategy, adopted by the EU, is the return of refugees fleeing conflict in Syria to Turkey on
1012 the grounds that it is a safe third country. Yet Turkey does not recognise their rights under the
1013 Convention. These barriers to entry often increase the health risks facing asylum seekers, leave them
1014 in difficult and dangerous situations, and push them to turn to irregular travel. The proposed Global
1015 Compact on Refugees would address some of these concerns by strengthening support for
1016 immediate and ongoing refugee needs and offer incentives for good practice through assistance to
1017 national and local institutions and communities receiving refugees, though it does not strengthen
1018 enforcement or accountability.

1019

1020 **Human rights of children in forced migration**

1021 Migration enforcement policies directed at adults, including detention and deportation, inevitably
1022 impact children.¹⁴³ Children of parents who have been deported experience increased emotional and
1023 psychological symptoms.¹⁴⁴ The UN Convention on the Rights of the Child guarantees civil, political,
1024 economic, social, and cultural rights to all children, irrespective of migration status or citizenship.
1025 The Convention requires that states act in the “best interests of the child.” Determining the best
1026 interests of the child requires a comprehensive review of the child’s circumstances and ability to
1027 exercise basic rights, such as to education, health, and family unity. Children’s rights to life, survival,
1028 and development (article 6) provide a framework for migrant and refugee children’s rights in host
1029 countries. States must ensure equal opportunity, access to services, and the chance for all children
1030 to thrive and reach their potential.¹⁴⁵ As in other dimensions of international migration, however,
1031 national laws affecting child migrants often do not adhere to human rights requirements, treating
1032 children and adolescents as foreigners first and often prioritising immigration enforcement policies
1033 over children’s rights.¹⁴⁶

1034 **Immigration detention, human rights and health**

1035 States are increasingly treating unauthorised border crossing as a criminal offense and detaining
1036 immigrants, regardless of circumstances. For example, in 2018 the United States announced a “zero
1037 tolerance” policy for unauthorised border crossings, announcing that it would prosecute 100% of
1038 such crossings as crimes, regardless of whether the migrants included family groups with children.
1039 As a result, migrants have been arrested and jailed, and children, including very young children,
1040 were separated from their parents.¹⁴⁷

1041 Evidence repeatedly demonstrates the range of negative health consequences associated with
1042 detention, especially for children and adolescents. We systematically reviewed 38 peer-reviewed
1043 studies on the effects of immigration detention on health outcomes, and found that a majority of
1044 the studies concerned male adults originating from Middle-Eastern countries and detained in
1045 Australia (38%) or the UK (22%). All studies showed negative health outcomes attributable to
1046 detention, especially mental health disorders although these studies are often limited by
1047 methodological constraints.

1048 Detention poses clear violations of one of the most important international agreements: the
1049 International Convention on Civil and Political Rights, which confirms that “Everyone has the right to
1050 liberty and security of person. No one shall be subjected to arbitrary arrest or detention”¹³¹. The
1051 Refugee Convention and Protocol establish protections prohibiting penalising refugees due to their
1052 entry without documented permission or presence and restrictions on movement other than those

1053 that are necessary, such as to verify identity or protect national security.¹⁴⁸ Detention is only
1054 warranted when persuasive evidence exists that the individual poses a danger to the community or
1055 is likely to flee to avoid further immigration proceedings, and must be of short duration.¹⁴⁹ For
1056 children, the Convention on the Rights of the Child permits states to use detention “only as a
1057 measure of last resort and for the shortest appropriate period of time”¹⁴⁵. The UN Committee on the
1058 Rights of the Child found that immigration detention of children is never in the best interests of the
1059 child.¹⁵⁰

1060 Yet throughout the world, detention of irregular migrants, including asylum-seekers, is often used
1061 routinely, arbitrarily, and for an indefinite period.¹⁵¹ Conditions in detention facilities are often
1062 substandard failing to meet needs for adequate food, clean water, healthcare, light, space, safety,
1063 health and sanitation with consequences for health.^{152,153} Detainees, especially children, are
1064 commonly subjected to violent victimisation, including abuse and rape.¹⁵⁴ Detention also impairs
1065 immigrants’ other human rights that can have profound and long-lasting effects on health, such as
1066 obtaining housing, education, employment and pursuit of claims for asylum. Numerous human
1067 rights and health experts have called for gradual abolition of immigration detention because of its
1068 arbitrariness, detrimental impact on health and flimsy justification.¹⁵⁵

1069 **Gender, law and health**

1070 As noted, health and migration are both highly gendered, affecting women, men and sexual
1071 minorities differently. Discriminatory laws frequently sustain or foster health inequalities by gender
1072 rather than protecting individuals - especially women and girls and sexual minorities. For example,
1073 host countries are often governed by plural legal systems that severely limit women’s and girls’
1074 rights to access contraception and abortion, avoid early marriage, and escape violence. In addition,
1075 in humanitarian aid settings, implementing agencies often apply host country laws rather than
1076 international standards to determine the scope of access and rights of migrant women and girls.
1077 Examples of discriminatory laws in countries with very high numbers of displaced persons are
1078 described in Panel 2.

1079 Some promising programmes and interventions exist to enhance gender justice for forcibly displaced
1080 persons. For instance, the UN Development Program, the UN Population Fund and local partners
1081 recently launched a project to protect female migrants inhabiting in refugee settlements in Iraq from
1082 exploitation, human trafficking, forced and underage marriages, and sexual and gender based
1083 violence.¹⁵⁶ This project offers novel opportunities for female Syrian refugees to receive free and
1084 long-term legal assistance in addition to counselling and psychosocial support.¹⁵⁶ The work of the
1085 Rights in Exile Programme, formerly known as the Fahamu Refugee Programme, is also notable for
1086 consolidating resources to support migrant legal aid advisors and advocates¹⁵⁷ and has gathered
1087 resources for legal advisors providing support to LGBTI migrants.¹⁵⁸ ‘Gender responsiveness’, that
1088 focuses on respecting human rights, is referred to in 12 of the 23 objectives in the Global Compact
1089 on Migration.

1090 **Access to Justice**

1091 Poor access to justice may lead to adverse health outcomes. People who migrate, for whatever
1092 reason, have the same rights to access to justice as all other people under the International
1093 Covenant on Civil and Political Rights.^{131,159} Yet, migrants encounter numerous obstacles to justice
1094 systems, for example, for violations of workplace rights and fair adjudication of asylum claims.
1095 Access to justice is frequently stymied by poor information, employer intimidation, lack of access to
1096 legal counsel, language barriers and unfamiliarity with procedures. Individual in refugee camps or
1097 settlements face particular difficulties accessing justice¹⁶⁰ because these are often located in remote
1098 areas where courts are absent, legal representation is scarce, and judicial systems may be weakened
1099 by civil unrest and war. Frequently, people are also unfamiliar with formal legal systems and further

1100 hindered by poor education, language barriers and previous reliance on informal, local justice
1101 systems.¹⁶¹

1102

1103 **Health services for mobile populations**

1104 **Universal and equitable access to healthcare before, during and after** 1105 **migration**

1106 One of the most promising measures to address health inequalities is access to healthcare through
1107 Universal Health Coverage (UHC). As stated throughout the report, migrants have the right to health
1108 and UHC is a key strategy for the realisation of that right. UHC is a structural intervention under
1109 which ‘all people and communities can use the promotive, preventive, curative, rehabilitative and
1110 palliative health services they need, of sufficient quality to be effective, while also ensuring that the
1111 use of these services does not expose the user to financial hardship’.¹⁶² Making UHC truly ‘universal’,
1112 will promote SDG 3.8: “financial risk protection, access to quality essential health-care services and
1113 access to safe, effective, quality and affordable essential medicines and vaccines for all”. Creating
1114 UHC systems that integrate migrant populations will benefit entire communities with better health
1115 access for all, with positive gains for local populations and should be championed by politicians and
1116 healthcare leaders. To examine the potential role of UHC to improve health considering global
1117 migration, we focus first on the health system and access for migrants, building on published work¹⁶³
1118 on transforming health systems towards SDG 3 targets and our conceptual model ([See](#)
1119 [supplementary appendix, Figure 7](#)) to ensure healthy lives and promote wellbeing for all at all ages.
1120 We build on established health system analytic frameworks by addressing governance, health
1121 financing policy, health information systems and health workforce with a focus on migration.

1122 **Equitable access to health systems**

1123 A health system is the collection of people, institutions and resources that aim to improve, protect,
1124 maintain, and restore health.¹⁶⁴ How health systems are conceptualised and structured is primarily
1125 linked to nation states and their constituent units. Migration can create challenges for health
1126 systems due to people crossing between system boundaries. That is, health systems are generally
1127 delimited by geo-political borders, which has made it difficult to assess how they might be
1128 strengthened to become migrant-inclusive. This is particularly true in situations of conflict that result
1129 in the spatial reorganisation of health systems within and across borders. These transformations can
1130 complicate displaced populations inclusion into health systems.¹⁶⁵ Considerations for a health
1131 system that aims to be inclusive are: addressing heterogeneity in service delivery; ensuring cross-
1132 jurisdictional networking and interoperability; and protecting the rights of individuals and
1133 communities to health services. Indeed, analysing health systems requires people-centred
1134 frameworks that are sensitive to individual and population care needs rather than determined by
1135 jurisdiction.

1136 Levels of access varies globally with published data providing some examples of good practice ([See](#)
1137 [supplementary appendix, Table 3](#)). We performed a secondary analysis of data from the Migrant
1138 Integration Policy Index ([See supplementary appendix, Panel 1](#)) which complemented our analysis of
1139 access to healthcare in European countries (Law and human rights Section). In our MIPEX analysis,
1140 Italy received the highest rating of all countries and has had a notably inclusive system that provides
1141 for asylum seekers and legal migrants under the same system as nationals. In Italy undocumented
1142 migrants have access to wide health coverage that is specified in the country's law. Countries that
1143 scored poorly required migrants to pay for specific insurance when the national population was not
1144 required to, did not provide any exemptions for migrants, and detained undocumented migrants
1145 identified by healthcare systems.

1146 Drawing on the patient centred access framework by Levesque et al,¹⁶⁶ we developed a new people-
1147 centred health systems framework for migrants' access to health and social protection (see figure 9).
1148 Our framework is underpinned by concepts of equity to emphasise human rights and equal access to
1149 health care regardless of status. The framework explicitly defines health and social protection by
1150 highlighting both the "supply side", or accessibility of services and determinants of health, such as
1151 water, nutrition and sanitation, and the "demand side", or the ability to access services. Both the
1152 demand and supply side are influenced by geographical, economic, and institutional factors
1153 (including law). These supply- and demand-side factors exist within the broader context of how
1154 governance institutions define and protect the rights of people (including migrants and other
1155 marginalised groups equitably) to access and use health services and determinants.¹⁶⁷ Guided by this
1156 framework we have reviewed the health system accessibility and population's ability barriers as they
1157 relate to migration.

1158 **Overcoming barriers to health services**

1159 National regulations, private employer's provision of health or legal status coverage all interact with
1160 accessibility and create barrier to health services. Some countries, such as Kenya, have national
1161 specific treaties or constitutions that assert the right to healthcare for each person, but despite such
1162 legal protections, and compared to Kenyan patients, migrants often continue to experience specific
1163 barriers including harassment, cost differentials, administrative and language.¹⁶⁸ Differences
1164 between¹⁶⁹ and even within¹⁷⁰ countries in the rights of access to health services are marked.

1165 Unaffordable cost of health services remains a significant barrier for many migrants, for example,
1166 among Syrian refugees in Jordan where cessation of free access to health care is taking a negative
1167 toll on the health of refugees.¹⁷¹

1168 Fear of deportation is of particular importance to undocumented migrants or failed asylum seekers,
1169 especially in locations where public health workers have a 'duty to report' undocumented migrants.
1170 These mandates contradict the fundamental ethics of health workers to do no harm, can hinder
1171 individual and public health, and result in further criminalisation of migration. Data from Doctors of
1172 the World's European clinics suggest that the contradictions between health and immigration goals
1173 are considerable and growing across Europe.¹⁷² As a result, individuals with irregular status or who
1174 are displaced without a regular residence often avoid making themselves known to formal services.

1175 Logistical challenges to provision of health services compound these hindrances, including
1176 transportation, job commitments, waiting time or poor knowledge of how to navigate the medical
1177 system.¹⁷³ Migrant workers who are paid by piecework or by the hour can rarely afford to sacrifice
1178 the time and income to seek medical care until urgent. To overcome these issues, health and social
1179 services may need to be taken closer to people to achieve good levels of access. As a result, a
1180 number of services have come to understand that medical care and health promotion campaigns
1181 need to be mobile to reach vulnerable migrant populations who are at greatest risk of harm. Panel 3
1182 outlines examples from the US of mobile health services and other examples include mobile clinics
1183 such as the Caravana de Vida, which reaches artisanal gold-miners in Madre de Dios, Peru.¹⁷⁴

1184 There is an emerging understanding of the ways health needs in conflict-affected settings can be
1185 supported by telemedicine using digital health technology, such as cellular technology or cloud-
1186 based solutions.¹⁷⁵ However, these technologies require rigorous evaluation and monitoring during
1187 roll out with particular attention paid to possible intervention induced inequalities. Implementation
1188 should be undertaken using evidence based models, but if successful, such systems may help
1189 achieve SDG 3 indicators and foster better data collection among populations that are especially
1190 likely to be left behind.

1191 **Governance and leadership of universal healthcare systems**

1192 Governance and leadership in the development of universal healthcare systems that facilitate safe
1193 and successful migration processes have been absent until now. The current focus on provision of
1194 universal healthcare is therefore an exciting opportunity for this leadership vacuum to be filled. Such
1195 leadership commitment as shown by the new WHO Director General, need to be followed by
1196 concrete action and be inclusive of migrants, in all countries and globally through better coordinated
1197 leadership across the UN system.

1198 The importance of migrant health was emphasised by the World Health Assembly (resolutions 61.17
1199 in 2008 and 70.15 in 2017). WHO Europe has then created a “Strategy and action plan for refugee
1200 and migrant health in the WHO European Region”¹⁷⁶. This document sets out a number of actions
1201 that should strengthen health systems for migration and we specifically call for member states to
1202 take positive actions. These actions include identifying an authoritative focal point that can engage
1203 multiple sectors, supportive legislation for health provision, underpinned by a needs assessment and
1204 evidence based guidelines, well resourced, and providing inclusive health and social care ideally co-
1205 developed with migrants.

1206 These calls to action and strategic frameworks have not been implemented by many countries and
1207 more work urgently needs to be done to ensure existing policies and guidelines around migration
1208 and health are fully implemented. One exception to the lack of progress is the example of how
1209 Switzerland have demonstrated leadership in the provision of open health systems for all migrants,
1210 and countries such as China (case study; Panel 4) have made substantial progress in improving
1211 access for internal migrants.

1212

1213 **Financing universal health coverage for all stages in a migration journey**

1214 Where a universal system does not exist, migrants are often unable to access even basic levels of
1215 healthcare provision for several reasons, one of the most important of which is cost. Well-designed
1216 health financing systems can prevent any individual or family from experiencing catastrophic costs
1217 as a result of ill health but this is unfortunately not the case in many countries at present. In order to
1218 address such issues, the World Health Assembly resolution 58.33 from 2005 set out a series of
1219 statements with regards to sustainable health financing, universal coverage and social health
1220 insurance and urged member states to: “ensure that health-financing systems include a method for
1221 prepayment of financial contributions for healthcare, with a view to sharing risk among the
1222 population and avoiding catastrophic health-care expenditure and impoverishment of individuals as
1223 a result of seeking care”.¹⁷⁷ If implemented, policies such as those recommended by resolution
1224 58.33 would ensure that no migrant is subject to financial hardship. However, prepayments are
1225 particularly challenging for migrants, particularly if they become unexpectedly unwell shortly after,
1226 or during the migration process - a point at which any prepayment is unlikely to be sufficient to
1227 cover costs.

1228 Several countries have managed to achieve impressive changes in coverage and financing of their
1229 health systems, including pro-poor pathways towards universal health coverage and specific
1230 coverage for labour migrants.¹⁷⁸ These examples demonstrate how countries have managed to
1231 provide coverage using limited budgets, whilst being inclusive of migrants, but tend to focus on
1232 labour and other forms of documented migration. A systematic review identified six ways to
1233 improve coverage including adjusting eligibility criteria; improving awareness; reducing insurance
1234 costs to make them more affordable; improving enrolment processes; strengthening delivery of
1235 healthcare; and improving the organisational delivery of insurance schemes.¹⁷⁹

1236 Health insurance schemes exist in many countries but do not cover migrants. A study of access to
1237 health services among migrants (including labour migrants) in the Greater Mekong Region

1238 (Cambodia, Lao, Myanmar, Thailand, Vietnam)¹⁸⁰ identified significant diversity in the capacity of
1239 health systems to address the needs of migrant populations. Thailand, for example, has sought to
1240 improve migrant health coverage. This has included developing migrant health programmes, migrant
1241 worker agreements, and the implementation of migrant health insurance schemes. In Vietnam,
1242 health coverage is provided to migrant workers. However, in the Greater Mekong Region overall
1243 access to high quality healthcare remains very limited, particularly for migrant workers and
1244 especially those with insecure legal status.

1245 In addition to health insurance and general taxation mechanisms to fund UHC for documented
1246 migrants, innovative ways of financing may be particularly helpful for those who are undocumented
1247 and individuals temporarily transiting through a country. Several examples of such mechanisms
1248 exist. Foreign exchange transaction taxes have considerable potential for fundraising and also are a
1249 way of migrants indirectly financing the coverage themselves given their likelihood of using such
1250 services. A new intergovernmental bond scheme administered either through a newly created global
1251 organisation similar to the Global Fund for Malaria, HIV and Tuberculosis or a regional entity should
1252 also be explored. Such mechanisms can also be administered through existing regional bodies where
1253 they exist such as the European Union or African Union. Such a fund will allow nation states to
1254 provide care to settled and transient populations and pool risks by drawing on funding from a variety
1255 of sources including governmental donors, charitable sources and taxation of/contributions from
1256 beneficiaries where they are able to work or wish to purchase additional cover. These forms of
1257 regional and global support and solidarity are necessary to enable less wealthy countries to make
1258 progress that will be to the benefit host and destination populations.

1259 **Ensuring the provision of migration-appropriate health information systems**

1260 Health information systems are the cornerstone of efficient and effective healthcare provision and
1261 are used for assessing needs, delivering care, assessing quality of services and accounting and
1262 financing. At present, the majority of health information systems do not collect routine information
1263 about the migratory status of individuals.¹⁸¹ There are risks of collecting this information (see case
1264 study in Panel 5) although these are often outweighed by the wider overall benefits once mitigated.
1265 Health information systems that do not collect data on migration, are unable to provide useful data
1266 to monitor differences in risk factors, morbidity and mortality between migrant and non-migrant
1267 populations, an essential step in monitoring and improving equity of service provision to this group.
1268 When health information systems are misused, civil society, academia and healthcare workers -
1269 including through the creation of “sanctuary hospitals” and “sanctuary doctoring”¹⁸² - can play an
1270 important and vital role in standing up against the misuse. Human rights law can reduce the risk as it
1271 requires respect for confidentiality and other protections against misuse of information. Finally,
1272 information governance and encryption procedures can be built into health information systems so
1273 that whilst data can be produced on migrants, it remains impossible to identify them.

1274 Many refugees’ healthcare providers have developed bespoke information systems on the basis of
1275 such a system’s ability to disaggregate populations by refugee status, enabling the monitoring of
1276 services, and humanitarian standards. It was therefore proposed that these systems remained
1277 separate and specific to the situation but would feed into the national infrastructure.¹⁸³ Despite the
1278 advantages of such an approach, there are risks associated with developing a completely separate
1279 system for refugees and other migrants. Separate systems make comparisons between the host
1280 population much more challenging as the data collection processes and outcomes typically vary.
1281 Instead, national health information systems should be adapted, with only minor additions, to
1282 collect information on migrants that will provide public health and policy makers better data. A truly
1283 universal health coverage system requires joined up and universal health information systems. For
1284 these reasons we argue that wherever possible, national health information systems should be
1285 adapted to include data on migration, rather than separate systems being used.

1286

1287 **Cultural competence**

1288 The health sector cannot fully assess and support health needs, including health promotion,
1289 surveillance and service provision, without understanding the users' backgrounds and perspectives,
1290 as well as the mechanisms for exclusion. Approaches to tackle such challenges, however, need to be
1291 rooted in an understanding of the cultural context and its intersection with the environment. Yet too
1292 often, assumptions about health risks and behaviours faced by individuals from cultural or ethnic
1293 communities stem from misunderstandings or stereotypes. This can obfuscate relevant individual,
1294 social, structural, economic or political factors.⁷¹

1295 Healthcare provision must be culturally appropriate and sensitive to the individual's understanding
1296 of health.¹⁸⁴ The "acceptability" of health services for migrants depends on the ability and
1297 preparedness of health professionals to provide "culturally informed care",⁷¹ which includes an
1298 understanding of "culture" and the sensitivity and reflexivity subsumed under the notion of "cultural
1299 humility".¹⁸⁵ For balancing the awareness for culture with the need to address other relevant factors,
1300 and to avoid cultural stereotypes, "structural competence" is also needed.¹⁸⁶ This is reflected in an
1301 anthropological study of irregular Mexican farm workers in the US which showed that in contrast to
1302 the physician's assumptions, the migrants' culture was not the primary barrier to health access.¹⁸⁷
1303 Instead a range of structural issues, including farm schedules, economic pressure, lack of insurance
1304 coverage and the mobility of farm workers determined utilization of local health resources.

1305 Cultural competence is thus not just a technical skill that can be acquired in specific courses or
1306 trainings – although such training is an important starting point; it must be an ongoing commitment
1307 to "awareness of the cultural factors that influence another's views and attitudes" regarding health
1308 and disease.⁷⁰ It supports the healthcare provider in approaching the patients' understanding of the
1309 illness, how she or he "understands, feels, perceives, and responds to it".⁷¹ This includes notions and
1310 practices commonly identified as "traditional medicine", that for multiple reasons may be of great
1311 importance for the patient and his or her peers. Systematic reflection of the health providers' own
1312 assumptions, beliefs, conventional understandings and values regarding medicine, health, and their
1313 own culture or ethnic heritage is also essential. Understanding organisational 'culture' - how medical
1314 institutions, professional groups function in particular settings (e.g. NGO providing humanitarian
1315 assistance) - are also important factors to consider in providing effective health care for migrant
1316 populations.⁷⁰

1317 An additional domain when considering migrant health, is the provision of adequate translation
1318 services and culturally appropriate health-related support services to migrants to increase their
1319 understanding of health and how to access services.¹⁸⁸ High quality interpretation and cultural
1320 mediation are among the most important factors in best practice delivery of health services to
1321 migrants.¹⁸⁹ The deployment of family members as translators when a professional interpreter is not
1322 available is, in contrast, highly problematic, for issues of confidentiality, quality of the translation,
1323 problems related to discussing sensitive topics, and the psychological burden for example for
1324 children when translating serious health issues for their parents. Moreover, it is important to
1325 consider that interpreters and individuals providing support services from the same country of origin
1326 or ethnicity may belong to socially and politically different parts of society, which may lead to
1327 associated challenges to effective provision of care.

1328 **Section 3: Burden of Disease and Migration**

1329 For many years, researchers pursued the theory of a "healthy migrant effect", which has been
1330 described as: "an empirically observed mortality advantage of migrants from certain countries of
1331 origin, relative to the majority population in the host countries, usually in the industrialised
1332 world".¹⁹⁰ However, not surprisingly, this theory has proven to be reductionist because it neglects
1333 the diversity and complexity of migration-related factors that influence people's health and how

1334 these affect individuals at different stages of the lifecourse¹⁹¹ and also that the health benefits of
1335 being a migrant tend to reduce over time. To ensure the Commission is informed by the latest and
1336 most relevant burden of disease evidence, we present the results of a new systematic review and
1337 meta-analysis of mortality outcomes in international migrants, examine mortality internal migrants
1338 and then explore in depth migration and morbidity across the lifecourse.

1339 **International migration and mortality**

1340 To complement the Commission's work, a systematic review and meta-analysis on mortality
1341 outcomes in migrants was undertaken.[\[cross reference review\]](#) A total of 96 studies were included
1342 and 5498 mortality data points were extracted and meta-analysed using a random effects model.
1343 Findings provide strong empirical evidence of the mortality advantage of international migrants
1344 (figure 10). Published evidence on all-cause mortality in international migrants was lower (0.70 (95%
1345 CI:0.65–0.76) than for non-migrants, although there were high levels of underlying heterogeneity
1346 between studies. Infectious disease and external causes were the only two ICD-10 categories for
1347 which there was increased mortality (2.4 [1.8–3.2]; $I^2=98.5\%$ and 1.3 [1.1–1.5]; $I^2=98.3\%$
1348 respectively).

1349 Our review highlighted the heterogeneity of SMRs by country of origin¹⁹², which is consistent with
1350 other studies. Moreover, other evidence indicates the importance of age at migration, type of
1351 migrant, year of migration, social class and policies towards promoting health in the receiving
1352 country.¹⁹³ We compared all-cause SMRs across migrant groups and geographical region of
1353 destination to examine underlying heterogeneity ([See supplementary appendix, Figure 8](#)) in the
1354 supplementary appendix). All-cause SMRs in migrants compared to non-migrants in the host
1355 countries were lower for Europe, Americas and Asia, but the statistical evidence of reduction for
1356 international migrants to Asia was weak (0.98 [0.92–1.05]; $I^2=99.3\%$). Data on refugees and asylum
1357 seekers were very limited precluding firm conclusions; based on two studies, there was lower
1358 mortality in refugees (0.50; 95% CI: 0.46, 0.56) and only four data points and no relative mortality
1359 difference found in among asylum seekers. No SMR data were available for labour migrants or
1360 internal migrants.

1361 The limitations to this review, detailed in the full manuscript, were that only SMR and absolute
1362 measures of mortality were included and we were unable to examine whether the mortality
1363 advantage changed over time since migration, or whether voluntary versus forced migration, socio-
1364 economic status, levels of acculturation) were associated with mortality rates. We also did not
1365 explore multi-generational effect. Our results point to the need for improved data collection and
1366 reporting in migrant health research.

1367 **Internal Migration and Mortality**

1368 To explore internal migration and mortality, we conducted a case study using novel analysis of
1369 Health and Demographic Surveillance System data from Sub Saharan Africa (Panel 6). Findings
1370 indicate that in half of the study sites, migrants' mortality was 50% higher than among non-migrants.
1371 These findings are strengthened by results from a study of internal migration and AIDS/tuberculosis
1372 and non-communicable disease (NCD) mortality in 4 HDSSs in South Africa and Kenya, which showed
1373 that in-migrants, and return migrants even more so, had higher mortality risk attributed to both
1374 non-communicable and infectious disease.¹⁹⁴

1375

1376 **Migration and morbidity across the lifecourse**

1377 In this section, we describe the health effects of migration on selected morbidity outcomes to
1378 illustrate varying impact through the life course and in different migrant groups and, where
1379 available, we summarise evidence of effective interventions. Health in different periods of life, vary

1380 in important ways in comparison to non-migrants, and may lead to longer term or intergenerational
1381 effects. There is paucity of evidence comparing migrant groups with the population in the location of
1382 origin and, unless otherwise stated, the studies relate to international migrants, with the
1383 comparison group being the host population. This makes it difficult to ascertain whether migration
1384 itself improves or worsens health. The reality is that it would improve and worsen different risk
1385 factors for health at an individual and population level. The health risk profiles of migrants are
1386 determined by their pre-migration status and is a complex combination of biological and
1387 socioeconomic factors developed over their lives. Moving to a new location will change someone's
1388 risk profile, with some determinants of health improving and others worsening. As people usually
1389 move to better their lives, risk factors for health will generally improve, resulting in better overall
1390 health than the counterfactual in their previous location. Comparing to the population in the
1391 destination location may make it appear that the morbidity in migrants is higher.

1392

1393 **Perinatal health**

1394 An umbrella review (including 19 systematic reviews) of perinatal outcomes amongst migrants and
1395 refugee women generally found worse outcomes amongst migrants for maternal mortality, maternal
1396 mental health, preterm birth and congenital anomalies.¹⁹⁵ A meta-analysis of 18 million pregnancies
1397 in Europe showed that migrant populations had an increased risk of perinatal mortality (OR 1.50;
1398 95% CI 1.47, 1.53), preterm birth (OR 1.24; 95% CI 1.22, 1.26), low birthweight (OR 1.43; 95% CI 1.42,
1399 1.44), and congenital malformations (OR 1.61; 95% CI 1.57, 1.65). Importantly, these risks were
1400 found to be significantly lower in countries with policies promoting social participation and active
1401 integration with the host population (Belgium, Denmark, the Netherlands, Norway, Sweden).¹⁹⁶
1402 Conversely a further large meta-analysis including >20 million pregnant women moving to western
1403 industrialised countries, found that children of migrants generally fared better. For subgroups of
1404 migrants from Asia and Africa, there were increased rates of preterm birth and mortality but Latin
1405 American migrants were at a lower risk of preterm birth.¹⁹⁷ The reasons for adverse birth outcomes
1406 included underlying conditions in the mother which could be exacerbated by migration, such as
1407 heart disease or HIV, poor access to and interaction with the health service, communication
1408 problems, socioeconomic deprivation and the stress of migration.

1409 Migration is also commonly associated with stressors that can have substantial effects on maternal
1410 mental health and postpartum depression. In a meta-analysis of perinatal mental disorders among
1411 women from LMICs in HICs, 31% had symptoms of any depressive disorder and 17% for major
1412 depressive disorder.¹⁹⁸ Estimates suggest that within the first year after childbirth, the risk of
1413 postpartum depression is 1.5-2 times higher in immigrant versus non-immigrant women.¹⁹⁹ Risk
1414 factors included a shorter period of residence, lower levels of social support, difficulties adjusting to
1415 the new country and perceived insufficient household income.¹⁹⁵

1416

1417 **Children and adolescent health**

1418 Children and adolescents who migrate generally do well, as they adapt and integrate quickly into
1419 new environments, especially when supported by families and engaged in quality education with
1420 access to health services. The risk factors for health in the location of origin can be profound, for
1421 example huge health benefits result from escaping trauma or conflict settings. Healthy development
1422 in infants, children and adolescents occurs in the context of stable and caring relationships. The
1423 extent to which migration can alter these social determinants of health is immense and migration
1424 during sensitive developmental phases, especially when exposed to stressors, can determine later
1425 health outcomes and the health of the next generation. Migration can break up and alter family
1426 units and loss of parents and carers can lead to emotional and psychological harm but it may also
1427 bring families together and new family and social networks form over time. Maintenance of secure

1428 family structures and functions during the migration journey can help protect children and
1429 adolescents from some of the most adverse influences, while continued access to learning
1430 environments is critical for all children and adolescents. Migration can also disrupt the provision of
1431 healthcare, for example immunisation schedules, threaten early childhood development and access
1432 to schooling.²⁰⁰

1433 Overall there is far less evidence on adolescents compared to young children, despite them
1434 constituting a larger proportion of migrants (figure 4b). As children mature through adolescence (10-
1435 24 years) they become more directly exposed to social determinants of health beyond the family
1436 (e.g. education, gender norms, racism). During puberty, brain maturation results in increased
1437 sensitivity to real and perceived differences related to migration. Beyond simply feeling “different”,
1438 the experience of stigma and social exclusion by bullying can contribute to emotional distress,
1439 anxiety and depression, and self-harm, including suicide.²⁰¹ Some of these impacts can be
1440 intergenerational. For example, migration of the mother as an adolescent or young adult was found
1441 to be associated with lower sociability and problem-solving skills in her children at four years of age
1442 compared to children born in the country or mothers who migrated when younger.²⁰²

1443 **Mental Health:** A systematic review of mental health outcomes in economic migrants found
1444 equivocal results, varying by migrant group and host country.²⁰³ A meta-analysis of internal
1445 migration in China showed that migrant children have a greater risk of internalising and externalising
1446 problems in public schools, but not in migrant-specific schools.²⁰⁴ Amongst forcibly displaced
1447 children in HICs, higher rates of psychological morbidity have been recorded. Only a small number of
1448 studies have looked at the migration itself with inconclusive results, but the evidence shows that
1449 pre-migration factors, such as exposure to violence were predictors of mental illness. Comparison
1450 studies with children left-behind are lacking. Factors, such as support from families and friends and a
1451 positive school experience, can be protective. There is also evidence of increased mental illness²⁰⁵
1452 and autism²⁰⁶ in second generation migrants, potentially mediated via epigenetic mechanisms and
1453 by their parents’ reactions to trauma.

1454 **Nutrition:** Rapid transitions associated with migration can lead to substantial changes in diet,
1455 exercise and infectious disease exposure, all of which can affect nutritional status. Improving the
1456 access to quality food by migrating would improve health but changes in lifestyles, shrinking social
1457 networks and the adoption of taste changes to high fat, high sugar or processed foods may lead to
1458 obesity.²⁰⁷ Poor nutrition, particularly during foetal life and infancy, coupled with rapid weight gain
1459 in a new environment can lead to an increased long-term risk of NCDs. As well as undernutrition,
1460 migration can lead to rapid weight gain, with evidence that timing of migration alters obesity
1461 rates.²⁰⁸ Children affected by migration may experience both undernutrition and overweight. For
1462 example, a Swedish study found an association between maternal migration and lower BMI in
1463 children <5 years old but higher BMI in older children.²⁰⁹ Apart from promoting breastfeeding, most
1464 other nutrition interventions vary according to the context and health outcome.²¹⁰

1465 **Unaccompanied minors:** Unaccompanied minors, typically 15-18 year olds who are ‘separated from
1466 both parents and other relatives and are not being cared for by an adult who, by law or custom, is
1467 responsible for doing so’.²¹¹ They are particularly vulnerable, both from the circumstances that have
1468 rendered them unaccompanied (e.g. war, parental death) and the risks that can arise when less
1469 protected by close family. The group is diverse and includes victims of trafficking or modern slavery,
1470 those reuniting with family, and those seeking a better life or reuniting with family. Less experienced
1471 than older adults, and generally impoverished, they are at great risk of exploitation. Unaccompanied
1472 minors can be subject to dispute over age (see Panel 7). While the younger the age, the greater the
1473 risks, unaccompanied young adults are also likely to be at greater risk than those protected by their
1474 immediate family. Health risks results from exposure to substances and unsafe sexual behaviours,
1475 and greater risk of early school completion and unsafe employment. Unaccompanied girls are
1476 particularly vulnerable to sexual violence and unwanted pregnancy.²¹² The accumulation of risks can

1477 result in complex health needs, especially mental health problems, which can then be compounded
1478 by issues around residency status.²¹³

1479 **Left-behind children:** Children may be 'left behind' when parents migrate usually for work. Though
1480 there are no global estimates for the number of left-behind children, there are an estimated 61
1481 million in China alone. The impacts of parental migration on the health of left-behind children are
1482 mixed. In some settings there is evidence of a beneficial effect, for example through receipt of
1483 remittances, while in others, children suffer adverse consequences. We undertook a comprehensive
1484 systematic review of the literature in any language, including in Chinese, across key areas of child
1485 and adolescent mental and physical health (see accompanying paper). We identified 111
1486 observational studies with outcomes for mental health, nutrition, infectious diseases, injuries and
1487 key determinants of health. The majority of studies addressed children of internal migrants in China
1488 and showed no difference or worse outcomes in children or adolescents left-behind compared to
1489 those of non-migrant parents. The meta-analyses showed an increased risk of anxiety (RR 1.85; 95%
1490 CI 1.36, 2.53), depression (RR 1.52; 95% CI 1.27-1.82), substance use (RR 1.24; 95% CI 1.00, 1.52),
1491 suicidal ideation (RR 1.70; 95% CI 1.28-2.26), stunting (RR 1.12 (95% CI 1.00, 1.26), and wasting (RR
1492 1.13; 95% CI 1.02, 1.24) among left-behind children and adolescents. No differences were found in
1493 the risk of being overweight/obese or experiencing abuse. In all the meta-analyses, heterogeneity
1494 was high, however the results were robust to sensitivity analyses removing low quality studies and
1495 subgroup analyses of internal and international migration, showed little difference. Parental absence
1496 and lack of supervision may lead to unhealthy risk behaviours in left-behind adolescents. Given the
1497 very large population of left-behind children globally, the increased risk of mental disorders,
1498 substance use and malnutrition represent a major concern.

1499

1500 **Women, Men and Sexual Minority health**

1501 The health and morbidity patterns among adult migrants are associated with a combination of pre-
1502 existing factors, their new environment and lifestyles, and exposures during their journey. This
1503 results in a great deal of variation in morbidity. There are also commonly differences between
1504 certain health conditions among recent migrant populations versus long-term residents and in this
1505 section we review the latest evidence in these areas.

1506

1507 **Mental health:** In general, prevalence rates of mental illness vary widely. Among first generation
1508 international migrants, individuals tend to have higher prevalence rates of depression, anxiety and
1509 post-traumatic stress disorder compared to the host population, with an increased risk in asylum
1510 seekers and refugees.²¹⁴ Men appear to have a higher risk of mood disorders (RR 1.29; 95% CI 1.06,
1511 1.56), but no difference in women.²⁰⁵ Psychosis and schizophrenia are consistently higher among
1512 migrants, approximately double the risk compared to the host population and these effects are
1513 carried over into the next generation.^{215,216} The reasons for the differences in mental health
1514 outcomes and the variation between individuals and groups is multi-faceted. They reflect real
1515 differences in precipitating risk factors, for example exposure to violence and traumatic events, time
1516 in new setting, and, importantly, methodological variation. Discrimination is also implicated across a
1517 range of mental health outcomes including depression, psychological distress, anxiety, and well-
1518 being.²¹⁷ Perceived discrimination has also been linked to specific types of physical health problems,
1519 like self-reported poor health and breast cancer, as well as potential risk factors for disease, such as
1520 obesity, hypertension, and substance use.²¹⁸

1521 Mixed results were found in mental health status in Chinese rural to urban internal migrants
1522 compared to local urban migrants or no difference or worsening mental health status compared to
1523 rural migrants. Social and economic exclusion were both important determinants of mental
1524 illness.²¹⁹ Research on the mental health of migrants typically focuses on refugees, asylum-seekers

1525 and torture survivors. Systematic reviews and meta-analyses often indicate inter-survey variability. A
1526 review and meta-analysis of 181 surveys from 40 countries, comprising 81,866 refugees and torture
1527 and conflict-affected persons found the unadjusted weighted prevalence rate was 30.6% (range: 0-
1528 99%) for PTSD, and 30.8% (range: 0-86%) for depression.²²⁰ Compared to labour migrants, refugees
1529 experienced approximately double the prevalence of depression and anxiety.²²¹ Mental health
1530 interventions, including CBT²²² and trauma-focused therapy²²³ have some efficacy in treating PTSD,
1531 and community-based mental health services have been consistently shown to improve
1532 outcomes.²²⁴

1533

1534 **Communicable diseases:** Control measures for infectious diseases have long been established,
1535 including processes such as quarantine of visitors and animals at ports of entry. The true risk of
1536 transmission arising through migration is, however, a function of multiple factors and risk varies
1537 according to route of transmission of the pathogen, its transmissibility, the degree of mixing
1538 between the infectious and susceptible population and the available control measures in place to
1539 mitigate transmission risks. Outbreaks of infectious diseases may be sustained by population
1540 movement, for example during the West African Ebola outbreak, population movement within and
1541 between countries contributed to sustaining transmission.²²⁵ An important risk in relation to the
1542 spread of infections is the emergence and subsequent transmission of antimicrobial resistant strains
1543 that emerge in one part of the world and spread to other regions.²²⁶ However, the spread of such
1544 resistant pathogens is not due to migration but driven by international travel and tourism and the
1545 movement of livestock.²²⁶ The public health burden of infectious disease in migrant populations
1546 remains high in many settings. Strong preventive services, including immunisation and screening
1547 programmes, and curative services to ensure early detection and treatment of infections in migrants
1548 are needed. Where screening programmes are established, they need to be evidence-based and
1549 culturally acceptable. Ultimately, the enlightened self-interest approach is to strengthen global
1550 health security by supporting the establishment of sustainable health infrastructure and system in all
1551 countries.

1552

1553 **Physical disability:** For people of any age with a range of disabilities, such as those with mobility
1554 impairments, or visual, hearing, intellectual or mental health impairments, the process of leaving
1555 home and traveling elsewhere can be physically challenging, stressful and confusing especially in
1556 times of crisis. These difficulties also often lead to later departure in times of economic stress or
1557 humanitarian disaster, placing them at additional risk. Furthermore, migration can disrupt existing
1558 social and medical support networks. People with disabilities are frequently and incorrectly assumed
1559 to be less able or competent leading to inability to find work or find enough work in a new
1560 community to cover their expenses or contribute to their households. Although the UN Convention
1561 on the Rights of Persons with Disabilities guarantees equal access across borders to all, people with
1562 disabilities find themselves victims of discrimination during the immigration process, struggling to
1563 pass immigration tests, understand oaths of alliance or to meet minimum income requirements.
1564 People with disabilities in all societies are significantly more likely to be victims of violence.

1565

1566 **Non-communicable diseases:** Increasingly people are moving with established non-communicable
1567 diseases (NCDs); and often combined with a double burden of NCDs alongside communicable
1568 disease. The interruption of care during transit - due to barriers to health access, documentation,
1569 lack of healthcare providers or disrupted health systems - prevents the continuous treatment
1570 necessary for the effective management of many chronic health conditions.²²⁷ The absence of
1571 effective prevention, screening and continuity of care in migrant populations result in higher
1572 burdens of NCD morbidity and mortality. Evidence has shown that migrants undergo rapid changes
1573 in environmental risk factor profiles. When compared to the native Danish population, migrants

1574 from Africa, Asia and the Middle East had 2.5 times the incidence of diabetes.²²⁸ This difference
1575 could be due to various factors such as poor health literacy and language barriers leading to
1576 difficulties accessing services, shift in socioeconomic status, decreased rates of physical activity and
1577 changes in diet. A systematic review of 37 studies of ‘non-Western’ migrants in Europe found lower
1578 morbidity due to any malignancy in migrants compared to the host populations. For specific cancers
1579 some exceptions existed, for example liver cancer, and incidence varied by the region migrants
1580 moved from.²²⁹ Consequently, more effective integration of NCD care into health systems and
1581 humanitarian response is therefore essential.

1582

1583 **Tobacco and alcohol use:** While tobacco and alcohol in migrants has been shown to be
1584 heterogenous and context-dependent, a number of underlying risk factors were identified including
1585 unemployment, poor working conditions, language proficiency, level of integration, number of
1586 traumatic experiences and community cohesion. Studies suggest that migrant smoking prevalence
1587 rates are dependent upon the rates in the country of origin and the rates in the host country. For
1588 example, Ghanaian migrants in Europe were more likely to smoke than both rural and urban
1589 dwellers in Ghana but still smoked less than the host population.²³⁰ Several studies in HICs and
1590 internal migrants in China have shown that migrants are less likely to smoke than non-migrants,^{231,232}
1591 while male migrants from Europe, North Africa and the Middle-East in Australia were found to
1592 smoke more than Australian-born men.²³³ A study in Kazakhstan demonstrated that international
1593 labour migrants reported higher rates of hazardous alcohol consumption compared to internal
1594 migrants and the host population.²³⁴ Conversely, in Peru the prevalence and incidence of heavy
1595 drinking was the same for rural-to-urban internal migrants as their rural and urban counterparts.²³⁵

1596

1597 **Occupational health outcomes in labour migrants:** Rates of fatal and non-fatal injuries are higher in
1598 labour migrant populations compared to non-migrant populations. This is in part due to the type of
1599 employment, such as construction, fishing, and metallurgy, but even within these sectors,
1600 occupational morbidity and mortality is higher among migrants than native-born workers (Table
1601 1).²³⁶ Occupational harms differ by sector and include injuries, exposure to weather/pesticides,
1602 respiratory conditions, depression and anxiety, infectious diseases. As part of a new analysis done
1603 for this Commission, we did a systematic review and meta-analysis focused on international labour
1604 migrants (originating from 24 LMICs) which found a reported prevalence of 47% documenting at
1605 least one morbidity (7260 migrants; 95% CI = 29-64%; I²= 99.7%)– including predominantly
1606 musculoskeletal pain and dermatological conditions – and a prevalence of reported injury and
1607 accidents of 22% (3890 migrants; 95% CI=7-37%; I²=99.4%).²³⁷

1608 However, there are studies that have shown no difference for migrant and non-migrant health in
1609 certain sectors. In general, men are more likely to suffer workplace injuries, illness and fatalities.²³⁸
1610 In fact, migrant workers, operating in many of the most hazardous work sectors may not be aware of
1611 or have access to occupational health and safety training or personal protective equipment.²³⁶

1612 To date, there are few studies exploring the mental health of migrant workers. A review that
1613 compared labour migrants to refugees found that refugees had approximately double the
1614 prevalence rates of depression and anxiety. Importantly, the authors suggest that financial stress is a
1615 significant risk factor and that a higher Gross National Product in the country of immigration was
1616 related to lower symptom prevalence of depression and/or anxiety in labour migrants but not in
1617 refugees.²²¹

1618

1619 **Sexual and reproductive health (SRH):** Addressing SRH needs can be particularly challenging
1620 because of the risks of sexual abuse and exploitation,²³⁹ especially among children and adolescents,
1621 and because of cultural practices that increase health risk, such as early or forced marriage,²⁰ genital

1622 cutting, and historical and cultural norms, such as unfamiliarity with or restricted use of
1623 gynaecological and obstetric care.

1624 Sexual violence or threat of abuse exacerbates reproductive health problems and can deter women
1625 and youth from seeking care. Importantly, it is not uncommon for sexual abuse among boys to be
1626 overlooked, nor is it unusual for professionals to be ill-equipped to detect and treat men and boys
1627 who have experienced sexual abuse. Traditional practices and beliefs can also be a point of
1628 contention, as new migrant populations call upon local health services and social support
1629 organisations. For example, female genital mutilation/cutting (FGM/C) is a human rights violation,
1630 with substantial health implications. At least 200 million girls and women have been subjected to
1631 genital cutting in 30 countries.²⁴⁰ Health systems in locations where FGM/C is uncommon need to be
1632 able to manage the resulting morbidity from this in migrant women and girls. Healthcare
1633 practitioners are well-positioned to detect and address the negative effects of FGM/C among
1634 pregnant women and to also help prevent FGM/C in girls in high risk families through provider
1635 training and guidelines on FGM/C, culturally appropriate information and engagement with self-help
1636 groups for the communities concerned.²⁴¹ Similarly, for migrant sexual minorities or LGBTI groups,
1637 appropriate and sensitive sexual services may be difficult to find. For example, in urban centres in
1638 China, approximately 70% of HIV/AIDS infections are among rural Chinese residents, of whom 80%
1639 are 16-29 year old men, a portion of whom are 'money boys' or those who engage in transactional
1640 same-gender sex.²⁴²

1641 Forcibly displaced women and adolescent girls may have facilitated access to much-needed SRH
1642 services if they enter well-equipped humanitarian aid settings. Without targeted SRH services in
1643 place, migrant women and adolescent girls may be more vulnerable to poor SRH outcomes,
1644 including unwanted pregnancy, pregnancy complications, sexually transmitted infections, and
1645 unsafe termination options.^{243,244} Humanitarian aid agencies have established an agreed set of
1646 essential services to respond to reproductive health needs in humanitarian crises. The Minimal Initial
1647 Service Package (MISP) includes: preventing and managing the consequences of sexual violence;
1648 reducing HIV; and preventing maternal and newborn mortality and morbidity.²⁴⁵ Where these
1649 targeted services are not in place, women are at greater risk of unwanted pregnancy, pregnancy
1650 complications, sexually transmitted infections and unsafe termination options.²⁴⁶

1651

1652 **Violence:** Migration can be a movement away from physical or structural violence. For people
1653 fleeing from violence, whether by crossing an international border or moving within their own
1654 country, migration allows people to move away from circumstances in which their life and freedom
1655 were at risk.²⁴⁷ However, mobility and relocation can create substantial risk factors for various forms
1656 of gender-based violence (GBV), including rape, intimate partner violence, sexual exploitation and
1657 human trafficking. Systematic reviews on health and human trafficking indicate that trafficking
1658 survivors are exposed to multiple physical and psychological abuses, sexual violence, confinement,
1659 occupational hazards and poor living conditions.²⁴⁸ The physical, mental health, social and financial
1660 consequences of these extreme forms of exploitation are multiple, severe and often enduring,
1661 especially psychological consequences.²⁴⁸ Meta-analysis of studies in humanitarian settings
1662 suggested that 21% of refugees or displaced women in complex humanitarian emergencies
1663 experienced sexual violence—a likely underestimation.²⁴⁹ Despite the prevalence of GBV in refugee
1664 populations, there is limited evidence on the effectiveness of prevention programmes, interventions
1665 and strategies.²⁵⁰

1666 Mobility may increase or decrease these health and safety risks among LGBTI migrants, depending
1667 on the comparative levels of discrimination and stigma in origin, transit and destination locations.
1668 Research with LGBTI migrants suggests that these individuals are especially likely to suffer from
1669 mental health disorders as a result of cultural or even state-sponsored persecution and violence.
1670 Many LGBTI migrants report emotional, physical and sexual violence committed by their families,
1671 leaving them without a familial support network and even more vulnerable upon migrating.²⁵¹

1672 Service providers in Nairobi have shown that LGBTI services for refugees need to be accessible and
1673 highly confidential to prevent further harassment or violence.²⁵²

1674 Migrants with disabilities are significantly more likely to be victims of violence and are less likely to
1675 be able to report such violence. This can be due to barriers such as not being believed or an
1676 inaccessibility of reporting mechanisms. Additionally, lack of employment options because of stigma,
1677 prejudice, lower access to education and job skills training result in many people with disabilities at
1678 increased risk of poverty and consequently increased risk of sexual violence and forced participation
1679 in prostitution and household slavery.²⁵³

1680

1681 **Older persons**

1682 There is relatively little evidence on the health effects of migration on older people, particularly from
1683 LMICs. Older people may have additional health risks due to multimorbidity, for example from
1684 interruptions to the continuity of care that contribute to clinical decompensations and declines in
1685 their health status. Despite lower mortality, morbidity is thought to be higher amongst older
1686 migrants. Analysis of population data from Belgium, England and Wales, and the Netherlands of
1687 healthy life expectancy at age 50 (HLE₅₀; expected number of remaining years in good health) found
1688 higher life expectancy in migrants compared to non-migrants, but HLE₅₀ was lower. This was
1689 particularly so for 'non-Western' migrants, i.e. not from Europe, USA, Canada, Australia, New
1690 Zealand or Japan.²⁵⁴ Multi-country studies from across Europe show higher self-reported morbidity
1691 in older migrants compared to native borns.^{255,256} A study from Sweden found a 50 to 80% increased
1692 risk in cardiovascular determinants, such as physical activity, smoking and body mass index in
1693 elderly migrants.²⁵⁷

1694 Studies of mental health in migrants across Europe found an increased risk of illness. Increased odds
1695 ratios of 1.6 (men)²⁵⁸ for depression were found in older migrants, despite lower rates of other
1696 chronic diseases. Research in forced migrants also points to an increase in depression but there is a
1697 dearth of evidence.²⁵⁹ The diagnosis and management of dementia is a particular concern amongst
1698 all migrants. With population ageing, dementia is becoming more common globally. Migrant or
1699 ethnic minority populations receive diagnoses later and have differences in their management, for
1700 example less medication and nursing home admission.²⁶⁰

1701

1702 **Section 4: Knowledge to address future** 1703 **migration and health challenges**

1704 Work of the Commission argues for a step-change in research on migration and health, joined with a
1705 deliberate effort to enhance the instruments and infrastructures supporting this. Synergistic work is
1706 needed which links academia, policy and frontline health and humanitarian workers. Research in
1707 migration and health has traditionally proven difficult to conduct, partially explained by migrants'
1708 high mobility.²⁶¹ In this section we outline how we can generate better knowledge to meet needs of
1709 people on the move through better data collection, research, research funding and ethics.

1710 **Meeting the health needs of a mobile world**

1711 Research undertaken in migration and health has to respond to the whole population need, not only
1712 the migrants themselves, but also the other groups affected by migration, such as families left in
1713 countries of origin and host communities. To enable this, and to further build capacity, the migrant
1714 population themselves should be viewed as an asset and a participatory approach encouraged,

1715 where migrants and local communities are included in all stages of the research process. Further,
1716 mixed methods and qualitative work, including anthropological and sociological work, is needed to
1717 understand socio-cultural factors of the migration experience, how to reduce barriers to healthcare
1718 and how the determinants of health might affect migrants differently, alongside systems level work
1719 to develop processes to mainstream and normalise migration.

1720 We used data from our review on mortality, (see section International Migration and Mortality) to
1721 systematically examine which disease areas have been the focus of historical research. Our data
1722 suggest that despite being the only ICD-10 disease categories with evidence of increased mortality,
1723 infectious and parasitic diseases and external causes of mortality were the fifth and third most
1724 studied group respectively in international migrants ([See supplementary appendix, Figure 9a](#)). These
1725 data also suggested that labour migrants have also been understudied relative to size of this
1726 population globally ([See supplementary appendix, Figure 9b](#)).

1727 These data can be used to inform future funding priorities, but this problem is compounded by the
1728 fact that migration has not been a priority amongst health funders. Review of the mission
1729 statements and strategies of the main global health funders (including the Global Fund, Gavi, the
1730 Vaccine Alliance, World Bank, Bill and Melinda Gates Foundation, European Commission, United
1731 States Agency for International Development, United Kingdom's Department for International
1732 Development, Wellcome Trust, Ford Foundation, Rockefeller Foundation, Medical Research Council
1733 and National Institute for Health) suggest that only two, the Global Fund and the European
1734 Commission, prioritise migrant health. Some funding streams exist that focus on research in
1735 humanitarian settings²⁶², but generally opportunities in migration and health are limited and
1736 research funding agencies including national government entities, charitable foundations and
1737 multilateral funding organisations should prioritise specific calls to address these gaps.

1738 **Data collection, technology and innovation**

1739 Traditional cohort studies are important to understand the life-course and intergenerational effects
1740 of migration but these are expensive and can be inefficient when studying populations with high
1741 levels of loss to follow up. Existing studies have therefore had sub-national coverage on migrants
1742 who have already moved.²⁶³ One efficient way to produce health data for migrants is the use of
1743 electronic health records with national coverage.^{264,265} However, in most countries (with one or two
1744 exceptions such as Sweden), migrants are not identifiable within these datasets. 'Big data', such as
1745 that collected from wearable devices, mobile phones, the internet and electronic health records, has
1746 the potential to provide new sources of information on migration and health and improve uptake
1747 and follow-up rates as migrant populations.²⁶⁶ Progress in genomics, mapping and mathematical
1748 models, including mechanistic approaches that are driven by information from satellites, human
1749 behaviour data and pathogen characteristics will allow better elucidation of outbreaks and global
1750 mapping of infectious transmission.^{267,268}

1751 A particular difficulty in migration research is understanding internal migration flows, where there
1752 are no border controls. A new method to map internal migrants is to use mobile phone data. Each
1753 time a mobile phone is used, the location of the individual is logged. Anonymised mobile phone call
1754 detail record (CDR) data can allow inferences about the movement patterns of individuals to be
1755 made, enabling the movement of populations to be tracked at scale, even in remote areas. For
1756 example, in 2016 a monsoon in Nepal caused severe flooding and triggered a series of landslides.
1757 Using mobile phone CDRs, researchers were able to demonstrate that the monsoon resulted in large
1758 movements of people, examine the number of people who spent time outside their home area,
1759 identify where these areas of movement were and those that were most heavily affected.²⁶⁹

1760 These new techniques are not without risks and logistical problems: for example, if personal health
1761 records or mobile data can be used to track where people have been, migrants may be reluctant to
1762 use them. In the case of the Dublin Regulation in the European Union, this might mean that a
1763 migrant could be sent back to their first country of entry in Europe. The acceptability of mobile

1764 health records therefore needs to be assessed further and any implementation of these should have
1765 routine monitoring and impact evaluation conducted, to include qualitative perspectives. Health
1766 professionals must recognise the need to protect the data and safeguards, including firewalls to
1767 separate who can access the data. New technologies, such as the use of blockchains, can help to
1768 keep the data secure but may not be possible in low resource countries.

1769 **Intervention research**

1770 While this Commission found ample evidence on differences in physical and mental health morbidity
1771 between migrants and host populations, information on specific interventions to improve the
1772 delivery of services or how diagnosis and treatment should be altered to better cater for the needs
1773 of migrants was limited. To complement our understanding of health consequences, resources have
1774 to be directed to find the best ways to improve health, from clinical and behavioural to health
1775 systems studies. Evidence on interventions outside the health system and focused on improving
1776 social, political and economics determinants of health are also critical. Outside of the humanitarian
1777 setting and in populations who have previously moved, robust interventions to improve the health
1778 of migrants are uncommon, particularly for neglected groups, such as elderly people left when their
1779 families migrate or LGBTI migrants. Where evidence of effectiveness exists, for example talking-
1780 based therapies for PTSD in refugees, data are needed on how to scale up and evaluate them. There
1781 may also be scope for adaptation and evaluation of interventions that work in other marginalised
1782 groups.

1783 Understanding the best treatment regimens and modifications in mobile populations to ensure
1784 continuity of care is urgently needed. Advances in digital technology allow diagnosis and monitoring
1785 of treatment for infections to be undertaken remotely. Removing the need for a clinic visit opens up
1786 the prospect of remote-, and self-, management for mobile populations.

1787 In populations that have been traumatised by violence, either at the individual or community level,
1788 research on pathways to prevent or improve management of both physical and mental health are
1789 needed. For example, schools have been suggested as important sites for mental health intervention
1790 research for both children refugees and their families, although studies conducted have been
1791 relatively small and difficult to replicate.²⁷⁰ Moreover, intervention implementation should include
1792 routine monitoring and evaluation of programmes in order to strengthen migration health
1793 interventions long-term.

1794 **Health policy and systems research**

1795 Our analysis of health systems and migration concludes that current thinking on health systems may
1796 well have a “migration problem”, since mainstream views of a health system tend to be of a
1797 jurisdiction defined by geopolitical boundaries within which services are provided, rather than –
1798 more appropriately and justly – a societal response to people’s needs regardless of their official
1799 status. Contemporary advances in trans-disciplinary health policy and systems research (HPSR) can
1800 partly address this problem. HPSR is concerned with answering evaluative, explanatory and
1801 exploratory questions focused on bringing change in health systems and the policy processes that
1802 shape and underpin them.²⁷¹ Multiple disciplines, such as economics, political science, sociology,
1803 anthropology and public health, contribute towards this. Of late there has been a turn towards a
1804 people-centric approach to framing the field, with the recognition that changes in health systems
1805 are not unifocal but are driven by different people at different levels of the system, including service
1806 users and communities.²⁷² As such, HPSR has the potential to include migration in relation to health
1807 system research questions. Under the umbrella question of how we can make existing real-world
1808 health systems become more responsive to human mobility, thereby improving individual and
1809 population health outcomes, there is a range of valuable lines of enquiry. More qualitative research
1810 focusing on the experience of healthcare from the perspectives of migrant service users and
1811 providers can broaden and enrich our understanding of their needs in different settings. Finally, and

1812 critically, implementation research on existing migration-friendly initiatives can help to identify
1813 bottlenecks and enablers, and which approaches work in which contexts and for whom, and
1814 translate those insights to other contexts.

1815

1816 **Research ethics**

1817 Migration should be an essential component of public health ethics, in particular in relation to social
1818 justice. Migration is a good example of where ethical issues related to health and determinants of
1819 health exist across state boundaries. Many important ethical issues exist - including the prioritisation
1820 of services, the detention and deportation of migrants, and the labelling of and discrimination
1821 against migrant groups- yet there is little literature on migration and public health ethics beyond
1822 issues of access to healthcare.

1823 Compliance with standards of research ethics is essential and can be particularly challenging in
1824 vulnerable and mobile populations. The social, cultural, legal and political aspects of migration status
1825 are often associated with higher levels of vulnerability. Due to this inferior social position and the
1826 particular risks from suffering deprivation of rights and dignity, researchers have to be highly
1827 sensitive and responsive to unintended and possibly harmful consequences of their work. The
1828 particular vulnerability to abuse and discrimination of disadvantaged groups demands the inclusion
1829 of the social and historical contextualisation of research. Systematic reflection on ethical questions
1830 thus has to be a part of all steps in the research process. When defining the research question, it is
1831 crucial to reflect on whether the research is likely to produce valuable data to improve living and
1832 health conditions. Data collection may cause fear and distrust in populations with experiences of
1833 exclusion and persecution, and trigger traumatising events in case of victims and witnesses of
1834 torture, sexual and other types of violence. Communication of research results has to be sensitive to
1835 the risk of directly or indirectly sustaining or promote stereotypes and stigma. The principle of “first
1836 do no harm” thus applies to all steps of the research process, while issues of confidentiality and
1837 informed consent especially apply to data security and the risk of abuse of medical and personal
1838 data (e.g. migration routes reflected in the medical record) by migration authorities. Little is known
1839 about whether migrants are willing to share their data and the perspectives they may have on this.
1840 Research activities have to be sensitive to systematically include ethical reflection and accountability
1841 in the research process and be “responsive” to findings that encourage a reconsideration of research
1842 questions and methodological and moral challenges. Institutional Review Board approval is
1843 mandatory, yet not sufficient, as it lacks the required flexibility and responsiveness. A key process to
1844 ensure that the research is fit for purpose is to engage with the public on migration and health. This
1845 is in the design of the research, participatory methods in the conduct of the research and in the
1846 dissemination and discussion of the results.

1847

1848 **Conclusions**

1849 Migration must be urgently treated as the central feature of the 21st century which is a core
1850 determinant of health and well-being, and addressed as a global health priority (further details in
1851 [supplement](#)). Migration and global health are each defining issues of our time. How the world
1852 addresses human mobility will determine public health and social cohesion for decades to come. Our
1853 work for this Commission aimed to provide robust evidence on migration and health and examine
1854 the structures and systems at the intersection of human mobility and individual and population
1855 health. By systematically presenting evidence on what is known about health and migration, it has
1856 been our intention to dispel populist myths about a ‘perceived other’ and to suggest promising
1857 strategies for a highly mobile world. Amidst current international dialogues about safer, healthier

1858 migration, substantial gains can be achieved towards multiple Sustainable Development Goals by
1859 resisting the turbulence of nationalist xenophobic discourse.

1860 In summary, our findings highlight that modern migration is a diverse and dynamic phenomenon and
1861 the health of people who migrate generally reflects the circumstances of migration. Our evidence
1862 indicates that, with sufficient political will, the international community, states and local providers
1863 have the knowledge and resources necessary to ensure those who are most vulnerable to harm are
1864 not health-marginalised. But, at the same time, our findings suggest that attitudes, misperceptions
1865 and cynical political motivations can hinder rights-based approaches to global health for migrants—
1866 especially for those seeking safety and economic security for themselves and their family. We must
1867 ensure that migrant’s equal right to health is respected and implemented.

1868 Our multiple analyses also contradict myths about who is migrating where and the health burden of
1869 migration on recipient locations. Data on migration tell us that more people from LMICs are
1870 migrating within their own countries and region than across high-income country borders—even if
1871 vocal political rhetoric implies otherwise. And, migrants are, on average, healthier, better educated
1872 and employed at higher levels than those in destination locations. However, many individuals who
1873 migrate are subjected to laws, restrictions and discrimination that put them at risk of ill-health.
1874 Certain mobile subgroups are especially likely to be exposed to migration-related harm and excluded
1875 from care, such as trafficking victims, irregular migrants, low-wage workers and asylum-seekers.
1876 These highly vulnerable migrant subgroups are also frequently individuals who have been forced to
1877 move because of global economic and political forces well-beyond their control. This also applies to
1878 the populations left-behind, when family members migrate for work or groups who are unable to
1879 flee from conflict areas or environmental dangers. The evidence indicates that through targeted
1880 rights-based laws, inclusive, migrant-friendly health systems and mobile medical services, it is
1881 possible to reduce migration-related risks and increase people’s access and use of health services.
1882 Migration-informed laws, services and public perceptions can increase determinants of good health,
1883 such as social inclusion, safe versus hazardous, low-wage employment, good nutrition, decent
1884 housing and hygiene, and universally accessible health systems that does not create catastrophic
1885 costs for families.

1886 Moreover, there are multiple opportunities to intervene to address health throughout the phases of
1887 a migrant’s journey. We believe that now, as we have the evidence, tools and potential international
1888 political will via the Global Compacts on Migration and the Sustainable Development Goals, is the
1889 time to call on our humanity and to take advantage of worldwide mobility to secure global health—
1890 especially for migrant groups who are most at risk of exclusion.

1891 In preparing this report, the Commissioners have reviewed a mass of data collected by researchers
1892 from around the world. These data describe the scale and nature of migration and the many threats
1893 to the health of those migrating. But it is impossible, on the pages of a scientific journal, to capture
1894 the entire distressing picture. That would require the many individual accounts of tragedy, of
1895 children drowning in parents’ arms or dying by the wayside, or of individual heroism among those
1896 who risk their own lives to rescue them. For those stark realities, we must look to those few
1897 journalists and humanitarian organisations who have recorded these accounts, such as the now
1898 iconic picture of the lifeless body of Aylan Kurdi being lifted from a Turkish beach. Anyone viewing
1899 those images must surely ask: Why has the international community done so little to live up to its
1900 commitments to advance the health of migrating populations, and especially those who have been
1901 forced to migrate? How can we explain this inertia?

1902 There are no simple answers to this question, but one indisputable reality is that, in the discourse on
1903 migration, health is far down the list of priorities. International meetings on migration are instead
1904 dominated by other considerations, such as domestic politics, especially where populist politicians
1905 ruthlessly exploit migration for their own purposes, national security, international trade, and
1906 commerce. These almost always take precedence over the health needs of migrants. Indeed, if
1907 health is discussed at all, it is often framed, unjustifiably, as the migrant posing a threat to the

1908 population in the destination country, either as a vehicle for infections or a terrorist risk. Health and
1909 migration have competing, if not conflicting, policy goals: health goals are inclusive (better health for
1910 all, the Hippocratic oath) and international migration policy goals are exclusionary (secure borders,
1911 national trade). The other key challenges are: a) the money; and 2) the leadership.

1912 Investing in health of populations and individuals is generally an expensive long-term commitment,
1913 such as providing medical services over lifetimes, whereas, for state budgets, protecting borders and
1914 arranging deportation can seem a lesser investment for greater political gain. Health leadership in
1915 the realm of migration policy-making often seems like the poor sister to other policy interests. Why
1916 are health leaders absent from the top table, engaging proactively in high level debates on
1917 migration? Instead, the health sector is often left to pick up the pieces of those migration policies
1918 that leave the lives of migrants in tatters. And, because the health sector will remain dedicated to
1919 these humanitarian ideals, policy makers can continue to prioritise security, exclusion and trade,
1920 while discriminatory rhetoric re-enforces the neglect and abuse of migrants. A second, much
1921 simpler, question is: why do some migrants have better health and health services than others? The
1922 answer is quite obviously related to the individual's social and economic status and the power this
1923 wields. So, perhaps the greatest challenge to achieving health equity for disadvantaged migrating
1924 populations will be promoting rights and empowerment that enables individuals to assert their
1925 rights to health. The publication of the Global Compacts with numerous references to health in the
1926 context of migration and for refugees presents an unprecedented opportunity that should be
1927 leveraged for specific action. Investments should be shifted towards empowering migrants through,
1928 for example, migrant worker insurance schemes or regional health and social accords.

1929 **Recommendations**

1930 The Commission makes the following recommendations that aim to maximise the health of people
1931 on the move and societies more broadly. We call for urgent action to raise migration and health on
1932 the political agenda in an objective manner, increase multi-stakeholder action and create robust
1933 accountability and monitoring mechanisms.

- 1934 1. Dedicate political capital, financial and human resources to fulfil our global commitments to
1935 secure healthy migration and improve the security and well-being of mobile groups,
1936 especially the most vulnerable and marginalised.
 - 1937 a. States need to commit strong leadership to meet their commitments to the 2030
1938 Sustainable Development Goals, and fulfil the health objectives of the Global
1939 Compacts on Migration and Refugees as well as other relevant global agreements.
1940 We advocate for clarity in leadership at the global level and for support to national
1941 actors, the public health workforce and civil society. We urge the Secretary General
1942 of the United Nations to appoint a Special Envoy on Migration and Health, regional
1943 bodies to appoint a regional representative, and national governments to have
1944 country-level focal points for migration and health.
 - 1945 b. International and regional bodies need to utilize existing agreements, such as the
1946 Global Compacts and the WHO Action Plan, to prioritise the health, rights and
1947 security of migrating populations. Decision-makers should allocate sufficient funding
1948 to create equitable health protection mechanisms for mobile groups, such as joint
1949 health insurance or social safety net schemes, mutual health accords and other
1950 mechanisms to integrate these groups into health systems.
 - 1951 c. Multilateral funding organizations should have clear mechanisms to include
1952 migrants into national and regional proposals. Ultimately the inclusion of migrants
1953 into existing health systems should improve such systems to benefit nationals and
1954 migrants.

- 1955
1956
1957
1958
1959
1960
1961
- d. States and the international community must urgently develop policy links that recognize the integral connections between environmental conditions and anthropogenic climate change, migration and health. Decision-makers should join forces to predict and respond to the effects of climate change on population mobility. Investments are needed in sustainable health infrastructure models that respond to migrants' health protection needs, including disaster risk reduction mechanisms.
- 1962
1963
1964
1965
- e. States must go beyond rhetoric to tackle modern slavery by recognizing the exploitation of migrant workers, especially in informal labour, and trafficking of individuals and families displaced by conflict, natural disasters and environmental degradation.
- 1966
1967
1968
1969
2. Re-balance policy-making in migration, trade and environment and foreign affairs to give greater prominence to health. Foster cross-sector, complementary decision-making that integrates health considerations across policies and services that determine the health of migrants.
- 1970
1971
1972
1973
1974
1975
- a. International and regional bodies and states must create a prominent place for health representatives at high-level policy-making fora for migration-related sectors e.g. (immigration, trade, labour, environment, security, education). Health leaders must assert their rights to participate in these policy fora. Conversely, high-level representatives from other sectors must be encouraged to participate in similar health policy-making fora.
- 1976
1977
1978
1979
- b. Health leaders and practitioners must fully engage in policy dialogues that affect migration, including the macro-economic forces that affect population mobility. They must participate in multi-sector budgeting and programme planning for migrants.
- 1980
1981
- c. Migrants and their advocates must have a voice in strategies that affect their health and safety.
- 1982
1983
3. Confront urgently, vigorously and persistently divisive myths and discriminatory rhetoric about migrants.
- 1984
1985
1986
1987
- a. Political leaders and elected officials must resoundingly and consistently condemn misinformation and disinformation about migrants, especially xenophobia proffered by divisive and populist voices. Fact-checking, promoting truth and vociferous objections should not be left to migrants and their advocates alone.
- 1988
1989
1990
1991
1992
- b. Governments, international agencies and civil society must stay ahead of developments in social media and digital technology to shut down anti-migrant abuse and promote fact-based portrayals of global migration, particularly the widespread reliance on migrants for economic development, health services, educational institutions and cultural richness.
- 1993
- 1994
1995
4. Advocate for and improve the rights of migrants to ensure safe and healthy educational and working conditions that includes freedom of movement with no arbitrary arrest.
- 1996
1997
1998
1999
2000
2001
2002
- a. States, regional bodies and the international community must utilize policies, laws and resources to improve the rights of migrants, especially for labour migrants. States and businesses must ensure workplace health and safety measures, employment conditions and implement inspections and monitoring tools targeted to protect migrant workers. Migrants must be assured easy-to-access, equitable healthcare and worker compensation entitlements. Transparent reporting using an agreed upon framework should occur.

- 2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
- b. Policy-makers must guarantee migrants’ rights and inclusion across sectors that affect the health of migrants, including workers, internally displaced persons, asylum seekers, refugees, and empower migrants to assert their rights to the underlying social, political, economic, cultural, and determinants of physical and mental health.
 - c. Social and health sector leaders and educational institutions should offer training to promote cultural competency, cultural mediation and migrant-sensitive services, including outreach programmes for hard-to-reach individuals and groups.
 - d. States must abolish arbitrary arrest and the detention of all migrants, especially children and adolescents. They must remove health restrictions on entry, stay and residence as well as the deportation of individuals with certain health conditions. These measures should be codified in international agreements and included in national law.
- 2015
2016
5. There is an urgent need to ensure adequate monitoring, evaluation and research to support the implementation of the Global Compacts.
- 2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
- a. States, coordinating with the global community and relevant local professionals (e.g. health, refugee services, labour, civil society), should put into place robust monitoring frameworks and independent reporting mechanisms to ensure accountability in the delivery of the Migration and Refugee Global Compacts. Strategies should include transparent and comparable monitoring frameworks and mechanisms to report how regions and countries are adhering to the policy principles and implementation components on migration and health. The Commission, therefore, recommends that a Global Migration and Health Observatory is established to develop evidence-based indicators and measurement methods, and to ensure improved reporting, transparency and accountability on the implementation of the Migration and Refugee Global Compacts.
 - b. Specific recommendations for research are outlined in greater detail in Panel 9 and were reached through a consensus approach by Commissioners.

2031 **The post-Commission phase**

2032 The Commission plans to inspire action, building on the health and health determinant aspects of
2033 the Global Compacts on Migration and on Refugees, through a number of key initiatives. There is
2034 considerable momentum in the migration and health community to move from recommendations to
2035 action. We plan to engage at multiple levels of society to raise the profile of migration and health.
2036 This would be at the community level with the public, including migrants themselves and
2037 populations at all stages of the migration process. Secondly, we plan to support the establishment of
2038 an inclusive global mechanism that will bring together civil society with researchers, non-
2039 governmental bodies and charities, and multilateral organisations including the World Health
2040 Organization, the global Migration Agency (International Organization for Migration) and the UN
2041 Refugee Agency to establish a distributed observatory to develop agreed indicators and a monitoring
2042 framework which has local, regional and global reach. The governance, reporting and advocacy
2043 efforts will include the use of reports, media, and the arts to challenge elected officials and will
2044 support research to generate new evidence on implementation best practice. We expect the
2045 observatory to report annually and liaise with regional stakeholders for adapted versions of the
2046 report to allow local and inter-regional action.

2047
2048
2049 **# The Migration and Health Commission:** In addition to the commissioners, authors include Mustafa
2050 Abbas, Eleanor Acer, Ayesha Ahmad, Bayes Ahmed, Seye Abimbola, Juan D. Beltrán, Karl Blanchet,
2051 Philippe Bocquier, Fiona Samuels, Olga Byrne, Sonia Haerizadeh, Rita Issa, Mark Collinson, Carren

2052 Ginsburg, Ilan Kelman, Alys McAlpine, Nicola Pocock, Barbara Olshansky, Dandara Ramos, Katerina
2053 Stavrianaki, Michael White, Suzanne Zhou.
2054

2055 **Role of Funding Source**

2056 The funders of the commission had no role in design, information, collection, analysis,
2057 interpretation, writing of the report, or the decision to submit the paper for publication. All authors
2058 had full access to all the data in the report and had final responsibility for the decision to submit for
2059 publication.

2060 **Declaration of interests**

2061 IA, DD and RA undertook paid consultancy work in support of the Doctors of the World 2017
2062 Observatory report - Falling through the cracks: The Failure of Universal Healthcare Coverage in
2063 Europe. MO reports personal fees from World Health Organisation, EURO, personal fees from World
2064 Health Organisation, EMRO, personal fees from Médecins Sans Frontières (MSF), Operational Centre
2065 Brussels, outside the submitted work; and Steering committee member for the Syria Public Health
2066 Network, which conducts research and policy work on public health issues in Syria and the region.

2067

2068 **Author contributions**

2069 The UCL-Lancet Commission on Migration and Health has been an international collaboration
2070 spanning multiple continents. The Commission was chaired and led by IA, with support from the
2071 steering group (RA, RB, DD, MO, CZ). The Commission was coordinated by MO, with research
2072 assistance from RI for the first year and RB for the last year of the Commission work. The work for
2073 the Commission was undertaken in six subgroups and all commissioners met on three occasions in:
2074 London (2016), London (2017) and Bellagio (2017). The first draft of the report manuscript was
2075 written by RA and DD, the second draft was compiled by IA, DD, MO and CZ. Authors provided
2076 sections of the report in the following themes: law TM and LR; culture, society and racism MK, NG
2077 and BK; labour migration and trafficking AM and CZ, health systems KS, DM and PD; data ST, RA,
2078 environment PSa, human rights MK, disabilities NG. All authors read and critiqued the manuscript
2079 and approved the final version of the report.

2080

2081 **Acknowledgments**

2082 We are grateful to the Wellcome Trust, Rockefeller Foundation, UK National Institute for Health
2083 Research, the UCL Grand Challenges in Global Health and the European Union's Health Programme
2084 (E-DETECT TB (709624). Views expressed here are the authors only and is their sole responsibility; it
2085 cannot be considered to reflect the views of the European Commission and/or the Consumers,
2086 Health, Agriculture and Food Executive Agency or any other body of the EU or any of our other
2087 funders. We are also grateful to the following individuals for their contribution to various stages of
2088 the commission and meetings: Catherine Kyobutungi (Commissioner till Sept 2017), Valentina Parisi,
2089 Victoria Rodulson, Kanokporn Kaojaroen, Laura B Nellums. The INDEPTH collaboration acknowledges
2090 support from NIH for the Migration and Health Follow-up Study (MHFUS). IA acknowledges funding
2091 from NIHR (SRF-2011-04-001; NF-SI-0616-10037), Medical Research Council, UK Department of
2092 Health and the Wellcome Trust. DD received salary funding from NIHR. The views expressed are
2093 those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.
2094 RWA is supported by a Wellcome Trust Clinical Research Career Development Fellowship
2095 (206602/Z/17/Z).

2096

2097 Figures

2098

2099 *Figure 1: The Migration cycle*

2100 *Figure 2 A. Global map of the total number of international migrants (2015); B. Proportion of*
2101 *population that were refugees by World Bank Income group (1960-2015). Analysis conducted using*
2102 *data from UN DESA, UNHCR and World Bank. [Online interactive versions of figures 2A and 2B](#)*

2103 *Figure 3. Weighted percentage of men and women using modern methods of contraception by*
2104 *migration status.*

2105 *Figure 4a. Percentage of all international migrants that were refugees, asylum seekers and labour*
2106 *migrants, 1960-2015 Note: Labour migration data for 2013 used in estimates for 2015. No*
2107 *historical estimates for labour migration available.*

2108 *Figure 4b. International migrant numbers at mid-year by age, sex and region (2015)*

2109 [Online interactive version of this figure](#)

2110 *Figure 5. Total annual new displacements due to conflict and disasters*

2111 [Online interactive version of figure](#)

2112 *Figure 6. Estimated refugee numbers by region, 1990-2017.*

2113 [Online interactive version of figure here](#)

2114 *Figure 7. Weighted mean number of years of education by internal migration status (Source: DHS)*

2115 *Figure 8. Historical Evolution of the Migration and Health Agenda: Selected International*
2116 *instruments and events*

2117 *Figure 9. A health systems framework for migrants' access to health and social protection Adapted*
2118 *from Levesque et al. 2013¹⁶⁶ Note: Factors on the supply side can affect demand and vice versa.*

2119 *Figure 10. Summary of random effects meta-analysis of Standardised Mortality Ratios for*
2120 *international migrants by ICD-10 disease category. [Online interactive version of figure:](#)*

2121

2122

2123

2124
2125

Panels

Panel 1 Projection for internal migrant numbers for Bangladesh by 2050 driven by hydrometeorological hazard risks under certain assumptions of social and political developments

Three different scenarios based on the combination of two development pathways and two climate trajectories were modelled by the World Bank,⁶⁸ along with three environmental variables, water stress, crop failure and sea level rise, using a gravity model based on distance and attractiveness of the destination compared with the source area. The report defines climate migrants as people who have moved from their place of origin for at least 10 years and travelled over 14 kilometres within country because of climate change. The report aims to present a plausible range of outcomes rather than precise forecasts. It is based on a single model but has positive aspects such as the inclusion of socioeconomic factors, the choice of slow onset climate change parameters, the use of whole globe decadal changes and that downscaling can easily be achieved. The modelling was calibrated by the highest resolution population census data available at that time. The World Bank report projects that by 2050 there will be 13.3 million climate migrants in Bangladesh applying pessimistic-realistic reference scenario with high emissions and unequal development.

To test the World Bank projection, the 2011 population and housing census data were collected from the Bangladesh Bureau of Statistics. This database was prepared from household surveying in Bangladesh using a questionnaire that covered the respondents' household characteristics, demography, migration details, economic activities etc. 50 districts out of 64 in Bangladesh were identified as vulnerable to hydrometeorological hazard risks: 1) flooding and river erosion (23 districts); 2) cyclones and storm surges (19 districts); 3) drought and groundwater depletion (8 districts). Some districts are affected by multiple hazards. Then in each district, the total number of life-time (greater than 10 years) and inter-district migrants (travelled more than 14 km away) were identified. The migrants constitute about 9%, 12% and 5% of district-wise total population categorised according to flooding and river erosion, cyclone and storm surge, and drought and groundwater depletion as reasons to migrate. They were then filtered by selecting only people migrating from rural areas, based on an assumption that the adaptive capacity to climate-change is lower in rural communities in Bangladesh due to lack of development and poverty. They constitute about 8%, 11%, and 4% respectively. After applying these filters it is possible to assess the number of internal migrants attributed to hydrometeorological hazard risks in Bangladesh and that this figure is compatible with the local context by analysing primary data collected through actual field surveying under the supervision of BBS.

4.07 million internal migrants were identified for the period of 2001-2011 migrating because of these hydrometeorological hazard risks. They represented about 4% of country's total population and 41%, 42%, and 31% of total migrant population for the flooding, cyclone, and drought hit districts, respectively. Now, by considering Bangladesh's population growth rate (varying between 0.22-1%) and a similar scenario (without new climatic and development interventions) up to 2050, it can be assessed that the total number of internal migrants attributed to hydrometeorological hazard risks of 19.4 million will surpass the World Bank projection of 13.3 million internal climate migrants by 2050. However the projected increase in the frequency and intensity of hydrometeorological events with global warming cannot all be identified as being caused by climate change. However these hydrometeorological hazard risks (e.g. river erosion and groundwater depletion) cannot all be identified as being caused by climate change.⁶⁷ So while showing greater number of people potentially affected than the World Bank report projects, our analysis of primary data does not validate their projections for internal climate migrants.

Panel 2: Gender, law and health: a four country analysis

Rape, sexual servitude, child marriage, and sex trafficking lead to substantial risks of transmitted infections, poor maternal health outcomes, and enduring mental health problems. But, access to protections, medical treatment and legal recourse, especially for women, are often dictated by laws and customs. An in-depth legal analysis of four countries in which migrants form a substantial portion of the population, Chad (519,968), Jordan (3,112,026), and especially in Lebanon (1,997,776) and Turkey (2,964,916), demonstrates the highly gendered –and sometimes contradictory– nature of the laws and customs governing the rights and safety of women and girls (See supplementary appendix, Table 6). Among Syrian refugee communities especially, rates of child marriage are high.²⁷³ While many countries have established a legal minimum age of marriage, the practice of early and forced marriage prevails due to weak enforcement, cumbersome marriage registration laws and cultural norms. In Jordan, for example, the legal age of marriage is 18, yet children can be married with the approval of a Sharia court judge starting at age 15.²⁷⁴ Although Chad criminalises child marriage under age 18, the child marriage rate was 68% between 2004-2017.

Although countries may sign conventions and draft legislation against gender-based violence, migrant women are often unable to access justice due to cultural norms, language barriers, and limited legal representation. Countries often have plural legal systems that provide complete defences or reduced sentences for honour crimes. In Chad for example, adultery is a criminal offence and murder committed because of adulterous behaviour is excusable. Women inhabiting migrant camps have faced months-long detention on grounds of adultery, while men rarely face punishment for rape and sexual assault.²⁷⁵ In both Jordan and Lebanon, perpetrators can avoid prosecution by marrying their victims²⁷⁶ as marital rape is not a crime in many host countries. For unmarried and displaced adolescent girls, failing health systems, limited providers, and domestic legal frameworks are significant barriers to reproductive health service access. Individuals under the age of 18 must obtain parental consent prior to receiving or undergoing any sort of medical treatment,²⁷⁷ including contraceptives in Jordan, Lebanon, and Turkey and in Jordan, spousal consent is also required.²⁷⁸ Migrant women also have limited access to abortion in the four countries reviewed. In Chad, Jordan, and Lebanon, abortion is not legal in cases of rape. Globally, intimate partner violence is reported to affect one in three women,²⁷⁹ and displacement appears to exacerbate conditions of abuse,^{279,280} triggered by destabilization of gender norms and roles, men's substance use, women's separation from family, and rapid remarriages and forced marriages. Laws are often limited to protect women from sexual abuse, for example, among the migrant-recipient countries analysed, only Turkey has legislation against marital rape and only Chad had legal termination to save the life of the mother—even in cases of rape. Countries are often reluctant to make commitments to protect women, for example, only Chad had signed and ratified without reservations the Convention on the Elimination of All Forms of Discrimination against Women and Convention on the Elimination of All Forms of Discrimination against Women Optional Protocols (CEDAW). While international instruments such as CEDAW and the UN Convention on the Rights of the Child (CRC) exist to protect women and children, implementation is often poor, especially during humanitarian crises. Dismantled or ineffective justice systems result in weak protections and responses for sexual and gender-based violence.²⁸¹ And, even where laws are in place, migrants who have tenuous legal status or are not aware of their rights, especially common among women, are much less likely to benefit from health protections and medical treatment.

Panel 3: Healthcare for migrant and seasonal farmworkers in the US - improving access and cultural competence

A high proportion of migrant and seasonal farmworkers in the US are uninsured or underinsured, due to both lack of eligibility and extremely low incomes. It is estimated that at least 75% of farmworkers, and up to 90% of their children do not have health insurance.²⁸² Many of these individuals do not qualify for government provided or subsidised insurance (e.g. Medicaid) because they are undocumented.

There are positive examples of programmes that have been established to address the health needs of these populations, however. At a national level, the Health Resources and Services Administration funds 137 migrant health centres and 955 community health centres across the US aimed at improving access to services for marginalised groups such as farm workers, including a voucher programme enabling farmworkers to obtain care from community centres, as well as funding non-profit organisations such as Migrant Health Promotion, and Farmworker Health Services.²⁸² However, there is a significant gap in the literature in terms of robust evaluations of the effectiveness or acceptability of such programmes. There are also numerous local programmes in the US focused on accessible culturally appropriate health assessments, or the use of mobile outreach clinics to migrants, for uninsured farmworkers who are considered to be working in a hazardous industry and are mostly foreign migrants. For example, there are clinics targeting farmworkers in the USA,²⁸³ and the Migrant Health Outreach program (federally funded) mobile clinic to farmworkers staffed by nurses, which seems to be a successful approach.²⁸⁴

Outreach services offer the benefit of going to the locations where migrants are working, living, going to school or to houses of worship,²⁸⁵ reducing many of the main access barriers. In the US, for example, there are an estimated 1500 mobile clinics, receiving 5 million or more annual visits nationwide, which are becoming an integral component of the healthcare system to serve vulnerable populations. Findings from a study on outreach to migrants and seasonal farmworkers in the US shows that workers and their families make very limited use of clinic-based services because of their mobility (constant residential changes), work hours, poor knowledge of the US health system (almost 40% of the population is new each year) with a majority preferring to seek care in Mexico—even those who have US health insurance, but that clinic outreach programmes are overcoming many of these barriers. Research suggests, however, that mobile clinics for migrants have been more often disease-focussed, to offer testing and treatment, for example, for HIV, especially for sex worker populations.^{285,286} Evening cluster clinics targeting migrant workers were considered by migrants themselves to be excellent or good.²⁸⁷ Six characteristics were believed contributed to the successful delivery of healthcare and education through cluster clinics, including: provision of both direct and referral services for this underserved population; comprehensive delivery of services in a single setting; collaborative delivery of services; access-driven delivery of services; delivery of culturally sensitive and linguistically appropriate services; and evidence-based service delivery. Free or mobile clinics and health and wellness programmes specially targeted for migrant workers are relatively rare.

2129

2130

Panel 4: Leadership in Migrant Population Accessibility and Affordability of Healthcare Services China

Since the launch of the new round of medical reform in 2009, China has almost achieved full coverage of its medical insurance system for urban and rural residents, with a stable coverage rate of above 95% for the whole population. The medical insurance system mainly consists of three types of schemes, including urban employee basic medical insurance (UEBMI), urban resident basic medical insurance (URBMI) and new rural cooperative medical scheme (NCMS). Among

them, the number of people participating in NCMS reached 670 million, with a coverage rate of 98.8%. However, despite the high coverage rate achieved, there is concrete difference among the coverage scope of those three medical insurance schemes, with a higher insurance level by UEBMI and URBMI than by NCMS. In addition, since the off-site medical expense settlement information system for NCMS has not been fully established, medical expenses of migrant populations cannot be directly deducted when they seek medical care in urban areas. Many of them still have to pay medical expenses first out of pocket and afterwards return to rural areas for reimbursement. Besides, the reimbursement review procedures are quite cumbersome and usually take a long period, resulting in a considerable number of the migrant population actually not being able to enjoy concrete insurance security.

Faced with the demand of nearly 200 million migrants, in 2016, the government promulgated a relevant document on off-site medical expense settlement under basic medical insurance schemes, which clarified the responsibility of all levels of governments in ensuring migrant population's right to medical insurance and defined the unified management requirements for locations providing medical treatment. At the same time, the off-site medical expense settlement information system was established and improved. Using social security cards distributed, migrant population can equally enjoy the convenient services of medical expense settlement across provinces. Through those policies and measures, the accessibility and affordability of healthcare services for migrant population have been greatly enhanced. Meanwhile, in order to promote the health of migrant workers working outside, the Health and Family Planning Commission in migrant-sending areas also established a health education group on WeChat, sending them health education messages and keeping track of their health status for better health management.

Switzerland

"Similar to all other areas of corporate governance, diversity policies need assertiveness by the highest management level", Peter Saladin says.²⁸⁸ The economist and former president of the H+ Swiss Hospital Association headed the Swiss "Migrant-Friendly-Hospitals"-project implemented in 2003–2007, as part of the Confederation's strategy on migration and public health.²⁸⁹ According to the recent Migrant Integration Policy Index (MIPEX) Health Strand, and international comparative study health systems' responsiveness to immigrants needs, the endeavour was successful: Switzerland scored second of 38 nations, and has established a "world-leading 'Migration and Health' programme".²⁹⁰

On the political level, Switzerland chose to turn "health" into a priority area of its integration policy. Legal entitlements and access to coverage within the insurance based Swiss healthcare system is nearly identical for nationals, legal migrants, asylum-seekers and undocumented migrants. Health care providers are informed by the Federal Health Office or NGOs (like the Swiss Red Cross) about immigrant's entitlements to health care and migrant patients are provided access to health relevant information in multiple languages.²⁹¹ Data collection and funding for migrant relevant health data is well developed, just as training of health professionals in transcultural competencies. The actual adaptation and responsiveness of health services, however, vary between regions (cantons) and institutions. The implementation of federal policies and provisions depend on political and institutional structures, priorities, and leadership on regional and local level. Interpreters and cultural mediators, for example, are available only at certain health centres, mainly large and university hospitals. As costs are charged on hospital budgets, a negative incentive for using interpreting services still exists. Specific services and support for undocumented migrants are also only available in a small number of cantons and political and administrative barriers to the actual realisation of formally granted rights are still prevalent.

Panel 5: Inappropriate health data sharing for immigration enforcement in the UK

On 1 January 2017 a memorandum of understanding (MOU) between the UK Home Office and National Health Service (NHS) Digital was signed.²⁹² The MOU formalised existing processes and data sharing that had occurred between NHS Digital and the Home Office.²⁹³ The MOU described how any data shared had to comply with the legal obligations under the Data Protection Act 1998 (DPA), the Human Rights Act 1998 (HRA) and the Health and Social Care Act 2012. Requests were used by the Home Office to track down migrants for the purposes of immigration enforcement. Upon publication, the MOU generated significant media interest, particularly as it became apparent that there had been an increasing use of these requests since 2010. The report led to a request for clarification about the issue from the Health Select committee, which received several responses from NHS Digital, Home Office, The National Data Guardian, Public Health England and the UK General Medical Council.²⁹³ In their responses, NHS Digital and the Department of Health outlined the basis by which the MOU had been written and the impact and equity considerations that had been reviewed. NHS Digital confirmed that no privacy impact statement had been undertaken, but that instead a public interest test was carried out in each individual tracing request.

In their response to the Health Select committee, Public Health England (PHE) stated they were unable to find statistical evidence about the impact of knowledge of data sharing on deterring immigrants from accessing healthcare treatment and agreed to undertake a full review within two years. However, in their testimony, PHE experts working in the field of communicable diseases stated that “sharing of personal information by NHS commissioners or healthcare providers, which has been provided to them by patients on an understanding of absolute confidentiality, with other government departments, law enforcement agencies or immigration enforcement authorities risks undermining public confidence in the public health system and could have unintended and serious consequences affecting the health of individuals and the risk to the public health of the wider community”.

The General Medical Council (GMC), the governing body for UK doctors, only permits clinicians to share patient information ‘if failure to disclose may expose others to a risk of death or serious harm’. Suspected immigration offences do not fall under this category. In the GMC’s response to the committee, they stated that: “The memorandum of understanding sets out clearly the public interest in maintaining effective immigration controls. It does not however reflect the public interest in there being a confidential health system, or consider how those two public goods should be weighed against each other”.

The National Data Guardian, Dame Fiona Caldicott, also expressed her concerns about this issue: “any perception by the public that confidential data collected by the NHS is shared for a purpose that they had not anticipated or without appropriate controls may well lead to a loss of people’s trust” and that “trust would have been better maintained had there been more public debate about where the balance should be struck between the public interest in maintaining an effective immigration service and the public interest in a confidential health service before an agreement was made between NHS Digital, the Home Office and the Department of Health. This would have allowed more scrutiny of the reasoning and factors which led to the policy position which has been taken.”

During a parliamentary debate in May 2018 about new data protection regulations, a member of the UK parliament with the Conservative party and chair of Health Select committee committee, Dr Sarah Wollaston, tabled an amendment to end the data-sharing arrangement between NHS Digital and the Home Office. During the debate the Government announced a reversal of policy and accepted Dr Wollaston’s amendment which significantly narrowed the scope of the MOU in order that it only covered sharing in cases where a person was suspected of serious criminality.

Panel 6: Internal migration and mortality - an analysis of all-cause mortality in 25 Health and Demographic Surveillance System (HDSS) sites in sub-Saharan Africa

These data represent a mix of rural and urban settlement types, from the International Network for the Demographic Evaluation of Populations and Their Health (INDEPTH) iShare platform.²⁹⁴ The datasets include individual-level information on all movements into or out of a surveillance area for durations in excess of 6 months. From these data, we can identify in-migrants (new residents) and return-migrants (former residents returning) to an area. After 5 years of residence, a migrant is considered a permanent resident, since prior analyses of the effect of duration following migration show that the mortality experience of migrants converges with that of permanent residents (non-migrants) after this length of time.²⁹⁵ For each migration category (non-migrant, in-migrant, return-migrant) premature mortality is estimated using the probability of mortality before age 60 if a person is alive at age 15 (45q15). The percentage difference in 45q15 between migrants and non-migrants was estimated by sex for each of the 25 HDSSs from the year 2000.

The analysis reveals that in sub-Saharan Africa, the distribution of the difference in premature adult mortality between migrants and non-migrants is substantial, i.e. in half of the sites migrants' mortality was 50% higher than non-migrants' mortality.

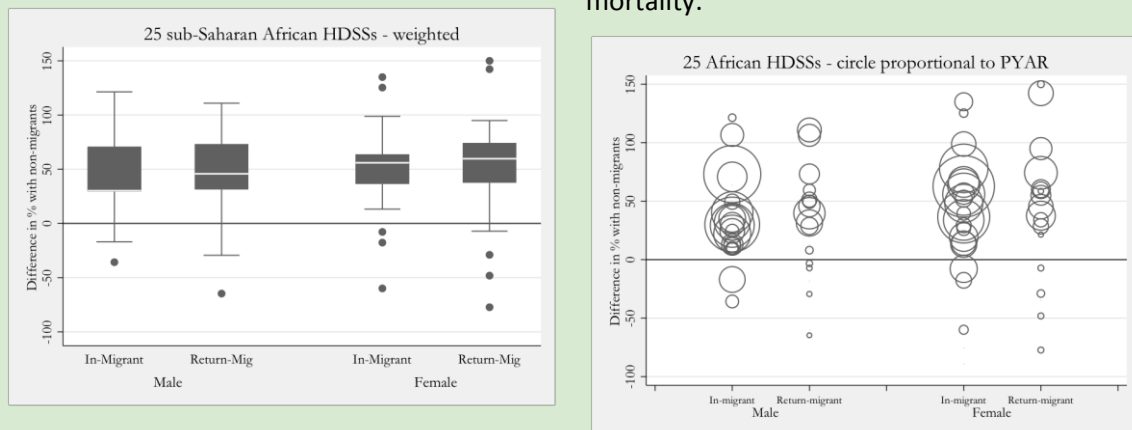


Figure 1: Difference in adult health probabilities (45q15) by migrant status in 25 African HDSSs

Box-and-whiskers plots or bubble plots (size of the bubble proportional to the person-years at risk) PYAR = person years at risk

These results suggest that internal migrants in the SSA sub-districts have a health disadvantage relative to the resident, non-migrant population. A study of internal migration and AIDS/tuberculosis and non-communicable disease mortality in 4 HDSSs in South Africa and Kenya affirmed these findings. In the Agincourt study population in rural South Africa, in-migrants and, even more so, return migrants had a health disadvantage in terms of mortality risk attributed to both non-communicable and infectious disease.²⁹⁶ These findings suggest that relative to non-migrant mortality, the experience of migrants is demonstrably worse in many sub-Saharan settings - with limited access to healthcare a likely determinant along with poor social integration or inadequate living conditions. Further research into the circumstances at migrant destinations is a priority going forward.

The same methodology was used to examine child mortality (the probability of death in under 5-

year olds) by migrant status, where child migration status was considered independently of the migration status of their parents (Figure 2). The results present a striking contrast to those of adults. Both in-migrant and return-migrant children of both sexes have lower all-cause mortality on average than non-migrant children. These results present an important direction for further research and challenge assumptions that determinants operate in the same way and have the same outcomes for adults and children.

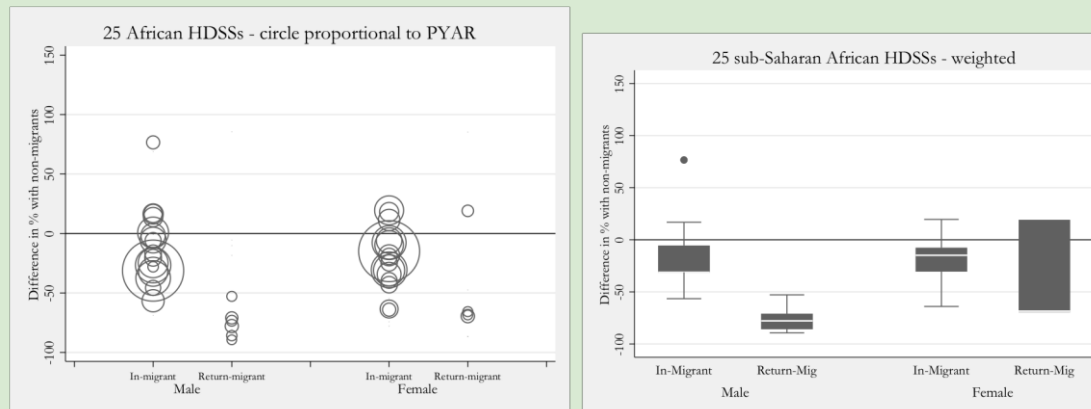


Figure 2: Difference in child health probabilities (45q15) by migrant status in 25 African HDSSs

2135

Panel 7: Age assessment – an unresolved challenge for unaccompanied minors and refugee children

Though migration to Norway is not a new phenomenon, the number of refugees that came to Norway in 2015 was unprecedented. Over 30,000 sought asylum, of which 5000 were unaccompanied minors. This group is at increased risk of child trafficking, abuse and violence and requires guardianship and protection. However, instead of focusing on their rights and obligations to this group of children and adolescents, regrettably governments often seek to skirt these obligations.

Age determination has been a substantial challenge and source of debate amongst child rights groups and immigration officials. Though there are universally agreed definitions of a ‘child’ there are no agreed methods regarding the assessment to determine the age of a child. Unaccompanied minors often have no reliable information about their age or date of birth. Authorities deploy techniques and investigations that are, at best, approximations.²⁹⁷ But the consequences of these approximations can be devastating for this group of children. In Norway, if the age assessment shows that someone is less than 18 years of age, they will be cared for by the Norwegian Child Welfare Services. The Child Welfare Services statutory obligation is “to ensure that children and youth who live in conditions that may be detrimental to their health and development receive the necessary assistance and care at the right time”. In addition, non-resident minors are entitled to receive the same help from these services as any other Norwegian child. In contrast, if the assessments conclude that a person is over 18 years old, they will be treated as an ordinary adult asylum seeker, with few such rights.

Thus, it comes as no surprise that the techniques to determine the age of a child are controversial. In Norway, the measurement of age by x-rays of the hand (‘bone age’) and teeth are routinely used, despite long-standing dispute about these techniques. The x-rays assess ossification and presence of molar teeth and can be used to estimate age. However they are not an accurate method and unnecessarily expose the adolescent to radiation. In response to the gravity of

concerns expressed by both the Norwegian Paediatric Society and the Ethical Committee in the Norwegian Medical Association in the context of critical significance of these procedures, the responsibility for conducting these was transferred from the private sector to the Oslo University Hospital from January 2017.

Age assessments, where necessary, should integrate the clinical history and physical assessment, taking into account the person's development (physical, cognitive and emotional). A report on age assessments²⁹⁸ concluded that "There is evidence that radiography (X-rays) of bones and teeth, which is increasingly relied upon by immigration authorities, is imprecise, unethical and potentially unlawful, and should not be used for age assessment". Despite this, x-rays are perpetuated as the gold standard. As this jeopardises the current and future situation of unaccompanied minors, many have no other alternative but to resort to other even more dangerous choices of living as undocumented minors on the streets of other European cities exposing and endangering them to further perils. Moreover, there is substantial evidence that even adolescents over the legal age for mandatory support services and guardianship, i.e., 16-24, have need of protection and support.²⁹⁹

2136

2137

Panel 8 Case study – Labour trafficked migrants, mental health and financial security.

A study among male, female and child trafficking survivors in the Greater Mekong Subregion found that 48% experienced physical or sexual violence, 43% reported symptoms of depression and 40% reported PTSD.³⁰⁰ Employment is highly correlated to mental health, with job insecurity and financial insecurity closely linked to anxiety and depression. Most data on employment and health come from high-income settings and studies on higher wage jobs, with very little research on migrant workers in LMICs. The *Study on Trafficking, Exploitation and Abuse in the Mekong* documented forms of labour exploitation and health outcomes among men, women and children using post-trafficking services in Thailand, Cambodia and Vietnam. Findings showed high symptom rates of depression and anxiety disorders, post-traumatic stress disorder (PTSD) and suicidal ideation associated with sexual and physical violence and threats during trafficking; poor living and working conditions; excessive overtime and restricted freedom.

Being deprived of wages was also a major stressor for formerly trafficked persons, many of whom experienced guilt and shame from failing to fulfil income expectations. In the STEAM study, most trafficked migrants (62.3%) reported being cheated of their wages. Among the few who were paid for their work, domestic workers (\$0.40), agricultural workers (\$0.70) and fishermen (\$1.10) received the lowest daily wages. Unsurprisingly, domestic workers and fishermen more frequently expressed financial concerns (75.9% and 71.1% respectively). The majority (81.6%) of domestic workers reported depression, anxiety and/or PTSD symptoms, similar to individuals trafficked for construction work (79.0%). Individuals who had been cheated over their wages or had financial concerns had approximately one and a half times the odds of being symptomatic of a mental health disorder.

Studies often overlook the significance of income security to a migrants' psychological well-being because research on migrants' mental health frequently focuses primarily on past events versus current stressors. Especially for those who migrated to improve their family's economic circumstances and failed, mental health support will need to include job training and placement or small business grants. Moreover, for individuals who were exploited, cheated of their wages or injured on the job, legal aid should be provided to help with wage recovery and compensation for abuses, and injuries, including long-term disability support.

2138

Panel 9: Research recommendations and priority research questions

1. To address the health needs of migrants, high-quality data collection for migration and health must:
 - a. Add migration-related questions to regularly administered surveys such as Demographic and Health Surveys, health and population surveillance systems and censuses.
 - b. Examine the multiple interactions between migrant populations and between migrant and non-migrant groups.
 - c. Include health outcomes of migrants that are more closely aligned with the drivers of migration and the geographical region of origin of migrants, internal migrants and the interaction with aging in order to better understand health needs.
 - d. In addition to comparisons with the host population, conduct research that, for example, compares to the population at origin to ascertain the consequences of moving on health, ideally using longitudinal data collection methods.
2. To provide an evidence base for health-related drivers and outcomes of migration, it is essential to focus on the processes and implementation of migration and health research, through:
 - a. Engagement with the population using participatory approaches to ensure that migration and health research meets their needs and does not result in harm.
 - b. Undertaking research that responds to the population need, including through increased focus on the health effects and needs during the migrant life cycle.
 - c. Analysis of best treatment regimens and modifications to these treatments required by mobile populations.
 - d. Implementing evidence-based health interventions, with a focus on data collection, assessment of cost-effectiveness and analysis of intervention impact and effectiveness.
 - e. Increasing the evidence base describing the consequences of discrimination against migrants and racism, and ways to prevent this.
 - f. Considering the health of migrant groups in all areas of research.
3. To provide and use better data to reduce inequities, changes in the migrant health research process and methods are needed, through:
 - a. Use of globally accepted definitions to guide comparable data collection and disaggregation, with a recognition that the categories used in human mobility and health are not static, but fluid.
 - b. Viewing the migrant population themselves as an asset and encouraging a participatory approach, where migrants and local communities are included in research prioritisation, policy making and decision process.
 - c. Including qualitative, adaptive and context sensitive approaches in order to understand socio-cultural factors of migration, the barriers to healthcare and how the determinants of health might affect migrants differently.
4. To provide evidence for health policy and systems research, the following questions should be considered:
 - a. What financing models are most effective in extending access equitably to migrants?
 - b. How can prevailing jurisdiction-based health governance and citizen participation approaches be made more sensitive to the needs of migrants?
 - c. How can healthcare providers be equipped with necessary multicultural competencies for migrant care?
 - d. How can information systems be made more portable and interoperable while still

preserving patient rights and privacy?

5. To produce ethical research, there should be incorporation of ethics, data protection, monitoring and evaluation into all stages of the research process. The following questions should be considered:
 - a. Does the research meet the particular needs and priorities of the research population, as well as goals like equity, integration, health protection and/or universal health coverage?
 - b. When defining the sample and the distinguishing categories of “migrants”, what are the sources of information that this relies on and how do these categories resonate with the individual’s self-perception?
 - c. Does the research deal with the challenge to understand social boundaries by providing scientific evidence of “differences” between and “homogeneity” within social groups and/or populations?
 - d. To what extent does the research reflect social, structural and political determinants of health and their implications on social gradients, historical power relations, and probably stigma?
6. To provide adequate funding and appropriate research, health funders should:
 - a. Make migration and health a priority research area.
 - b. Ensure that funded research always endeavours to include migrants within it.
 - c. Support capacity development among migration and health researchers and institutions in the global south through specific funding initiatives and support of research networks.

2140

Tables

2141

Industry	Examples of occupational hazards and harm	Migrant health studies
Sex work	<ul style="list-style-type: none"> Weak condom negotiation ⇒STIs, unwanted pregnancy Sexual violence, confinement ⇒anxiety disorders, depression 	Migrant female sex workers in Africa (Benin, Kenya, Ethiopia) are at greater risk of HIV than non-migrant sex workers and higher risk of acute STIs in all settings.
Construction	<ul style="list-style-type: none"> Work at heights ⇒fatal falls, disabilities Heavy lifting ⇒musculoskeletal problems Poor personal protective equipment (PPE) ⇒respiratory disease, dermatitis, eye injury. 	In the USA, Latino construction workers were nearly twice (1.84, 95% CI 1.60,2.10) as likely to die from occupational injuries as their non-Latino counterparts.
Manufacturing (e.g., textile)	<ul style="list-style-type: none"> Repeated bending & fixed postures ⇒musculoskeletal damage, pain Sharp instruments, ⇒puncture wounds Dust particles ⇒silicosis 	In Malaysia, 64.4% of migrant workers experienced musculoskeletal pain caused or worsened by work compared to 28% of Malaysian manufacturing workers.
Commercial fishing	<ul style="list-style-type: none"> Environmental exposures (sun, cold, rain) ⇒skin cancer, dehydration, frostbite Long hours, weeks with no break ⇒exhaustion, pneumonia Unstable fishing vessels, inadequate life vests ⇒drowning Fishing net and knife hazards ⇒deep cuts, lost limbs 	Trafficking survivors of the Thai fishing industry reported higher injury rates (46.6%) than non-trafficked fishermen (20.6%). 53.8% of trafficked fishermen experienced severe violence versus 10.1% of non-trafficked fishermen.
Agriculture	<ul style="list-style-type: none"> Pesticide exposure ⇒toxicity Environmental exposures (heat, cold, mosquitoes) ⇒dehydration, kidney failure, headaches, malaria. Heavy lifting, bending ⇒repetitive injury syndromes 	95% of the greenhouse workers in Oman were migrants. Poor practices related to pesticide use resulted numerous health problems, such as skin irritation (70.3%), headaches (39.2%), and vomiting (29.7%).

Domestic work	<ul style="list-style-type: none"> • Physical, sexual, verbal abuse, social isolation ⇒depression, anxiety, suicide • Extensive working hours, food deprivation ⇒exhaustion • Repeated lifting, bending and reaching ⇒musculoskeletal strain • Chemical cleaning agents, cooking, ironing, knives ⇒skin damage, burns 	A two-year study in Kuwait found that hospitalisation for domestic workers (93% from Sri Lanka, India and Philippines) was 1.86 times higher than for Kuwaiti women. Stress-related disorders were more common (49.2 vs. 22.3%) in housemaids than the Kuwaiti female patients.
Mining, quarrying	<p>Mercury extraction, lead exposure, mineral dust ⇒mercury poisoning (gold-mining), neurotoxic disorders, pneumoconiosis</p> <p>Heavy lifting, falls, falling rocks ⇒fatalities, traumatic injuries, disabilities</p> <p>Heavy equipment, extensive hours, repetitive lifting ⇒noise-induced hearing loss, chronic fatigue, musculoskeletal injuries</p> <p>Remote locations malaria ⇒venomous snake bites.</p>	China’s Ministry of Health reports that 87% of occupational disease is pneumoconiosis (black lung disease), with a mortality rate higher than 20%. Pneumoconiosis is a chronic lung disease that often affects miners, sandblasters and metal grinders, occupations undertaken primarily by internal migrant workers.
Forestry	<ul style="list-style-type: none"> • Environmental exposures (heat, cold, mosquitos) ⇒dehydration, malaria, parasites • Falls, sharp tools, machinery ⇒fatalities, broken bones, lacerations • Repetitive motions, long hours ⇒body pain, strains, chronic fatigue 	A study of Burmese migrants found 87 of 105 (82.9%) rubber plantation workers had a suspected case of malaria in the past year. Workers had limited access to care due to their working hours and limited transportation.
Leather and tanning	<ul style="list-style-type: none"> • Chemical exposure (i.e., chromium, benzene dyes, formaldehyde) ⇒respiratory illness, ocular damage, cancer, ulcers, toxicity, dermatological diseases (rashes), chronic / allergic bronchitis pulmonary tuberculosis 	Higher morbidity was found in tannery worker (40.1%) than the control group (19.6%) in northern India.
Brick kilns	<ul style="list-style-type: none"> • Unsanitary environment, air pollution ⇒bronchitis, asthma, silicosis, respiratory toxicity • Extremely high heat ⇒burns, fatalities • High rates of child labour ⇒Developmental problems 	Migrant brick kiln workers in South India had higher prevalence of chest symptoms (9.4%) versus general population rates (4.9%) related to occupational hazards and poor healthcare access.
PPE= personal protective equipment; STI= sexually transmitted infection		

2142 Table 1: Low-wage labour sectors and associated occupational hazards among migrant workers ([see appendix for full list of references](#))

2143 References

- 2144 1 International Organization for Migration. World Migration Report 2018.
2145 <https://www.iom.int/wmr/world-migration-report-2018> (accessed June 25, 2018).
- 2146 2 Urquia ML, Gagnon AJ. Glossary: migration and health. - PubMed - NCBI.
2147 <https://www.ncbi.nlm.nih.gov/pubmed/21282138> (accessed Jan 15, 2018).
- 2148 3 Zimmerman C, Kiss L, Hossain M. Migration and health: a framework for 21st century policy-
2149 making. *PLoS Med* 2011; 8: e1001034.
- 2150 4 The Oxford Handbook of Stigma, Discrimination, and Health. Google Books.
2151 https://books.google.com/books/about/The_Oxford_Handbook_of_Stigma_Discrimina.html?id=aOw9DwAAQBAJ (accessed June 14, 2018).
2152
- 2153 5 Elliott P, Hennigan WJ. Exclusive: Navy Document Shows Plan to Erect ‘Austere’ Tent Cities for
2154 Immigrants. *Time*. <http://time.com/5319334/navy-detainment-centers-zero-tolerance-immigration-family-separation-policy/> (accessed July 1, 2018).
2155
- 2156 6 McNeill L, Moore R. Sustainable fashion consumption and the fast fashion conundrum:
2157 fashionable consumers and attitudes to sustainability in clothing choice. *Int J Consum Stud*
2158 2015; 39: 212–22.
- 2159 7 United Nations, Treaty Series. International Covenant on Economic, Social and Cultural Rights.
2160 OHCHR. 1976; 993: 3.
- 2161 8 UN Committee on Economic, Social and Cultural Rights. General Comment 14, The right to the
2162 highest attainable standard of health. 2000 <http://www.refworld.org/pdfid/4538838d0.pdf>
2163 (accessed Jan 15, 2018).
- 2164 9 Mann JM, Gostin L, Gruskin S, Brennan T, Lazzarini Z, Fineberg HV. Health and human rights.
2165 *Health Hum Rights* 1994; 1: 6–23.
- 2166 10 Compact for Migration. UN Refugees and Migrants. <http://refugeesmigrants.un.org/migration-compact> (accessed Jan 12, 2018).
2167
- 2168 11 New York Declaration for Refugees and Migrants New York Declaration for Refugees and
2169 Migrants : resolution / adopted by the General Assembly, 3 October 2016, A/RES/71/1. United
2170 Nations General Assembly. 2016.
2171 http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/71/1 (accessed Jan 15, 2018).
- 2172 12 U.S. Ends Participation in the Global Compact on Migration. U.S. Department of State. 2017;
2173 published online Dec 3. <http://www.state.gov/secretary/remarks/2017/12/276190.htm>
2174 (accessed Jan 12, 2018).
- 2175 13 Henley J. EU’s migrant centres could breach human rights, say campaigners. *the Guardian*.
2176 2018; published online June 29. <http://www.theguardian.com/world/2018/jun/29/eus-migrant-centres-could-breach-human-rights-say-campaigners> (accessed July 1, 2018).
2177
- 2178
- 2179 14 The Sustainable Development Goals Report 2016: Leaving no one behind. UN Stats Division.
2180 <https://unstats.un.org/sdgs/report/2016/leaving-no-one-behind> (accessed Jan 15, 2018).

- 2181 15 Lynch C, Roper C. The Transit Phase of Migration: Circulation of Malaria and Its Multidrug-
2182 Resistant Forms in Africa. *PLoS Med* 2011; 8: e1001040.
- 2183 16 Davies AA, Borland RM, Blake C, West HE. The Dynamics of Health and Return Migration. *PLoS*
2184 *Med* 2011; 8: e1001046.
- 2185 17 Pocock NS, Mahmood SS, Zimmerman C, Orcutt M. Imminent health crises among the Rohingya
2186 people of Myanmar. *BMJ* 2017; 359: j5210.
- 2187 18 United Nations Human Rights Office of the High Commission. Detained and dehumanised”
2188 report on human rights abuses against migrants in Libya.
2189 https://www.ohchr.org/Documents/Countries/LY/DetainedAndDehumanised_en.pdf (accessed
2190 June 28, 2018).
- 2191 19 Quarterly Update: sexual exploitation and abuse within the UN. United Nations. 2018;
2192 published online July 30. [https://www.un.org/preventing-sexual-exploitation-and-](https://www.un.org/preventing-sexual-exploitation-and-abuse/content/quarterly-updates)
2193 [abuse/content/quarterly-updates](https://www.un.org/preventing-sexual-exploitation-and-abuse/content/quarterly-updates) (accessed Sept 8, 2018).
- 2194 20 McAlpine A, Hossain M, Zimmerman C. Sex trafficking and sexual exploitation in settings
2195 affected by armed conflicts in Africa, Asia and the Middle East: systematic review. *BMC Int*
2196 *Health Hum Rights* 2016; 16: 34.
- 2197 21 Freccero J, Biswas D, Whiting A, Alrabe K, Seelinger KT. Sexual exploitation of unaccompanied
2198 migrant and refugee boys in Greece: Approaches to prevention. *PLoS Med* 2017; 14: e1002438.
- 2199 22 Whitson A. ‘To protect her honour’: Child marriage in emergencies – the fatal confusion
2200 between protecting girls and sexual violence. CARE
2201 [http://insights.careinternational.org.uk/publications/to-protect-her-honour-child-marriage-in-](http://insights.careinternational.org.uk/publications/to-protect-her-honour-child-marriage-in-emergencies-the-fatal-confusion-between-protecting-girls-and-sexual-violence)
2202 [emergencies-the-fatal-confusion-between-protecting-girls-and-sexual-violence](http://insights.careinternational.org.uk/publications/to-protect-her-honour-child-marriage-in-emergencies-the-fatal-confusion-between-protecting-girls-and-sexual-violence) (accessed Jan
2203 17, 2018).
- 2204 23 Brides GN. Untying the knot: exploring early marriage in fragile states. World Vision, 2013
2205 [https://www.girlsnotbrides.org/resource-centre/untying-the-knot-exploring-early-marriage-in-](https://www.girlsnotbrides.org/resource-centre/untying-the-knot-exploring-early-marriage-in-fragile-states/)
2206 [fragile-states/](https://www.girlsnotbrides.org/resource-centre/untying-the-knot-exploring-early-marriage-in-fragile-states/) (accessed Jan 17, 2018).
- 2207 24 Immigration by Category: Workers, Students, Family Members, Asylum Applicants - Migration
2208 Observatory. Migration Observatory.
2209 [http://www.migrationobservatory.ox.ac.uk/resources/briefings/immigration-by-category-](http://www.migrationobservatory.ox.ac.uk/resources/briefings/immigration-by-category-workers-students-family-members-asylum-applicants/)
2210 [workers-students-family-members-asylum-applicants/](http://www.migrationobservatory.ox.ac.uk/resources/briefings/immigration-by-category-workers-students-family-members-asylum-applicants/) (accessed June 14, 2018).
- 2211 25 d’Albis H, Boubtane E, Coulibaly D. Macroeconomic evidence suggests that asylum seekers are
2212 not a ‘burden’ for Western European countries. *Science Advances* 2018; 4: eaaq0883.
- 2213 26 Siyam A, Dal poz MR, editors. Migration of Health Workers: WHO Code of Practice and the
2214 Global Economic Crisis. WHO , 2014
2215 http://www.who.int/hrh/migration/14075_MigrationofHealth_Workers.pdf (accessed Jan 17,
2216 2018).
- 2217 27 Baker C. NHS staff from overseas: statistics. House of Commons Library Briefing paper Number
2218 7783 , 2017 <http://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-7783>
2219 (accessed Jan 17, 2018).
- 2220 28 Okeke EN. Brain drain: Do economic conditions ‘push’ doctors out of developing countries? *Soc*
2221 *Sci Med* 2013; 98: 169–78.

- 2222 29 Kulu H, Hannemann T, Krapf S, Wolf K, Andersson G, Persson L. Country-specific case studies on
2223 fertility among the descendants of immigrants: Part 1. *Families and Societies* , 2015
2224 <http://www.familiesandsocieties.eu/wp-content/uploads/2015/09/WP39HillEtAl2015Part1.pdf>
2225 (accessed Jan 15, 2018).
- 2226 30 Madise NJ, Onyango B. Protecting female migrants from forced sex and HIV infection. *Lancet*
2227 *Public Health* 2018; 3: e2–3.
- 2228 31 Chynoweth SK. Advancing reproductive health on the humanitarian agenda: the 2012–2014
2229 global review. *Confl Health* 2015; 9: l1.
- 2230 32 IMFBlog. Migrants Bring Economic Benefits for Advanced Economies. IMF Blog. 2016; published
2231 online Oct 24. [https://blogs.imf.org/2016/10/24/migrants-bring-economic-benefits-for-](https://blogs.imf.org/2016/10/24/migrants-bring-economic-benefits-for-advanced-economies/)
2232 [advanced-economies/](https://blogs.imf.org/2016/10/24/migrants-bring-economic-benefits-for-advanced-economies/) (accessed Dec 17, 2017).
- 2233 33 Migration Policy Debates: Is migration good for the economy? Organisation for Economic Co-
2234 operation and Development. 2014; published online May.
2235 [https://www.oecd.org/migration/OECD%20Migration%20Policy%20Debates%20Numero%202.](https://www.oecd.org/migration/OECD%20Migration%20Policy%20Debates%20Numero%202.pdf)
2236 [pdf](https://www.oecd.org/migration/OECD%20Migration%20Policy%20Debates%20Numero%202.pdf) (accessed Dec 17, 2017).
- 2237 34 Jauer J, Liebig T, Martin JP, Puhani P. Migration as an Adjustment Mechanism in the Crisis? A
2238 Comparison of Europe and the United States. OECD Social, Employment and Migration Working
2239 Papers. 2014. DOI:10.1787/5jzb8p51gvhl-en.
- 2240 35 Migration and development brief 29, Migration and Remittances: Recent Developments and
2241 Outlook Special Topic: Transit Migration. KNOMAD. 2018; published online April.
2242 <http://www.knomad.org/publication/migration-and-development-brief-29> (accessed June 25,
2243 2018).
- 2244 36 Marks L, Worboys M, editors. *Migrants, Minorities and Health. Historical and contemporary*
2245 *studies*. London/New York. Routledge, 1999.
- 2246 37 Aldridge RW, Zenner D, White PJ, et al. Tuberculosis in migrants moving from high-incidence to
2247 low-incidence countries: a population-based cohort study of 519 955 migrants screened before
2248 entry to England, Wales, and Northern Ireland. *Lancet* 2016; 388: 2510–8.
- 2249 38 Dahle UR, Eldholm V, Winje BA, Mannsåker T, Heldal E. Impact of immigration on the molecular
2250 epidemiology of *Mycobacterium tuberculosis* in a low-incidence country. *Am J Respir Crit Care*
2251 *Med* 2007; 176: 930–5.
- 2252 39 Aldridge RW, Yates TA, Zenner D, White PJ, Abubakar I, Hayward AC. Pre-entry screening
2253 programmes for tuberculosis in migrants to low-incidence countries: a systematic review and
2254 meta-analysis. *Lancet Infect Dis* 2014; 14: 1240–9.
- 2255 40 Khan MS, Osei-Kofi A, Omar A, et al. Pathogens, prejudice, and politics: the role of the global
2256 health community in the European refugee crisis. *Lancet Infect Dis* 2016; 16: e173–7.
- 2257 41 Aldridge R, Devakumar D, Abubakar I. Doctors of the World: Vulnerable people should not fear
2258 arrest when seeking healthcare. *The BMJ Opinion*. 2017; published online Nov 8.
2259 [http://blogs.bmj.com/bmj/2017/11/08/doctors-of-the-world-vulnerable-people-should-not-](http://blogs.bmj.com/bmj/2017/11/08/doctors-of-the-world-vulnerable-people-should-not-fear-arrest-when-seeking-healthcare/)
2260 [fear-arrest-when-seeking-healthcare/](http://blogs.bmj.com/bmj/2017/11/08/doctors-of-the-world-vulnerable-people-should-not-fear-arrest-when-seeking-healthcare/) (accessed Jan 16, 2018).
- 2261 42 Mass gatherings health--creating a public health legacy. *Lancet* 2012; 380: 1.

- 2262 43 Ihekweazu C, Abubakar I. Tackling viral haemorrhagic fever in Africa. *Lancet* 2017; 390: 2612–4.
- 2263 44 United Nations, Department of Economic and Social Affairs, Population Division. International
2264 Migration Report 2017 Highlights (ST/ESA/SER.A/404).
2265 [http://www.un.org/en/development/desa/population/migration/publications/migrationreport](http://www.un.org/en/development/desa/population/migration/publications/migrationreport/docs/MigrationReport2017_Highlights.pdf)
2266 [/docs/MigrationReport2017_Highlights.pdf](http://www.un.org/en/development/desa/population/migration/publications/migrationreport/docs/MigrationReport2017_Highlights.pdf) (accessed July 4, 2018).
- 2267 45 UNDP. Human Development Report 2009: Overcoming Barriers - Human Mobility and
2268 Development. 2009 DOI:10.18356/9d335cec-en.
- 2269 46 United Nations. World Urbanization Prospects [highlights]. Department of Economic and Social
2270 Affairs, 2014 <https://esa.un.org/unpd/wup/publications/files/wup2014-highlights.pdf> (accessed
2271 Jan 15, 2018).
- 2272 47 Deshingkar P, Grimm S. Internal Migration and Development: A Global Perspective. Overseas
2273 Development Institute, 2005 <https://www.odi.org/resources/docs/68.pdf> (accessed Dec 18,
2274 2017).
- 2275 48 de Haan A. Migrants, livelihoods and rights: the relevance of migration in development policies.
2276 Social Development Department, University of Sussex, 2000
2277 https://books.google.com/books/about/Migrants_livelihoods_and_rights.html?hl=&id=ulhEAA
2278 [AAYAAJ](https://books.google.com/books/about/Migrants_livelihoods_and_rights.html?hl=&id=ulhEAA) (accessed Dec 17, 2017).
- 2279 49 Division P. Cross-national comparisons of internal migration: An update on global patterns and
2280 trends, Technical Paper No. 2013/1,. United Nations Department of Economic and Social Affairs
2281 , 2013
2282 <http://www.un.org/en/development/desa/population/publications/pdf/technical/TP2013->
2283 [1.pdf](http://www.un.org/en/development/desa/population/publications/pdf/technical/TP2013-1.pdf). (accessed Dec 18, 2017).
- 2284 50 Centre IDM, Norwegian Refugee Council. Global Report on Internal Displacement. 2017
2285 <http://www.internal-displacement.org/global-report/grid2017/pdfs/2017-GRID.pdf> (accessed
2286 Jan 16, 2018).
- 2287 51 (ilo) ILO. ILO global estimates on migrant workers: Results and methodology. 2015.
- 2288 52 Battistella G. Labour Migration in Asia and the Role of Bilateral Migration Agreements. In: The
2289 Palgrave Handbook of International Labour Migration. Palgrave Macmillan, London, 2015: 299–
2290 324.
- 2291 53 Key Migration Terms. International Organization for Migration. 2015; published online Jan 14.
2292 <https://www.iom.int/key-migration-terms> (accessed Jan 15, 2018).
- 2293 54 Hennebry J, Grass W, Mclaughlin J. Women Migrant Workers' Journey through the margins:
2294 Labour, migration, and trafficking. UN Women, 2016 [http://www.unwomen.org/-](http://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2017/women-migrant-workers-journey.pdf?la=en&vs=4009)
2295 [/media/headquarters/attachments/sections/library/publications/2017/women-migrant-](http://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2017/women-migrant-workers-journey.pdf?la=en&vs=4009)
2296 [workers-journey.pdf?la=en&vs=4009](http://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2017/women-migrant-workers-journey.pdf?la=en&vs=4009) (accessed Jan 15, 2018).
- 2297 55 Temin M, Montgomery MR, Engebretsen S, Barker KM. Girls on the Move: Adolescent Girls &
2298 Migration in the Developing World. Population Council , 2013
2299 [http://www.popcouncil.org/research/girls-on-the-move-adolescent-girls-migration-in-the-](http://www.popcouncil.org/research/girls-on-the-move-adolescent-girls-migration-in-the-developing-world)
2300 [developing-world](http://www.popcouncil.org/research/girls-on-the-move-adolescent-girls-migration-in-the-developing-world) (accessed Jan 15, 2018).
- 2301 56 Migrant children in child labour: A vulnerable group in need of attention. 2013; published
2302 online April 26.

- 2303 <http://www.ilo.org/ipecinfo/product/download.do?type=document&id=23755>><http://www.ilo.org/ipecinfo/product/download.do?type=document&id=23755> (accessed Nov 10, 2017).
2304
- 2305 57 Report IV: Addressing governance challenges in a changing labour migration landscape.
2306 International Labour Organization, 2017.
2307 [http://www.ilo.org/ilc/ILCSessions/106/reports/reports-to-the-](http://www.ilo.org/ilc/ILCSessions/106/reports/reports-to-the-conference/WCMS_550269/lang--en/index.htm)
2308 [conference/WCMS_550269/lang--en/index.htm](http://www.ilo.org/ilc/ILCSessions/106/reports/reports-to-the-conference/WCMS_550269/lang--en/index.htm) (accessed Jan 15, 2018).
- 2309 58 Fragility, Conflict and Violence. The World Bank.
2310 <http://www.worldbank.org/en/topic/fragilityconflictviolence/overview> (accessed Jan 15, 2018).
- 2311 59 In Search of Work - Creating Jobs for Syrian Refugees: A Case Study of the Jordan Compact.
2312 International Rescue Committee (IRC). 2017; published online Feb 3. [https://www.rescue-](https://www.rescue-uk.org/report/search-work-creating-jobs-syrian-refugees-case-study-jordan-compact)
2313 [uk.org/report/search-work-creating-jobs-syrian-refugees-case-study-jordan-compact](https://www.rescue-uk.org/report/search-work-creating-jobs-syrian-refugees-case-study-jordan-compact) (accessed
2314 Jan 18, 2018).
- 2315 60 United Nations High Commissioner for Refugees. UNHCR Global Trends - Forced Displacement
2316 in 2017. UNHCR. [http://www.unhcr.org/statistics/unhcrstats/5b27be547/unhcr-global-trends-](http://www.unhcr.org/statistics/unhcrstats/5b27be547/unhcr-global-trends-2017.html)
2317 [2017.html](http://www.unhcr.org/statistics/unhcrstats/5b27be547/unhcr-global-trends-2017.html) (accessed July 4, 2018).
- 2318 61 United Nations High Commissioner for Refugees. UNHCR Projected Global Resettlement Needs
2319 2018. UNHCR. [http://www.unhcr.org/en-us/protection/resettlement/593a88f27/unhcr-](http://www.unhcr.org/en-us/protection/resettlement/593a88f27/unhcr-projected-global-resettlement-needs-2018.html)
2320 [projected-global-resettlement-needs-2018.html](http://www.unhcr.org/en-us/protection/resettlement/593a88f27/unhcr-projected-global-resettlement-needs-2018.html) (accessed Jan 17, 2018).
- 2321 62 2017 Global Estimates of Modern Slavery and Child Labour. 2017 Global Estimates of Modern
2322 Slavery and Child Labour. <http://www.alliance87.org/2017ge/modernslavery> (accessed Jan 16,
2323 2018).
- 2324 63 Global Estimates of Modern Slavery: Forced Labour and Forced Marriage. Alliance 87, 2017
2325 [http://www.alliance87.org/global_estimates_of_modern_slavery-](http://www.alliance87.org/global_estimates_of_modern_slavery-forced_labour_and_forced_marriage.pdf)
2326 [forced_labour_and_forced_marriage.pdf](http://www.alliance87.org/global_estimates_of_modern_slavery-forced_labour_and_forced_marriage.pdf) (accessed Jan 16, 2018).
- 2327 64 Zimmerman C, Kiss L. Human trafficking and exploitation: A global health concern. *PLoS Med*
2328 2017; 14: e1002437.
- 2329 65 Watts N, Adger WN, Agnolucci P, et al. Health and climate change: policy responses to protect
2330 public health. *Lancet* 2015; 386: 1861–914.
- 2331 66 Kang S, Eltahir EAB. North China Plain threatened by deadly heatwaves due to climate change
2332 and irrigation. *Nat Commun* 2018; 9: 2894.
- 2333 67 Intergovernmental Panel on Climate Change. Climate Change 2014: Synthesis Report (Longer
2334 Report). 2014.
- 2335 68 Rigaud KK, de Sherbinin A, Jones B, et al. Groundswell. 2018.
- 2336 69 Ottersen OP, Dasgupta J, Blouin C, et al. The political origins of health inequity: prospects for
2337 change. *Lancet* 2014; 383: 630–67.
- 2338 70 Napier AD, Ancarno C, Butler B, et al. Culture and health. *Lancet* 2014; 384: 1607–39.
- 2339 71 Kleinman A, Benson P. Anthropology in the Clinic: The Problem of Cultural Competency and
2340 How to Fix It. *PLoS Med* 2006; 3: e294.

- 2341 72 Willen SS, Knipper M, Abadía-Barrero CE, Davidovitch N. Syndemic vulnerability and the right to
2342 health. *Lancet* 2017; 389: 964–77.
- 2343 73 Willen SS. How is health-related ‘deservingness’ reckoned? Perspectives from unauthorized
2344 im/migrants in Tel Aviv. *Soc Sci Med* 2012; 74: 812–21.
- 2345 74 Bhopal R. Glossary of terms relating to ethnicity and race: for reflection and debate. *Journal of*
2346 *Epidemiology & Community Health* 2004; 58: 441–5.
- 2347 75 Fox JE, Mogilnicka M. Pathological integration, or, how East Europeans use racism to become
2348 British. *Br J Sociol* 2017; published online Nov 30. DOI:10.1111/1468-4446.12337.
- 2349 76 Prime Minister Viktor Orbán’s speech at the annual general meeting of the Association of Cities
2350 with County Rights. Government. <http://www.kormany.hu/en/the-prime-minister/the-prime-minister-s-speeches/prime-minister-viktor-orban-s-speech-at-the-annual-general-meeting-of-the-association-of-cities-with-county-rights> (accessed June 27, 2018).
2351
2352
- 2353 77 Almeida J, Biello KB, Pedraza F, Wintner S, Viruell-Fuentes E. The association between anti-
2354 immigrant policies and perceived discrimination among Latinos in the US: A multilevel analysis.
2355 *SSM - Population Health* 2016; 2: 897–903.
- 2356 78 Morey BN, Gee GC, Muennig P, Hatzenbuehler ML. Community-level prejudice and mortality
2357 among immigrant groups. *Soc Sci Med* 2018; 199: 56–66.
- 2358 79 Novak NL, Geronimus AT, Martinez-Cardoso AM. Change in birth outcomes among infants born
2359 to Latina mothers after a major immigration raid. *Int J Epidemiol* 2017; 46: 839–49.
- 2360 80 Momartin S E al. A comparison of the mental health of refugees with temporary versus
2361 permanent protection visas. - PubMed - NCBI.
2362 <https://www.ncbi.nlm.nih.gov/pubmed/?term=A+comparison+of+the+mental+health+of+refugees+with+temporary+versus+permanent+protection+visas> (accessed June 14, 2018).
2363
- 2364 81 Elias A, Paradies Y. Estimating the mental health costs of racial discrimination. *BMC Public*
2365 *Health* 2016; 16: 1205.
- 2366 82 Pauchulo AL. Anti-Racism Education in Canada: Best Practices – Centre for Race and Culture.
2367 Centre for Race and Culture, 2013 <https://cfrac.com/publications/anti-racism-education-in-canada-best-practices/> (accessed May 14, 2018).
2368
- 2369 83 Muswede T. Approaches to ‘Xenophobia’ interventions in Africa: Common narratives through
2370 community radio in South Africa. *The Journal for Transdisciplinary Research in Southern Africa*
2371 2015; 11: 220–31.
- 2372 84 O’Keefe P, Westgate K, Wisner B. Taking the naturalness out of natural disasters. *Nature* 1976;
2373 260: 566–7.
- 2374 85 Watts N, Amann M, Ayeb-Karlsson S, et al. The Lancet Countdown on health and climate
2375 change: from 25 years of inaction to a global transformation for public health. *Lancet* 2017;
2376 published online Oct 30. DOI:10.1016/S0140-6736(17)32464-9.
- 2377 86 Bahadur A, Simonet C. Reducing disaster risks, through increasing resilience of communities,
2378 infrastructure and process have reduced the impact of hazard events. *Disaster mortality, ODI*
2379 *Briefing* 2015.

- 2380 87 Ingram JC, Franco G, Rio CR, Khazai B. Post-disaster recovery dilemmas: challenges in balancing
2381 short-term and long-term needs for vulnerability reduction. *Environ Sci Policy* 2006; 9: 607–13.
- 2382 88 Katie P. The next frontier for disaster risk reduction: Tackling disasters in fragile and conflict-
2383 affected contexts. 2017. <http://repo.floodalliance.net/jspui/handle/44111/2502>.
- 2384 89 Davis I, Alexander D. *Recovery from Disaster*. Routledge, 2015.
- 2385 90 Asia Pacific Disaster Report 2010 - Protecting Development Gains. United Nations ESCAP, 2010
2386 <http://www.unescap.org/publications/asia-pacific-disaster-report-2010-protecting->
2387 [development-gains](http://www.unescap.org/publications/asia-pacific-disaster-report-2010-protecting-development-gains) (accessed Jan 17, 2018).
- 2388 91 Beine M, Parsons C. Climatic factors as determinants of international migration. CESifo working
2389 paper: Energy and Climate Economics, 2012
2390 <https://www.econstor.eu/bitstream/10419/55879/1/687925916.pdf> (accessed Jan 17, 2018).
- 2391 92 Drabo A, Mbaye L. Climate Change, Natural Disasters and Migration: An Empirical Analysis in
2392 Developing Countries. Institute for the Study of Labor , 2011 <http://ftp.iza.org/dp5927.pdf>
2393 (accessed Jan 17, 2018).
- 2394 93 Paul BK. Evidence against disaster-induced migration: the 2004 tornado in north-central
2395 Bangladesh. *Disasters* 2005; 29: 370–85.
- 2396 94 Bohra-Mishra P, Oppenheimer M, Hsiang SM. Nonlinear permanent migration response to
2397 climatic variations but minimal response to disasters. *Proc Natl Acad Sci U S A* 2014; 111: 9780–
2398 5.
- 2399 95 Kelman I. Islandness within climate change narratives of small island developing states (SIDS).
2400 *Island Studies Journal* 2018; published online May 15. <http://discovery.ucl.ac.uk/1567002/>
2401 (accessed Jan 17, 2018).
- 2402 96 www.istructe.org - EEFIT reports - The Earthquake Engineering Field Investigation Team - The
2403 Institution of Structural Engineers. [www.istructe.org/resources-centre/technical-topic-](http://www.istructe.org/resources-centre/technical-topic-areas/eefit/eefit-reports)
2404 [areas/eefit/eefit-reports](http://www.istructe.org/resources-centre/technical-topic-areas/eefit/eefit-reports) (accessed Aug 22, 2018).
- 2405 97 Barbieri AF, Domingues E, Queiroz BL, et al. Climate change and population migration in Brazil's
2406 Northeast: scenarios for 2025–2050. *Popul Environ* 2010; 31: 344–70.
- 2407 98 Wandschneider T, Mishra P. The role of small rural towns in Bolangir District, India: a village-
2408 level perspective. University of Greenwich, Natural Resources Institute, 2003
2409 <http://gala.gre.ac.uk/11672/1/Doc-0289.pdf> (accessed Jan 17, 2018).
- 2410 99 Black R, Arnell NW, Adger WN, Thomas D, Geddes A. Migration, immobility and displacement
2411 outcomes following extreme events. *Environ Sci Policy* 2013; 27: S32–43.
- 2412 100 ISCG Situation Update: Rohingya Refugee Crisis, Cox's Bazar | 21 December 2017. ReliefWeb.
2413 [https://reliefweb.int/report/bangladesh/iscg-situation-update-rohingya-refugee-crisis-cox-s-](https://reliefweb.int/report/bangladesh/iscg-situation-update-rohingya-refugee-crisis-cox-s-bazar-21-december-2017)
2414 [bazar-21-december-2017](https://reliefweb.int/report/bangladesh/iscg-situation-update-rohingya-refugee-crisis-cox-s-bazar-21-december-2017) (accessed Dec 21, 2017).
- 2415 101 Ahmed B, Orcutt M, Sammonds P, et al. Humanitarian disaster for Rohingya refugees:
2416 impending natural hazards and worsening public health crises. *Lancet Glob Health* 2018; 6:
2417 e487–8.
- 2418 102 Mahmood SS, Wroe E, Fuller A, Leaning J. The Rohingya people of Myanmar: health, human

- 2419 rights, and identity. *Lancet* 2017; 389: 1841–50.
- 2420 103 Klugman J, Pereira IM. Assessment of national migration policies: Human Development
2421 Research Paper No. 48. United Nations Development Programme, Human Development Report
2422 Office, 2009 <http://hdr.undp.org/en/content/assessment-national-migration-policies> (accessed
2423 Jan 17, 2018).
- 2424 104 Kalengayi FKN, Hurtig A-K, Nordstrand A, Ahlm C, Ahlberg BM. ‘It is a dilemma’: perspectives of
2425 nurse practitioners on health screening of newly arrived migrants. *Glob Health Action* 2015; 8:
2426 27903.
- 2427 105 UNESCO. The Right to Education for Persons with Disabilities.
2428 <http://unesdoc.unesco.org/images/0023/002325/232592e.pdf> (accessed June 14, 2018).
- 2429 106 Bartlett L. Access and Quality of Education for International Migrant Children. Education for All
2430 Global Monitoring Report, 2015 <http://unesdoc.unesco.org/images/0023/002324/232474e.pdf>
2431 (accessed Jan 17, 2018).
- 2432 107 Urbanisation and health in China. *Lancet* 2012; 379: 843–52.
- 2433 108 Fong HF MJ. Migration and health. Lessons from China. In: Griffiths SM, Tang JL, Yeoh EK, eds.
2434 *Routledge Handbook of Global Public Health in Asia*. 2014.
- 2435 109 Lebanon - Refugees Access to Education. UNICEF. 2017.
2436 <https://weshare.unicef.org/Folder/2AMZIFIL5FQY> (accessed Jan 17, 2018).
- 2437 110 Buller AM, Stoklosa H, Zimmerman C, Vaca V, Borland R. Labour Exploitation, Trafficking and
2438 Migrant Health: Multi-country Findings on the Health Risks and Consequences of Migrant and
2439 Trafficked Workers. International Organization for Migration, 2015.
- 2440 111 Chantavanich S, Laodumrongchai S, Harkins B, et al. Employment Practices and Working
2441 Conditions in Thailand’s Fishing Sector. ILO Regional Office for Asia and the Pacific, Bangkok,
2442 Thailand, 2013.
- 2443 112 Ang JW, Chia C, Koh CJ, et al. Healthcare-seeking behaviour, barriers and mental health of non-
2444 domestic migrant workers in Singapore. *BMJ Glob Health* 2017; 2: e000213.
- 2445 113 Malhotra R, Arambepola C, Tarun S, de Silva V, Kishore J, Østbye T. Health issues of female
2446 foreign domestic workers: a systematic review of the scientific and gray literature. *Int J Occup
2447 Environ Health* 2013; 19: 261–77.
- 2448 114 Hansen E, Donohoe M. Health issues of migrant and seasonal farmworkers. *J Health Care Poor
2449 Underserved* 2003; 14: 153–64.
- 2450 115 Healthy workplaces: a model for action For employers, workers, policy-makers and
2451 practitioners. WHO, 2010
2452 http://www.who.int/occupational_health/publications/healthy_workplaces_model_action.pdf.
2453 (accessed Jan 17, 2018).
- 2454 116 Guinto RLLR, Curran UZ, Suphanchaimat R, Pocock NS. Universal health coverage in ‘One
2455 ASEAN’: are migrants included? *Glob Health Action* 2015; 8: 25749.
- 2456 117 Levine PB, Zimmerman DJ. An empirical analysis of the welfare magnet debate using the NLSY. *J
2457 Popul Econ* 1999; 12: 391–409.

- 2458 118 International Organization for Migration, World Health Organization and Office of the High
2459 Commission for Human Rights. International migration, health and human rights.
2460 http://www.ohchr.org/Documents/Issues/Migration/WHO_IOM_UNOHCHRPublication.pdf
2461 (accessed June 22, 2018).
- 2462 119 Benach J, Muntaner C, Delclos C, Menéndez M, Ronquillo C. Migration and ‘low-skilled’ workers
2463 in destination countries. *PLoS Med* 2011; 8: e1001043.
- 2464 120 Maplecroft V. Human rights outlook. 2016. [https://maplecroft.com/portfolio/new-](https://maplecroft.com/portfolio/new-analysis/2016/02/15/human-rights-outlook-2016/)
2465 [analysis/2016/02/15/human-rights-outlook-2016/](https://maplecroft.com/portfolio/new-analysis/2016/02/15/human-rights-outlook-2016/) (accessed June 22, 2018).
- 2466 121 Sustainable development goals - United Nations. United Nations Sustainable Development.
2467 <https://www.un.org/sustainabledevelopment/sustainable-development-goals/> (accessed June
2468 22, 2018).
- 2469 122 [No title].
2470 [http://www.un.org/en/development/desa/population/migration/generalassembly/docs/global](http://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_147.pdf)
2471 [compact/A_RES_70_147.pdf](http://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_147.pdf) (accessed June 22, 2018).
- 2472 123 Alhasan H. Gulf Research Center Cambridge (hereafter ‘GLMM’), ‘Irregular Migration in Bahrain:
2473 Legislation, Policies, and Practices,’ Chapter 6 in *Skillful Survivals: Irregular Migration to the*
2474 *Gulf*. 2017. <http://gulfmigration.eu/> (accessed Aug 28, 2017).
- 2475 124 El-Zein A, DeJong J, Fargues P, Salti N, Hanieh A, Lackner H. Who’s been left behind? Why
2476 sustainable development goals fail the Arab world. *Lancet* 2016; 388: 207–10.
- 2477 125 Pace P, editor. *Migration and the Right to Health: A Review of International Law*. IOM:
2478 *International Migration Law, 2009* http://publications.iom.int/system/files/pdf/iml_19.pdf
2479 (accessed Jan 15, 2018).
- 2480 126 Legido-Quigley H, Pajin L, Fanjul G, Urdaneta E, McKee M. Spain shows that a humane response
2481 to migrant health is possible in Europe. *Lancet Public Health* 2018; 3: e358.
- 2482 127 Lifting HIV-related restrictions on entry, stay and residence. UNAIDS.
2483 https://results.unaids.org/sites/default/files/documents/FINAL_TR_A3_press.pdf (accessed Jan
2484 15, 2018).
- 2485 128 Swept Under the Rug: Abuses against Domestic Workers Around the World: V. Migrant
2486 domestic workers. Human Rights Watch.
2487 https://www.hrw.org/reports/2006/wrd0706/5.htm#_Toc139175370 (accessed Jan 15, 2018).
- 2488 129 Sönmez S, Apostopoulos Y, Tran D, Rentrop S. Human rights and health disparities for migrant
2489 workers in the UAE – Health and Human Rights Journal. *Health and Human Rights* 2011; 13.
2490 [https://www.hhrjournal.org/2013/08/human-rights-and-health-disparities-for-migrant-](https://www.hhrjournal.org/2013/08/human-rights-and-health-disparities-for-migrant-workers-in-the-uae)
2491 [workers-in-the-uae](https://www.hhrjournal.org/2013/08/human-rights-and-health-disparities-for-migrant-workers-in-the-uae) (accessed Jan 15, 2018).
- 2492 130 Deporting HIV-Positive Migrants Threatens Lives, Global Goals: Need to Ensure Continuity of
2493 Treatment and Care Across Borders. Human Rights Watch. 2009; published online Sept 23.
2494 [https://www.hrw.org/news/2009/09/23/deporting-hiv-positive-migrants-threatens-lives-](https://www.hrw.org/news/2009/09/23/deporting-hiv-positive-migrants-threatens-lives-global-goals)
2495 [global-goals](https://www.hrw.org/news/2009/09/23/deporting-hiv-positive-migrants-threatens-lives-global-goals) (accessed Jan 15, 2018).
- 2496 131 United Nations. *International Covenant on Civil and Political Rights*. United Nations, Treaty
2497 Series. 1966; 999: 171.

- 2498 132 Article 18 – Liberty of movement and nationality. Convention on the Rights of Persons with
2499 Disabilities, Article 18(1). [https://www.un.org/development/desa/disabilities/convention-on-](https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-18-liberty-of-movement-and-nationality.html)
2500 [the-rights-of-persons-with-disabilities/article-18-liberty-of-movement-and-nationality.html](https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-18-liberty-of-movement-and-nationality.html)
2501 (accessed Jan 15, 2018).
- 2502 133 International Organization for Migration. International Migration, Health and Human Rights.
2503 2013.
- 2504 134 Assembly UNG. Convention on the Elimination of All Forms of Discrimination against Women:
2505 CEDAW/C/TUN/3-4. 2000; published online Aug 2.
2506 <http://www.un.org/womenwatch/daw/cedaw/cedaw27/tun3-4.pdf> (accessed Jan 15, 2018).
- 2507 135 Siracusa Principles on the Limitation and Derogation of Provisions in the International Covenant
2508 on Civil and Political Rights. 1984. [http://icj.wpengine.netdna-cdn.com/wp-](http://icj.wpengine.netdna-cdn.com/wp-content/uploads/1984/07/Siracusa-principles-ICCPR-legal-submission-1985-eng.pdf)
2509 [content/uploads/1984/07/Siracusa-principles-ICCPR-legal-submission-1985-eng.pdf](http://icj.wpengine.netdna-cdn.com/wp-content/uploads/1984/07/Siracusa-principles-ICCPR-legal-submission-1985-eng.pdf) (accessed
2510 Jan 16, 2018).
- 2511 136 Office of the High Commission for Human Rights. Recommended Principles and Guidelines on
2512 Human Rights at International Borders. 2014
2513 [http://www.globalmigrationgroup.org/system/files/OHCHR_Principles_and_Guidelines_on_Hu](http://www.globalmigrationgroup.org/system/files/OHCHR_Principles_and_Guidelines_on_Human_Rights_at_International_Borders_CRPA69.pdf)
2514 [man_Rights_at_International_Borders_CRPA69.pdf](http://www.globalmigrationgroup.org/system/files/OHCHR_Principles_and_Guidelines_on_Human_Rights_at_International_Borders_CRPA69.pdf) (accessed Jan 16, 2018).
- 2515 137 Government A. Migration Act 1958, No. 62. 2013; published online Aug 23.
2516 <https://www.legislation.gov.au/Details/C2013C00458> (accessed Jan 16, 2018).
- 2517 138 Australia. Migration Regulations 1994, No. 268.
2518 [https://www.legislation.gov.au/Details/F2016C01073/6d7be855-ba1a-4160-b359-](https://www.legislation.gov.au/Details/F2016C01073/6d7be855-ba1a-4160-b359-a8d70b1ba871)
2519 [a8d70b1ba871](https://www.legislation.gov.au/Details/F2016C01073/6d7be855-ba1a-4160-b359-a8d70b1ba871).
- 2520 139 Significant costs and services in short supply. Australian Government Department of
2521 Immigration and Border Protection. [https://www.border.gov.au/Trav/Visa/Heal/overview-of-](https://www.border.gov.au/Trav/Visa/Heal/overview-of-the-health-requirement/significant-costs-and-services-in-short-supply)
2522 [the-health-requirement/significant-costs-and-services-in-short-supply](https://www.border.gov.au/Trav/Visa/Heal/overview-of-the-health-requirement/significant-costs-and-services-in-short-supply) (accessed Aug 23, 2017).
- 2523 140 Kett M, Trani JF. Refugees with Disabilities: More vulnerable, more at risk. In: Refugees
2524 Worldwide: Refugee health. discovery.ucl.ac.uk, 2012.
- 2525 141 United Nations, Treaty Series. Convention Relating to the Status of Refugees. United Nations
2526 High Commissioner for Refugees. 1951; 189: 137.
- 2527 142 Zetter R, Ruaudel H. Refugees’ Right to Work and Access to Labor Markets – An Assessment.
2528 Knomad Study, 2016 [http://www.knomad.org/sites/default/files/2017-](http://www.knomad.org/sites/default/files/2017-03/KNOMAD%20Study%20Part%20I-%20Assessing%20Refugees%27%20Rights%20to%20Work_final.pdf)
2529 [03/KNOMAD%20Study%20Part%20I-](http://www.knomad.org/sites/default/files/2017-03/KNOMAD%20Study%20Part%20I-%20Assessing%20Refugees%27%20Rights%20to%20Work_final.pdf)
2530 [%20Assessing%20Refugees%27%20Rights%20to%20Work_final.pdf](http://www.knomad.org/sites/default/files/2017-03/KNOMAD%20Study%20Part%20I-%20Assessing%20Refugees%27%20Rights%20to%20Work_final.pdf) (accessed Jan 16, 2018).
- 2531 143 Sinha A. Slavery by Another Name: ‘Voluntary’ Immigrant Detainee Labor and the Thirteenth
2532 Amendment. *Stanford Journal of Civil Rights and Civil Liberties* 2015; XI.
2533 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2571569 (accessed Jan 16, 2018).
- 2534 144 Zayas LH, Aguilar-Gaxiola S, Yoon H, Rey GN. The Distress of Citizen-Children with Detained and
2535 Deported Parents. *J Child Fam Stud* 2015; 24: 3213.
- 2536 145 United Nations. Convention on the Rights of the Child. 1990; published online Sept 2.
2537 <http://www.ohchr.org/Documents/ProfessionalInterest/crc.pdf> (accessed Jan 16, 2018).

- 2538 146 (unicef) UNCF. Judicial Implementation of Article 3 of the Convention on the Rights of the Child
 2539 in Europe : The case of migrant children including unaccompanied children. 2012
 2540 <http://www.refworld.org/docid/5135ae842.html> (accessed Jan 16, 2018).
- 2541 147 Attorney General Announces Zero-Tolerance Policy for Criminal Illegal Entry.
 2542 [https://www.justice.gov/opa/pr/attorney-general-announces-zero-tolerance-policy-criminal-](https://www.justice.gov/opa/pr/attorney-general-announces-zero-tolerance-policy-criminal-illegal-entry)
 2543 [illegal-entry](https://www.justice.gov/opa/pr/attorney-general-announces-zero-tolerance-policy-criminal-illegal-entry) (accessed June 14, 2018).
- 2544 148 Detention of Refugees and Asylum-Seekers, No. 44 (XXXVII). UN High Commissioner for
 2545 Refugees, 1986 <http://www.unhcr.org/4aa764389.pdf> (accessed Jan 16, 2018).
- 2546 149 Special Rapporteur on the Rights of Migrants, Annual report of the United Nations High
 2547 Commissioner for Human Rights and reports of the Office of the High Commissioner and the
 2548 Secretary-General. A/71/285 2016. 2016 [https://reliefweb.int/report/world/human-rights-](https://reliefweb.int/report/world/human-rights-migrants-report-special-rapporteur-human-rights-migrants-a71285-enar-0)
 2549 [migrants-report-special-rapporteur-human-rights-migrants-a71285-enar-0](https://reliefweb.int/report/world/human-rights-migrants-report-special-rapporteur-human-rights-migrants-a71285-enar-0) (accessed Jan 16,
 2550 2018).
- 2551 150 Committee on the Rights of the Child. The Rights of all Children in the Context of International
 2552 Migration. 2012
 2553 [http://www2.ohchr.org/english/bodies/crc/docs/discussion2012/2012CRC_DGD-](http://www2.ohchr.org/english/bodies/crc/docs/discussion2012/2012CRC_DGD-Childrens_Rights_InternationalMigration.pdf)
 2554 [Childrens_Rights_InternationalMigration.pdf](http://www2.ohchr.org/english/bodies/crc/docs/discussion2012/2012CRC_DGD-Childrens_Rights_InternationalMigration.pdf) (accessed Jan 16, 2018).
- 2555 151 Assembly UNG. In safety and dignity: addressing large movements of refugees and migrants.
 2556 Report of the Secretary-General A/70/59. 2016
 2557 http://www.un.org/ga/search/view_doc.asp?symbol=A/70/59 (accessed Jan 16, 2018).
- 2558 152 Wales J, Rashid M. No longer a place of refuge: health consequences of mandatory detention
 2559 for refugees. *Can Fam Physician* 2013; 59: 609–11.
- 2560 153 United Nations High Commissioner for Refugees. UNHCR Detention Guidelines: Guidelines on
 2561 the Applicable Criteria and Standards relating to the Detention of Asylum-Seekers and
 2562 Alternatives to Detention. UNHCR. [http://www.unhcr.org/publications/legal/505b10ee9/unhcr-](http://www.unhcr.org/publications/legal/505b10ee9/unhcr-detention-guidelines.html)
 2563 [detention-guidelines.html](http://www.unhcr.org/publications/legal/505b10ee9/unhcr-detention-guidelines.html) (accessed Jan 16, 2018).
- 2564 154 Kalt A, Hossain M, Kiss L, Zimmerman C. Asylum seekers, violence and health: a systematic
 2565 review of research in high-income host countries. *Am J Public Health* 2013; 103: e30–42.
- 2566 155 Report of the Working Group on Arbitrary Detention. A/HRC/13/50. UN Human Rights Council,
 2567 2010 [https://documents-dds-](https://documents-dds-ny.un.org/doc/UNDOC/GEN/G10/108/72/PDF/G1010872.pdf?OpenElement)
 2568 [ny.un.org/doc/UNDOC/GEN/G10/108/72/PDF/G1010872.pdf?OpenElement](https://documents-dds-ny.un.org/doc/UNDOC/GEN/G10/108/72/PDF/G1010872.pdf?OpenElement) (accessed Jan 16,
 2569 2018).
- 2570 156 Iraq: Syrian women and girls struggle to survive in camps. UNDP Arab States.
 2571 [http://www.arabstates.undp.org/content/rbas/en/home/ourwork/crisis-](http://www.arabstates.undp.org/content/rbas/en/home/ourwork/crisis-response/successstories/alone-in-iraq--syrian-women-and-girls-struggle-to-survive-in-ref.html)
 2572 [response/successstories/alone-in-iraq--syrian-women-and-girls-struggle-to-survive-in-ref.html](http://www.arabstates.undp.org/content/rbas/en/home/ourwork/crisis-response/successstories/alone-in-iraq--syrian-women-and-girls-struggle-to-survive-in-ref.html)
 2573 (accessed Jan 17, 2018).
- 2574 157 Rights in Exile Programme | Refugee Legal Aid Information for Lawyers Representing Refugees
 2575 Globally. <http://www.refugeelegalaidinformation.org/> (accessed Jan 17, 2018).
- 2576 158 Sexual orientation and gender identity and the protection of forced migrants. *Forced Migration*
 2577 *Review* 2013; published online April.
 2578 <http://www.fmreview.org/sites/fmr/files/FMRdownloads/en/fmr42full.pdf> (accessed Jan 17,
 2579 2018).

- 2580 159 United Nations High Commissioner for Refugees. General comment no. 32, Article 14, Right to
2581 equality before courts and tribunals and to fair trial, CCPR/C/GC/32. Refworld. 2007.
2582 <http://www.refworld.org/docid/478b2b2f2.html> (accessed Jan 16, 2018).
- 2583 160 Grove NJ, Zwi AB. Our health and theirs: forced migration, othering, and public health. *Soc Sci*
2584 *Med* 2006; 62: 1931–42.
- 2585 161 Jacobs C, Flaam H, Fowlis M, Pangburn A. Justice needs, strategies, and mechanisms for the
2586 displaced: Reviewing the evidence. 2017. [http://webarchive.ssrc.org/working-](http://webarchive.ssrc.org/working-papers/CPPF_Justice%20Needs_WorkingPaper.pdf)
2587 [papers/CPPF_Justice%20Needs_WorkingPaper.pdf](http://webarchive.ssrc.org/working-papers/CPPF_Justice%20Needs_WorkingPaper.pdf).
- 2588 162 WHO | What is universal coverage? 2018; published online June 13.
2589 http://www.who.int/health_financing/universal_coverage_definition/en/ (accessed June 14,
2590 2018).
- 2591 163 Stenberg K, Hanssen O, Edejer TT-T, et al. Financing transformative health systems towards
2592 achievement of the health Sustainable Development Goals: a model for projected resource
2593 needs in 67 low-income and middle-income countries. *Lancet Glob Health* 2017; 5: e875–87.
- 2594 164 The world health report 2000 - Health systems: improving performance. WHO, 2013
2595 <http://www.who.int/whr/2000/> (accessed Jan 17, 2018).
- 2596 165 Dewachi O, Skelton M, Nguyen V-K, et al. Changing therapeutic geographies of the Iraqi and
2597 Syrian wars. *Lancet* 2014; 383: 449–57.
- 2598 166 Levesque J-F, Harris MF, Russell G. Patient-centred access to health care: conceptualising access
2599 at the interface of health systems and populations. *Int J Equity Health* 2013; 12: 18.
- 2600 167 Dixit A. Governance Institutions and Economic Activity. *Am Econ Rev* 2009; 99: 3–24.
- 2601 168 Arnold C, Theede J, Gagnon A. A qualitative exploration of access to urban migrant healthcare
2602 in Nairobi, Kenya. *Soc Sci Med* 2014; 110: 1–9.
- 2603 169 Cuadra CB. Right of access to health care for undocumented migrants in EU: a comparative
2604 study of national policies. *Eur J Public Health* 2012; 22: 267–71.
- 2605 170 Miedema B, Hamilton R, Easley J. Climbing the walls: Structural barriers to accessing primary
2606 care for refugee newcomers in Canada. *Can Fam Physician* 2008; 54: 335–6, 338–9.
- 2607 171 Doocy S, Lyles E, Akhu-Zaheya L, Burton A, Burnham G. Health service access and utilization
2608 among Syrian refugees in Jordan. *Int J Equity Health* 2016; 15: 108.
- 2609 172 Aldridge RW, Miller AK, Jakubowski B, Pereira L, Fille F, Noret I. Falling through the Cracks: The
2610 Failure of Universal Healthcare Coverage in Europe, European Network to Reduce
2611 Vulnerabilities in Health Observatory Report. 2017
2612 <https://mdmeuroblog.files.wordpress.com/2014/01/observatory-report-2017-web-version.pdf>
2613 (accessed Jan 17, 2018).
- 2614 173 Tsai T-I, Lee S-YD. Health literacy as the missing link in the provision of immigrant health care: A
2615 qualitative study of Southeast Asian immigrant women in Taiwan. *Int J Nurs Stud* 2016; 54: 65–
2616 74.
- 2617 174 ‘Caravan of Life’ Documentary Launched in Peru. International Organization for Migration.
2618 2015; published online March 26. <https://www.iom.int/news/caravan-life-documentary->

- 2619 launched-peru (accessed July 1, 2018).
- 2620 175 The role of digital health in making progress toward Sustainable Development Goal (SDG) 3 in
2621 conflict-affected populations. *Int J Med Inform* 2018; 114: 114–20.
- 2622 176 Strategy and action plan for refugee and migrant health in the WHO European Region. WHO
2623 Regional Office for Europe .
2624 http://www.euro.who.int/__data/assets/pdf_file/0004/314725/66wd08e_MigrantHealthStrategyActionPlan_160424.pdf?ua=1 (accessed Jan 17, 2018).
- 2626 177 WHA58.33 Sustainable health financing, universal coverage and social health insurance. WHO,
2627 2005 <http://apps.who.int/medicinedocs/documents/s21475en/s21475en.pdf> (accessed Jan 17,
2628 2018).
- 2629 178 Admasu K, Balcha T, Ghebreyesus TA. Pro-poor pathway towards universal health coverage:
2630 lessons from Ethiopia. *J Glob Health* 2016; 6: 010305.
- 2631 179 Meng Q, Yuan B, Jia L, et al. Expanding health insurance coverage in vulnerable groups: a
2632 systematic review of options. *Health Policy Plan* 2011; 26: 93–104.
- 2633 180 McMichael C, Healy J. Health equity and migrants in the Greater Mekong Subregion. *Glob
2634 Health Action* 2017; 10: 1271594.
- 2635 181 Rechel B, Mladovsky P, Ingleby D, Mackenbach JP, McKee M. Migration and health in an
2636 increasingly diverse Europe. *Lancet* 2013; 381: 1235–45.
- 2637 182 Saadi A, McKee M. Hospitals as places of sanctuary. *BMJ* 2018; 361: k2178.
- 2638 183 Haskew C, Spiegel P, Tomczyk B, Cornier N, Hering H. A standardized health information system
2639 for refugee settings: rationale, challenges and the way forward. *Bull World Health Organ* 2010;
2640 88: 792–4.
- 2641 184 A human rights-based approach to health. WHO
2642 http://www.who.int/hhr/news/hrba_to_health2.pdf (accessed Jan 17, 2018).
- 2643 185 Tervalon M, Murray-García J. Cultural Humility Versus Cultural Competence: A Critical
2644 Distinction in Defining Physician Training Outcomes in Multicultural Education. *J Health Care
2645 Poor Underserved* 1998; 9: 117–25.
- 2646 186 Metz J, Hansen H. Structural competency: theorizing a new medical engagement with stigma
2647 and inequality. *Soc Sci Med* 2014; 103: 126–33.
- 2648 187 Holmes SM. The clinical gaze in the practice of migrant health: Mexican migrants in the United
2649 States. *Soc Sci Med* 2012; 74: 873–81.
- 2650 188 Simbiri KOA, Hausman A, Wadenya RO, Lidicker J. Access impediments to health care and social
2651 services between Anglophone and Francophone African immigrants living in Philadelphia with
2652 respect to HIV/AIDS. *J Immigr Minor Health* 2010; 12: 569–79.
- 2653 189 Jensen NK, Nielsen SS, Krasnik A. Expert opinion on ‘best practices’ in the delivery of health care
2654 services to immigrants in Denmark. *Dan Med Bull* 2010; 57: A4170.
- 2655 190 Kirch W. *Encyclopedia of Public Health*. 2 Vol. Springer Science & Business Media, 2008.
- 2656 191 Spallek J, Zeeb H, Razum O. What do we have to know from migrants’ past exposures to

- 2657 understand their health status? a life course approach. *Emerg Themes Epidemiol* 2011; 8: 6.
- 2658 192 Marmot MG, Adelstein AM, Bulusu L. Lessons from the study of immigrant mortality. *Lancet*
2659 1984; 323: 1455–7.
- 2660 193 Moullan Y, Jusot F. Why is the ‘healthy immigrant effect’ different between European
2661 countries? - PubMed - NCBI. *European Journal Public Health* 2014; 24: 80–6.
- 2662 194 Ginsburg, C., Bocquier, P., Béguay, D., Afolabi, S., Kahn K., Obor, D., Tanser, F., Tomita, A.,
2663 Wamukoya, M., Collinson, M.A. Association between internal migration and epidemic
2664 dynamics: An analysis of cause-specific mortality in Kenya and South Africa using Health and
2665 Demographic Surveillance Data. *BMC Public Health* 2018; In Press.
- 2666 195 Heslehurst N, Brown H, Pemu A, Coleman H, Rankin J. Perinatal health outcomes and care
2667 among asylum seekers and refugees: a systematic review of systematic reviews. *BMC Med*
2668 2018; 16: 89.
- 2669 196 Bollini P, Pampallona S, Wanner P, Kupelnick B. Pregnancy outcome of migrant women and
2670 integration policy: a systematic review of the international literature. *Soc Sci Med* 2009; 68:
2671 452–61.
- 2672 197 Gagnon AJ, Zimbeck M, Zeitlin J. Migration to western industrialised countries and perinatal
2673 health: A systematic review. *Soc Sci Med* 2009; 69: 934–46.
- 2674 198 Fellmeth G, Fazel M, Plugge E. Migration and perinatal mental health in women from low- and
2675 middle-income countries: a systematic review and meta-analysis. *BJOG* 2017; 124: 742–52.
- 2676 199 Falah-Hassani K, Shiri R, Vigod S, Dennis C-L. Prevalence of postpartum depression among
2677 immigrant women: A systematic review and meta-analysis. *J Psychiatr Res* 2015; 70: 67–82.
- 2678 200 Mipatrini D, Stefanelli P, Severoni S, Rezza G. Vaccinations in migrants and refugees: a challenge
2679 for European health systems. A systematic review of current scientific evidence. *Pathog Glob*
2680 *Health* 2017; 111: 59–68.
- 2681 201 Patton GC, Sawyer SM, Santelli JS, et al. Our future: a Lancet commission on adolescent health
2682 and wellbeing. *Lancet* 2016; 387: 2423–78.
- 2683 202 Glick JE, Hanish LD, Yabiku ST, Bradley RH. Migration timing and parenting practices:
2684 contributions to social development in preschoolers with foreign-born and native-born
2685 mothers. *Child Dev* 2012; 83: 1527–42.
- 2686 203 Stevens GWJM, Vollebergh WAM. Mental health in migrant children. *J Child Psychol Psychiatry*
2687 2008; 49: 276–94.
- 2688 204 Sun X, Chen M, Chan KL. A meta-analysis of the impacts of internal migration on child health
2689 outcomes in China. *BMC Public Health* 2016; 16: 66.
- 2690 205 Mindlis I, Boffetta P. Mood disorders in first- and second-generation immigrants: systematic
2691 review and meta-analysis. *Br J Psychiatry* 2017; 210: 182–9.
- 2692 206 Crafa D, Warfa N. Maternal migration and autism risk: systematic analysis. *Int Rev Psychiatry*
2693 2015; 27: 64–71.
- 2694 207 Sanou D E al. Acculturation and nutritional health of immigrants in Canada: a scoping review. -

2695 PubMed - NCBI. <https://www.ncbi.nlm.nih.gov/pubmed/23595263> (accessed Aug 18, 2018).

2696 208 Dawson-Hahn E, Pak-Gorstein S, Matheson J, et al. Growth Trajectories of Refugee and
2697 Nonrefugee Children in the United States. *Pediatrics* 2016; 138. DOI:10.1542/peds.2016-0953.

2698 209 Pour MB, Bergström A, Bottai M, et al. Body Mass Index Development from Birth to Early
2699 Adolescence; Effect of Perinatal Characteristics and Maternal Migration Background in a
2700 Swedish Cohort. *PLoS One* 2014; 9. DOI:10.1371/journal.pone.0109519.

2701 210 Victora CG, Bahl R, Barros AJD, et al. Breastfeeding in the 21st century: epidemiology,
2702 mechanisms, and lifelong effect. *Lancet* 2016; 387: 475–90.

2703 211 Inter-agency Working Group on Unaccompanied and Separated Children. Field handbook on
2704 unaccompanied and separated children. [https://www.iom.int/sites/default/files/HANDBOOK-
WEB-2017-0322.pdf](https://www.iom.int/sites/default/files/HANDBOOK-
2705 WEB-2017-0322.pdf) (accessed June 26, 2018).

2706 212 Weathering the Storm: Adolescent Girls and Climate Change. Plan International , 2011
2707 <https://plan-international.org/publications/weathering-storm> (accessed Jan 15, 2018).

2708 213 Fazel M, Reed RV, Panter-Brick C, Stein A. Mental health of displaced and refugee children
2709 resettled in high-income countries: risk and protective factors. *Lancet* 2012; 379: 266–82.

2710 214 Close C, Kouvonen A, Bosqui T, Patel K, O’Reilly D, Donnelly M. The mental health and wellbeing
2711 of first generation migrants: a systematic-narrative review of reviews. *Global Health* 2016; 12:
2712 47.

2713 215 Bourque F, van der Ven E, Malla A. A meta-analysis of the risk for psychotic disorders among
2714 first- and second-generation immigrants. *Psychol Med* 2011; 41: 897–910.

2715 216 Cantor-Graae E, Selten J-P. Schizophrenia and migration: a meta-analysis and review. *Am J*
2716 *Psychiatry* 2005; 162: 12–24.

2717 217 Paradies Y, Ben J, Denson N, et al. Racism as a Determinant of Health: A Systematic Review and
2718 Meta-Analysis. *PLoS One* 2015; 10: e0138511.

2719 218 Pascoe EA, L SR. Perceived discrimination and health: a meta-analytic review. - PubMed - NCBI.
2720 <https://www.ncbi.nlm.nih.gov/pubmed/19586161> (accessed Aug 18, 2018).

2721 219 Li J, Rose N. Urban social exclusion and mental health of China’s rural-urban migrants - A review
2722 and call for research. *Health Place* 2017; 48: 20–30.

2723 220 Steel Z, Chey T, Silove D, Marnane C, Bryant RA, van Ommeren M. Association of torture and
2724 other potentially traumatic events with mental health outcomes among populations exposed to
2725 mass conflict and displacement: a systematic review and meta-analysis. *JAMA* 2009; 302: 537–
2726 49.

2727 221 Lindert J, Ehrenstein OS von, Priebe S, Mielck A, Brähler E. Depression and anxiety in labor
2728 migrants and refugees--a systematic review and meta-analysis. *Soc Sci Med* 2009; 69: 246–57.

2729 222 Palic S, Elklit A. Psychosocial treatment of posttraumatic stress disorder in adult refugees: a
2730 systematic review of prospective treatment outcome studies and a critique. *J Affect Disord*
2731 2011; 131: 8–23.

2732 223 Nickerson A, Bryant RA, Silove D, Steel Z. A critical review of psychological treatments of

2733 posttraumatic stress disorder in refugees. *Clin Psychol Rev* 2011; 31: 399–417.

2734 224 Williams ME, Thompson SC. The use of community-based interventions in reducing morbidity
2735 from the psychological impact of conflict-related trauma among refugee populations: a
2736 systematic review of the literature. *J Immigr Minor Health* 2011; 13: 780–94.

2737

2738 225 Omoleke SA, Mohammed I, Saidu Y. Ebola Viral Disease in West Africa: A Threat to Global
2739 Health, Economy and Political Stability. *J Public Health Africa* 2016; 7: 534.

2740 226 Holmes AH, Moore LSP, Sundsfjord A, et al. Understanding the mechanisms and drivers of
2741 antimicrobial resistance. *Lancet* 2016; 387: 176–87.

2742 227 Migration and health: key issues. World Health Organization: Regional Office for Europe.
2743 [http://www.euro.who.int/en/health-topics/health-determinants/migration-and-](http://www.euro.who.int/en/health-topics/health-determinants/migration-and-health/migrant-health-in-the-european-region/migration-and-health-key-issues)
2744 [health/migrant-health-in-the-european-region/migration-and-health-key-issues](http://www.euro.who.int/en/health-topics/health-determinants/migration-and-health/migrant-health-in-the-european-region/migration-and-health-key-issues) (accessed Jan
2745 16, 2018).

2746 228 Andersen GS, Kamper-Jørgensen Z, Carstensen B, Norredam M, Bygbjerg IC, Jørgensen ME.
2747 Diabetes among migrants in Denmark: Incidence, mortality, and prevalence based on a
2748 longitudinal register study of the entire Danish population. *Diabetes Res Clin Pract* 2016; 122:
2749 9–16.

2750 229 Arnold M, Razum O, Coebergh J-W. Cancer risk diversity in non-western migrants to Europe: An
2751 overview of the literature. *Eur J Cancer* 2010; 46: 2647–59.

2752 230 Brathwaite R, Addo J, Kunst AE, et al. Smoking prevalence differs by location of residence
2753 among Ghanaians in Africa and Europe: The RODAM study. *PLoS One* 2017; 12: e0177291.

2754 231 Bosdriesz JR, Lichthart N, Witvliet MI, Busschers WB, Stronks K, Kunst AE. Smoking prevalence
2755 among migrants in the US compared to the US-born and the population in countries of origin.
2756 *PLoS One* 2013; 8: e58654.

2757 232 Ji Y, Liu S, Zhao X, Jiang Y, Zeng Q, Chang C. Smoking and Its Determinants in Chinese Internal
2758 Migrants: Nationally Representative Cross-Sectional Data Analyses. *Nicotine Tob Res* 2016; 18:
2759 1719–26.

2760 233 Weber MF, Banks E, Sitas F. Smoking in migrants in New South Wales, Australia: report on data
2761 from over 100 000 participants in The 45 and Up Study. *Drug Alcohol Rev* 2011; 30: 597–605.

2762 234 El-Bassel N, Marotta PL. Alcohol and Sexual Risk Behaviors Among Male Central Asian Labor
2763 Migrants and Non-migrants in Kazakhstan: Implications for HIV Prevention. *AIDS Behav* 2017;
2764 21: 183–92.

2765 235 Taype-Rondan A, Bernabe-Ortiz A, Alvarado GF, Gilman RH, Smeeth L, Miranda JJ. Smoking and
2766 heavy drinking patterns in rural, urban and rural-to-urban migrants: the PERU MIGRANT Study.
2767 *BMC Public Health* 2017; 17: 165.

2768 236 Schenker MB. A global perspective of migration and occupational health. *Am J Ind Med* 2010;
2769 53: 329–37.

2770 237 Hargreaves S, Rustage K, Nellums L, et al. Occupational health outcomes among international
2771 labour migrants: a systematic review and meta-analysis. (In press) 2018.

- 2772 238 Stergiou-Kita M, Mansfield E, Bezo R, et al. Danger zone: Men, masculinity and occupational
2773 health and safety in high risk occupations. *Saf Sci* 2015; 80: 213–20.
- 2774 239 Structural violence and marginalisation. The sexual and reproductive health experiences of
2775 separated young people on the move. A rapid review with relevance to the European
2776 humanitarian crisis. *Public Health* 2018; 158: 156–62.
- 2777 240 Female Genital Mutilation and Cutting - UNICEF DATA. UNICEF DATA: Monitoring the Situation
2778 of Children and Women. [https://data.unicef.org/topic/child-protection/female-genital-
2779 mutilation-and-cutting/](https://data.unicef.org/topic/child-protection/female-genital-mutilation-and-cutting/) (accessed Jan 15, 2018).
- 2780 241 Thierfelder C, Tanner M, Bodiang CMK. Female genital mutilation in the context of migration:
2781 experience of African women with the Swiss health care system. *Eur J Public Health* 2005; 15:
2782 86–90.
- 2783 242 Wong FY, Huang ZJ, He N, et al. HIV risks among gay- and non-gay-identified migrant money
2784 boys in Shanghai, China. *AIDS Care* 2008; 20: 170–80.
- 2785 243 Reproductive Health: A Right for Refugees and Internally Displaced Persons. *Reprod Health*
2786 *Matters* 2008; 16: 10–21.
- 2787 244 Sexual violence and unwanted pregnancies in migrant women. *The Lancet Global Health* 2017;
2788 5: e396–7.
- 2789 245 The Minimum Initial Service Package for reproductive health in crisis situations. WHO and the
2790 Inter-Agency Working Group for Reproductive Health
2791 <http://www.who.int/disasters/repo/7345.doc> (accessed Jan 15, 2018).
- 2792 246 Women, Migration, and Conflict - Breaking a Deadly Cycle | Susan Forbes Martin | Springer.
2793 <https://www.springer.com/gb/book/9789048128242> (accessed Aug 18, 2018).
- 2794 247 Bank A, Fröhlich C, Schneiker A. The Political Dynamics of Human Mobility: Migration out of, as
2795 and into Violence. *Glob Policy* 2017; 8: 12–8.
- 2796 248 Ottisova L, Hemmings S, Howard LM, Zimmerman C, Oram S. Prevalence and risk of violence
2797 and the mental, physical and sexual health problems associated with human trafficking: an
2798 updated systematic review. *Epidemiol Psychiatr Sci* 2016; 25: 317–41.
- 2799 249 Vu A, Adam A, Wirtz A, et al. The Prevalence of Sexual Violence among Female Refugees in
2800 Complex Humanitarian Emergencies: a Systematic Review and Meta-analysis. *PLoS Curr* 2014;
2801 6. DOI:10.1371/currents.dis.835f10778fd80ae031aac12d3b533ca7.
- 2802 250 Tappis H, Freeman J, Glass N, Doocy S. Effectiveness of Interventions, Programs and Strategies
2803 for Gender-based Violence Prevention in Refugee Populations: An Integrative Review. *PLoS Curr*
2804 2016; 8. DOI:10.1371/currents.dis.3a465b66f9327676d61eb8120eaa5499.
- 2805 251 Mental health challenges of LGBT forced migrants | Forced Migration Review.
2806 <http://www.fmreview.org/sogi/shidlo-ahola.html?contrast=regular-contrast> (accessed Aug 22,
2807 2018).
- 2808 252 Breen D, Millo Y. Protection in the city: some good practice in Nairobi. *Forced Migr Rev* 2013;
2809 42: 55.
- 2810 253 Groce N, Kett M, Lang R, Trani J-F. Disability and Poverty: the need for a more nuanced

- 2811 understanding of implications for development policy and practice. *Third World Q* 2011; 32:
2812 1493–513.
- 2813 254 Reus-Pons M, Kibele EUB, Janssen F. Differences in healthy life expectancy between older
2814 migrants and non-migrants in three European countries over time. *Int J Public Health* 2017; 62:
2815 531–40.
- 2816 255 Lanari D, Bussini O. International migration and health inequalities in later life. *Ageing & Society*
2817 2012; 32: 935–62.
- 2818 256 Solé-Auró A, Crimmins EM. Health of immigrants in European countries. *Int Migr Rev* 2008.
2819 <http://onlinelibrary.wiley.com/doi/10.1111/j.1747-7379.2008.00150.x/full>.
- 2820 257 Pudaric S, Sundquist J, Johansson SE. Major risk factors for cardiovascular disease in elderly
2821 migrants in Sweden. *Ethn Health* 2000; 5: 137–50.
- 2822 258 Ladin K, Reinhold S. Mental health of aging immigrants and native-born men across 11
2823 European countries. *J Gerontol B Psychol Sci Soc Sci* 2013; 68: 298–309.
- 2824 259 Virgincar A, Doherty S, Siriwardhana C. The impact of forced migration on the mental health of
2825 the elderly: a scoping review. *Int Psychogeriatr* 2016; 28: 889–96.
- 2826 260 Sagbakken M, Kumar B, editors. *Dementia, Ethnic Minorities and Migrants*. Norwegian Centre
2827 for Migration and Minority Health, 2017
2828 [http://www.nakmi.no/publikasjoner/dokumenter/sagbakken-kumar-dementia-ethnic-](http://www.nakmi.no/publikasjoner/dokumenter/sagbakken-kumar-dementia-ethnic-minorities-and-migrants-nakmi-rapport-2-2017.pdf)
2829 [minorities-and-migrants-nakmi-rapport-2-2017.pdf](http://www.nakmi.no/publikasjoner/dokumenter/sagbakken-kumar-dementia-ethnic-minorities-and-migrants-nakmi-rapport-2-2017.pdf).
- 2830 261 Migration Statistics Quarterly Report: Dec 2016. Office for National Statistics, 2016
2831 [https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/international](https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/bulletins/migrationstatisticsquarterlyreport/dec2016)
2832 [almigration/bulletins/migrationstatisticsquarterlyreport/dec2016](https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/bulletins/migrationstatisticsquarterlyreport/dec2016) (accessed Jan 17, 2018).
- 2833 262 Research for Health in Humanitarian Crises. Elrha. <http://www.elrha.org/r2hc/home/> (accessed
2834 Aug 18, 2018).
- 2835 263 Wright J, Small N, Raynor P, et al. Cohort Profile: the Born in Bradford multi-ethnic family
2836 cohort study. *Int J Epidemiol* 2013; 42: 978–91.
- 2837 264 Bhaskaran K, Douglas I, Forbes H, dos-Santos-Silva I, Leon DA, Smeeth L. Body-mass index and
2838 risk of 22 specific cancers: a population-based cohort study of 5.24 million UK adults. *Lancet*
2839 2014; 384: 755–65.
- 2840 265 Pell J. Maximising the Value of UK Population Cohorts: MRC Strategic Review of the Largest UK
2841 Population Cohort Studies. MRC. 2014. [http://www.mrc.ac.uk/news-](http://www.mrc.ac.uk/news-events/publications/maximising-the-value-of-uk-population-cohorts/)
2842 [events/publications/maximising-the-value-of-uk-population-cohorts/](http://www.mrc.ac.uk/news-events/publications/maximising-the-value-of-uk-population-cohorts/) (accessed Jan 26, 2017).
- 2843 266 Mapping Refugee Media Journeys. The Open University.
2844 <http://www.open.ac.uk/ccig/research/projects/mapping-refugee-media-journeys> (accessed Jan
2845 17, 2018).
- 2846 267 Pigott DM, Deshpande A, Letourneau I, et al. Local, national, and regional viral haemorrhagic
2847 fever pandemic potential in Africa: a multistage analysis. *Lancet* 2017; 390: 2662–72.
- 2848 268 Redding DW, Moses LM, Cunningham AA, Wood JL, Jones KE. Environmental-mechanistic
2849 modelling of the impact of global change on human zoonotic 2 disease emergence: A case study

- 2850 of Lassa fever. Redding et al *Methods in Ecology and Evolution* 2016; 7: 646–55.
- 2851 269 Worldpop - Nepal. <http://www.worldpop.org.uk/nepal/> (accessed Jan 17, 2018).
- 2852 270 Fazel M, Betancourt TS. Preventive mental health interventions for refugee children and
2853 adolescents in high-income settings. *The Lancet Child & Adolescent Health* 2018; 2: 121–32.
- 2854 271 Methodology Reader A. Health Policy and Systems Research. [http://www.who.int/alliance-](http://www.who.int/alliance-hpsr/alliancehpsr_reader.pdf)
2855 [hpsr/alliancehpsr_reader.pdf](http://www.who.int/alliance-hpsr/alliancehpsr_reader.pdf).
- 2856 272 Sheikh K, George A, Gilson L. People-centred science: strengthening the practice of health
2857 policy and systems research. *Health Res Policy Syst* 2014; 12: 19.
- 2858 273 Ghazal M. Child marriage on the rise among Syrian refugees. *The Jordan Times*. 2016; published
2859 online June 11. [http://www.jordantimes.com/news/local/child-marriage-rise-among-syrian-](http://www.jordantimes.com/news/local/child-marriage-rise-among-syrian-refugees)
2860 [refugees](http://www.jordantimes.com/news/local/child-marriage-rise-among-syrian-refugees) (accessed Jan 17, 2018).
- 2861 274 Jordan: NGO Report - On the implementation of the ICCPR. Amman Center for Human Rights ,
2862 2010
2863 [http://tbinternet.ohchr.org/Treaties/CCPR/Shared%20Documents/JOR/INT_CCPR_NGO_JOR_9](http://tbinternet.ohchr.org/Treaties/CCPR/Shared%20Documents/JOR/INT_CCPR_NGO_JOR_98_9263_E.pdf)
2864 [8_9263_E.pdf](http://tbinternet.ohchr.org/Treaties/CCPR/Shared%20Documents/JOR/INT_CCPR_NGO_JOR_98_9263_E.pdf) (accessed Jan 17, 2018).
- 2865 275 Leaning J, Bartels S, Mowafi H. Sexual Violence during War and Forced Migration. In: *Women,*
2866 *Migration, and Conflict*. 2009: 173–99.
- 2867 276 Hussein R. Debate continues as Article 308 on way to Lower House’s vote. *The Jordan Times*.
2868 2017; published online May 31. [http://www.jordantimes.com/news/local/debate-continues-](http://www.jordantimes.com/news/local/debate-continues-article-308-way-lower-houses-vote)
2869 [article-308-way-lower-houses-vote](http://www.jordantimes.com/news/local/debate-continues-article-308-way-lower-houses-vote) (accessed Jan 17, 2018).
- 2870 277 Gündüz RC, Halil H, Gürsoy C, et al. Refusal of medical treatment in the pediatric emergency
2871 service: analysis of reasons and aspects. *Turk J Pediatr* 2014; 56: 638–42.
- 2872 278 Gharaibeh MK, Oweis A, Shakhathreh FMN, Froelicher ES. Factors Associated with Contraceptive
2873 Use among Jordanian Muslim Women: Implications for Health and Social Policy. *Journal of*
2874 *International Women’s Studies* 2011; 12.
2875 <http://vc.bridgew.edu/cgi/viewcontent.cgi?article=1119&context=jiws> (accessed Jan 17, 2018).
- 2876 279 Devries KM, Mak JYT, García-Moreno C, et al. The Global Prevalence of Intimate Partner
2877 Violence Against Women. *Science* 2013; 340: 1527–8.
- 2878 280 Wachter K, Horn R, Friis E, et al. Drivers of Intimate Partner Violence Against Women in Three
2879 Refugee Camps. *Violence Against Women* 2018; 24: 286–306.
- 2880 281 Jacobs C, Flaam H, Fowles M, Pangburn A. Justice Needs, Strategies, and Mechanisms for the
2881 Displaced: Reviewing the Evidence. *Social Science Research Council* 2017; : 15.
- 2882 282 Arcury TA, Quandt SA. Delivery of health services to migrant and seasonal farmworkers. *Annu*
2883 *Rev Public Health* 2007; 28: 345–63.
- 2884 283 Luque JS, Reyes-Ortiz C, Marella P, et al. Mobile farm clinic outreach to address health
2885 conditions among Latino migrant farmworkers in Georgia. *J Agromedicine* 2012; 17: 386–97.
- 2886 284 Stein LM. Health care delivery to farmworkers in the Southwest: an innovative nursing clinic. *J*
2887 *Am Acad Nurse Pract* 1993; 5: 119–24.

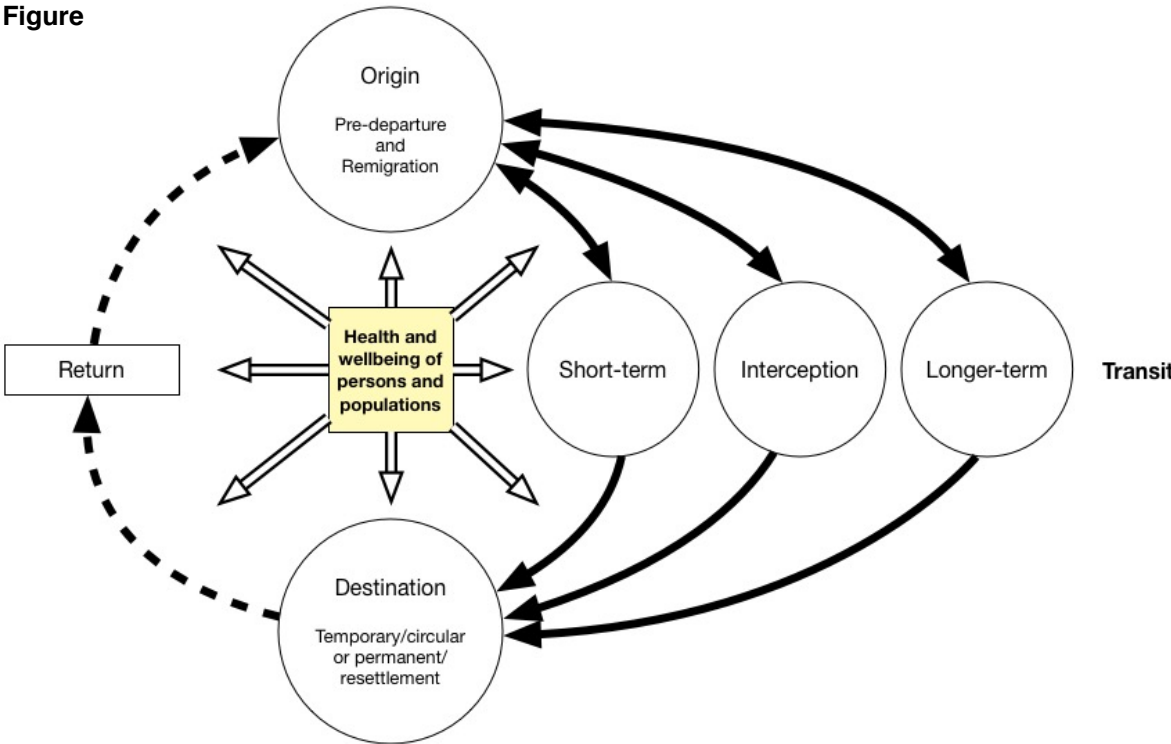
- 2888 285 [No title].
 2889 <https://www.annualreviews.org/doi/full/10.1146/annurev.publhealth.27.021405.102106?amp>
 2890 [%3Bsearch=](#) (accessed July 1, 2018).
- 2891 286 Conserve DF, Jennings L, Aguiar C, Shin G, Handler L, Maman S. Systematic review of mobile-
 2892 health behavioral interventions to improve uptake of HIV testing for vulnerable and key
 2893 populations. *J Telemed Telecare* 2017; 23: 347–59.
- 2894 287 Heuer LJ, Hess C, Batson A. Cluster clinics for migrant Hispanic farmworkers with diabetes:
 2895 perceptions, successes, and challenges. *Rural Remote Health* 2006; 6: 469.
- 2896 288 Coors M, Grützmann T, Peters Tim /, et al. Der Umgang mit Fremdheit in Medizin und Pflege.
 2897 Interkulturalität und Ethik 2017; published online May 22. <http://www.edition->
 2898 [ruprecht.de/katalog/titel.php?id=399](http://www.edition-ruprecht.de/katalog/titel.php?id=399) (accessed Jan 17, 2018).
- 2899 289 Saladin P, Bühlmann R, Switzerland Bundesamt für Gesundheit, H+ Swiss Hospital Association.
 2900 Diversity and equality of opportunity : fundamentals for effective action in the microcosm of
 2901 the health care institution. NLM Catalog <http://www.ncbi.nlm.nih.gov/nlmcatalog/101485196>
 2902 (accessed Jan 17, 2018).
- 2903 290 MIPEX 2015: Switzerland. Migration Integration Policy Index. <http://www.mipex.eu/switzerland>
 2904 (accessed Jan 17, 2018).
- 2905 291 migesplus.ch – Portal für gesundheitliche Chancengleichheit. 2017; published online Nov 29.
 2906 <http://www.migesplus.ch/> (accessed Jan 17, 2018).
- 2907 292 Information requests from the Home Office to NHS Digital: Memorandum of understanding
 2908 (MOU) on processing information requests from the Home Office to NHS Digital for tracing
 2909 immigration offenders. [https://www.gov.uk/government/publications/information-requests-](https://www.gov.uk/government/publications/information-requests-from-the-home-office-to-nhs-digital)
 2910 [from-the-home-office-to-nhs-digital](https://www.gov.uk/government/publications/information-requests-from-the-home-office-to-nhs-digital) (accessed Jan 18, 2018).
- 2911 293 Publications - Health Committee. UK Parliament. 2013; published online May 7.
 2912 [http://www.parliament.uk/business/committees/committees-a-z/commons-select/health-](http://www.parliament.uk/business/committees/committees-a-z/commons-select/health-committee/publications/?type=37&session=28&sort=false&inquiry=all)
 2913 [committee/publications/?type=37&session=28&sort=false&inquiry=all](http://www.parliament.uk/business/committees/committees-a-z/commons-select/health-committee/publications/?type=37&session=28&sort=false&inquiry=all) (accessed Jan 18, 2018).
- 2914 294 iSHARE Repository. <http://www.indepth-ishare.org/> (accessed Jan 15, 2018).
- 2915 295 Ginsburg, C., Bocquier, P., Bégué, D., Afolabi, S., Augusto, O., Derra, K., Herbst, K., Lankoande,
 2916 B., Odhiambo, F., Otiende, M., Soura, A., Wamukoya, M., Zabre, P., White, M.J., and Collinson,
 2917 M.A. Healthy or unhealthy migrants? Identifying internal migration effects on mortality in Africa
 2918 using health and demographic surveillance systems of the INDEPTH network. *Soc Sci Med* 2016;
 2919 164: 59–73.
- 2920 296 Ginsburg C, Bocquier P, Beguy D, et al. A multi-centre analysis of internal migration and cause
 2921 specific mortality in Kenya and South Africa using Health and Demographic Surveillance Data of
 2922 the INDEPTH Network. Manuscript 2017.
 2923 <https://iussp.confex.com/iussp/ipc2017/meetingapp.cgi/Paper/2230> (accessed Jan 15, 2018).
- 2924 297 Methods for assessing the age of migrant children must be improved. Commissioner for Human
 2925 Rights. [https://www.coe.int/en/web/commissioner/blog/-](https://www.coe.int/en/web/commissioner/blog/-/asset_publisher/xZ32OPEoxOkq/content/methods-for-assessing-the-age-of-migrant-children-must-be-improv-1)
 2926 [/asset_publisher/xZ32OPEoxOkq/content/methods-for-assessing-the-age-of-migrant-children-](https://www.coe.int/en/web/commissioner/blog/-/asset_publisher/xZ32OPEoxOkq/content/methods-for-assessing-the-age-of-migrant-children-must-be-improv-1)
 2927 [must-be-improv-1](https://www.coe.int/en/web/commissioner/blog/-/asset_publisher/xZ32OPEoxOkq/content/methods-for-assessing-the-age-of-migrant-children-must-be-improv-1) (accessed June 14, 2018).
- 2928 298 Aynsley-Green A, Cole TJ, Crawley H, Lessof N, Boag LR, Wallace RMM. Medical, statistical,

2929 ethical and human rights considerations in the assessment of age in children and young people
2930 subject to immigration control. *Br Med Bull* 2012; 102: 17–42.

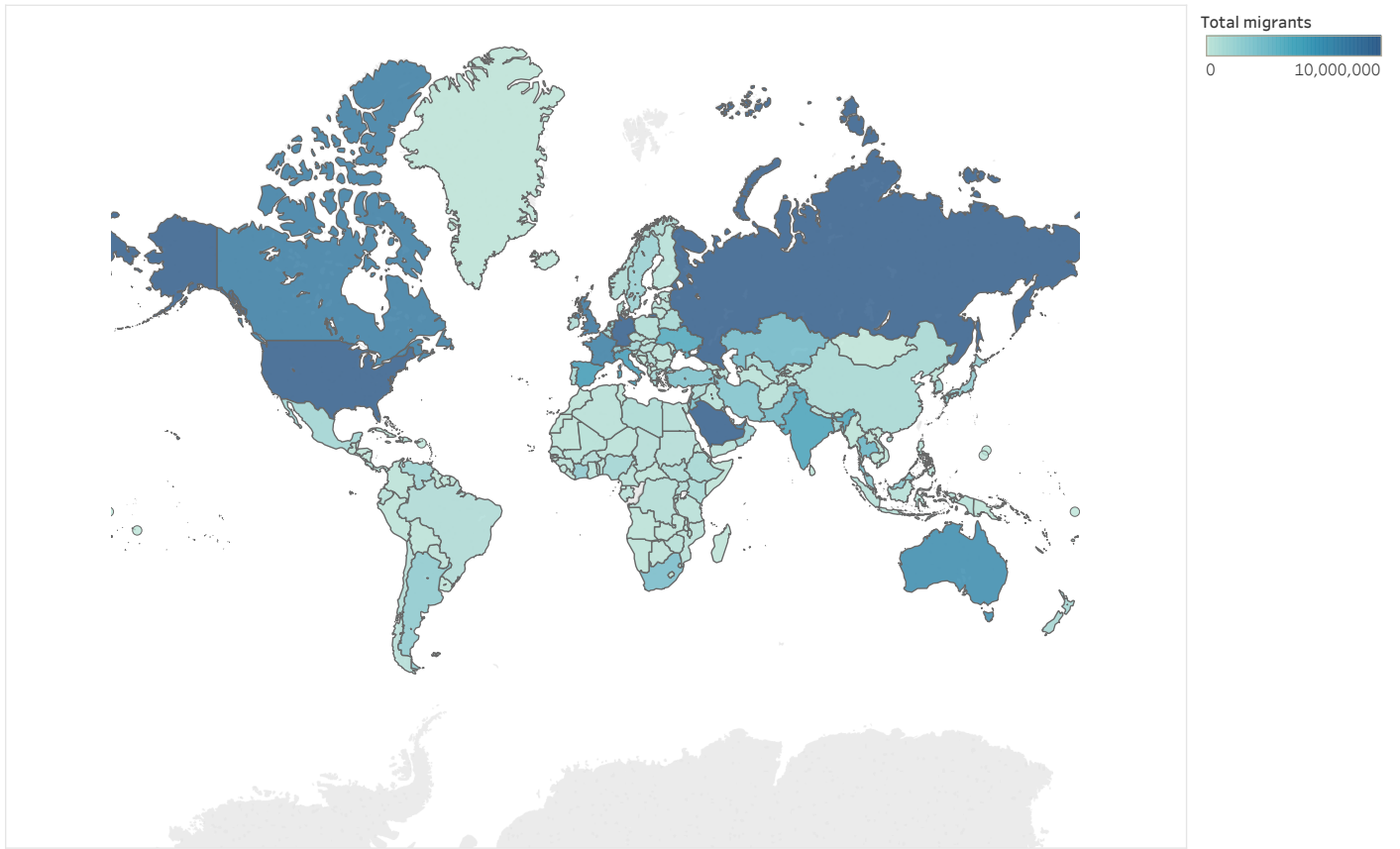
2931 299 Curry SR, Abrams LS. Housing and Social Support for Youth Aging Out of Foster Care: State of
2932 the Research Literature and Directions for Future Inquiry. *Child Adolesc Social Work J* 2015; 32:
2933 143–53.

2934 300 Kiss L, Pocock NS, Naisanguansri V, et al. Health of men, women, and children in post-trafficking
2935 services in Cambodia, Thailand, and Vietnam: an observational cross-sectional study. *Lancet*
2936 *Glob Health* 2015; 3: e154–61.

Figure

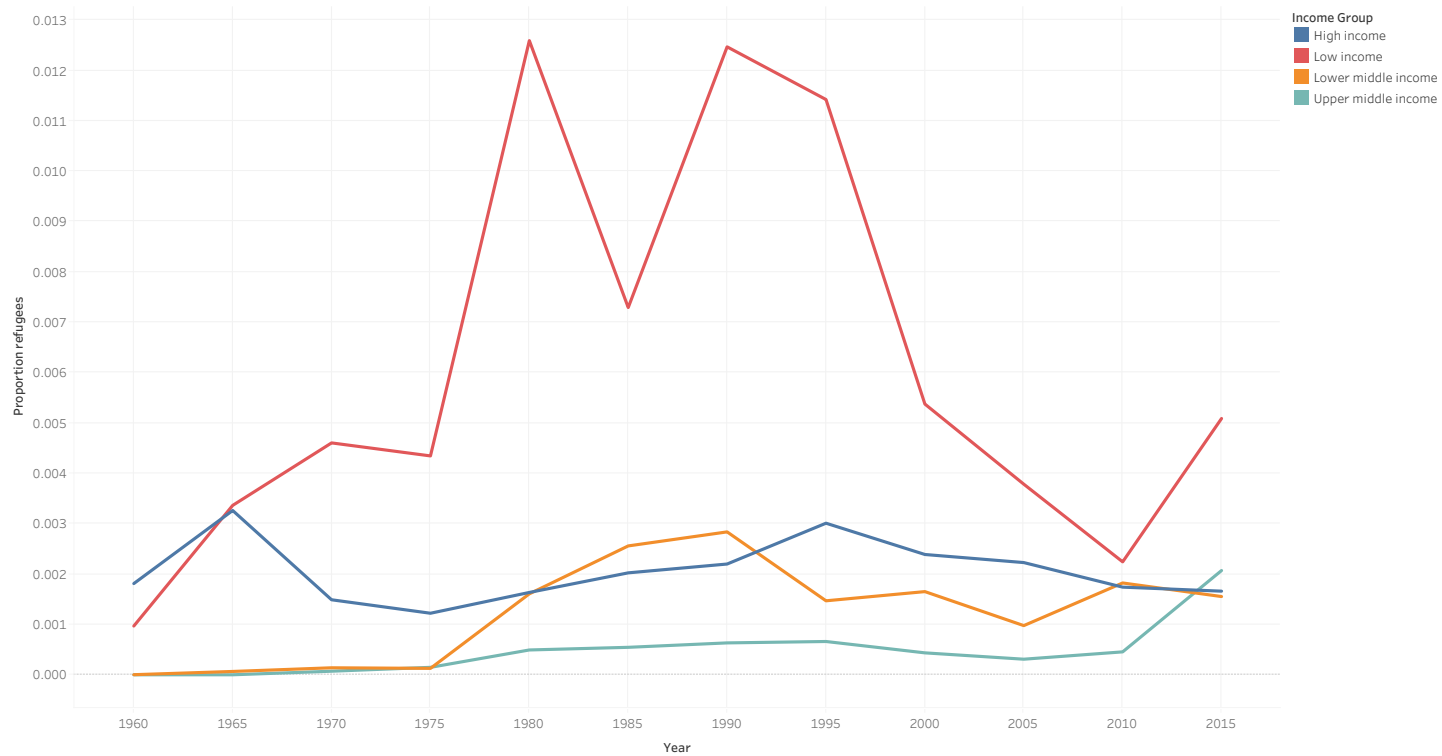


Figure

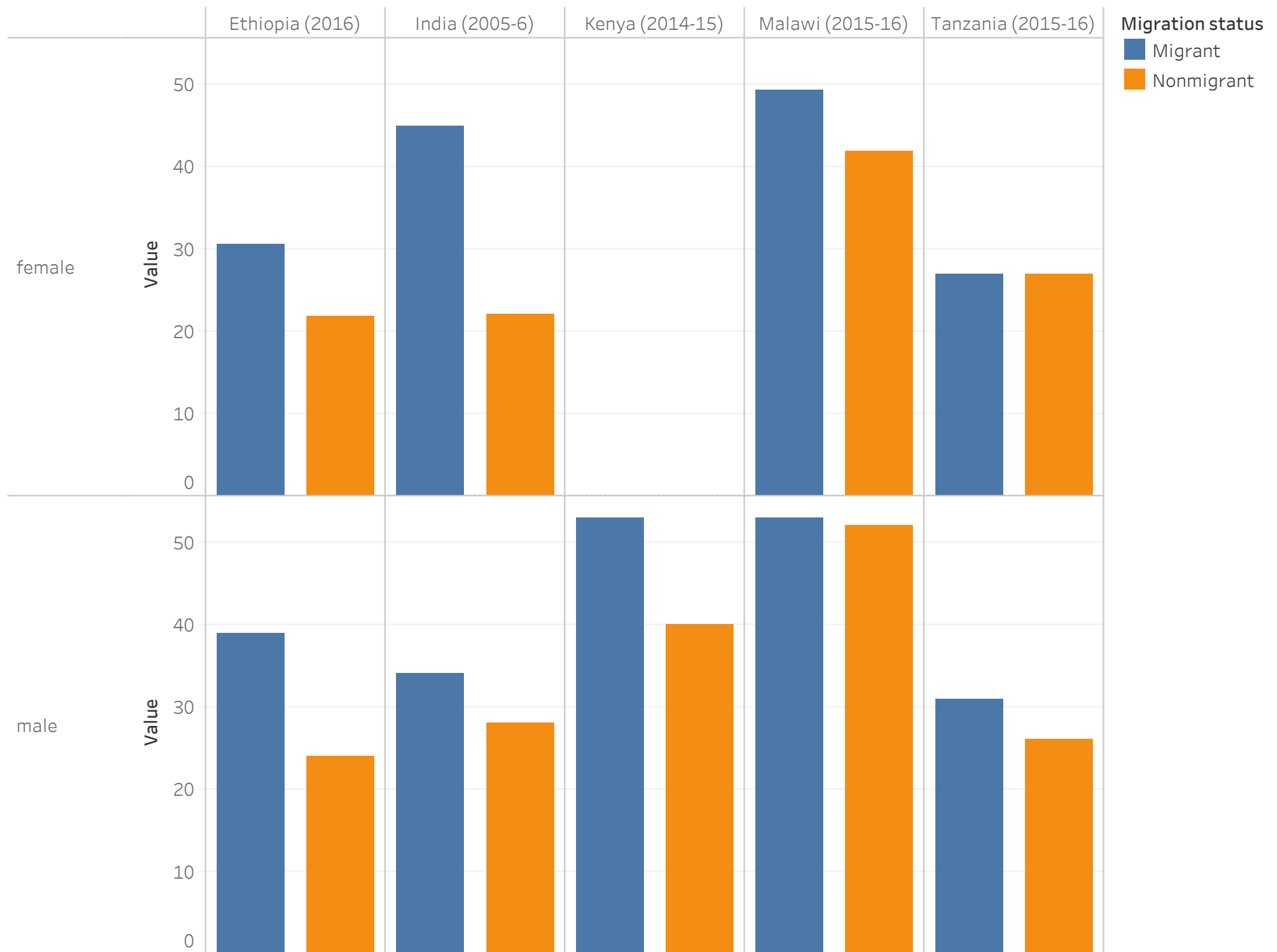


Figure

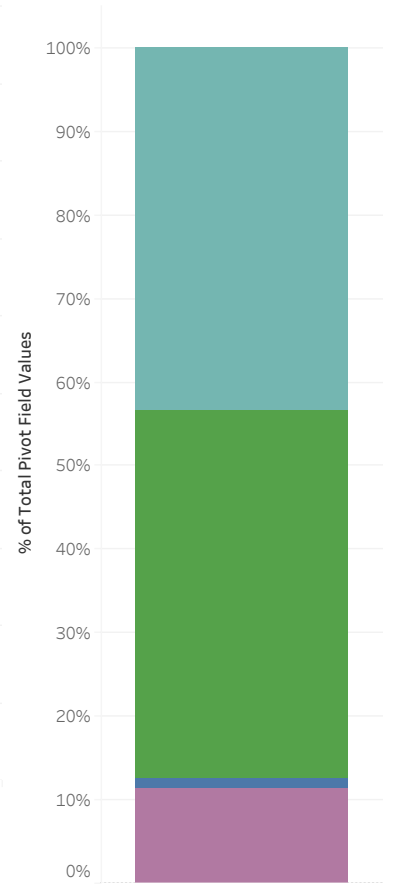
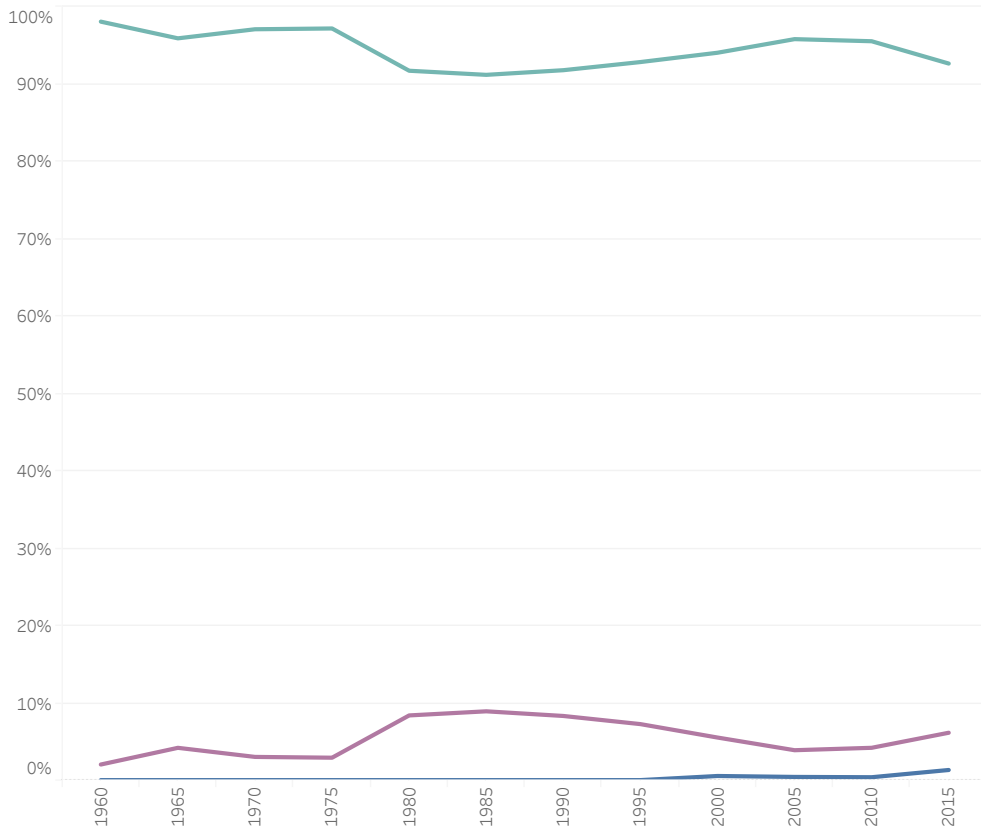
proportion refugees



Figure

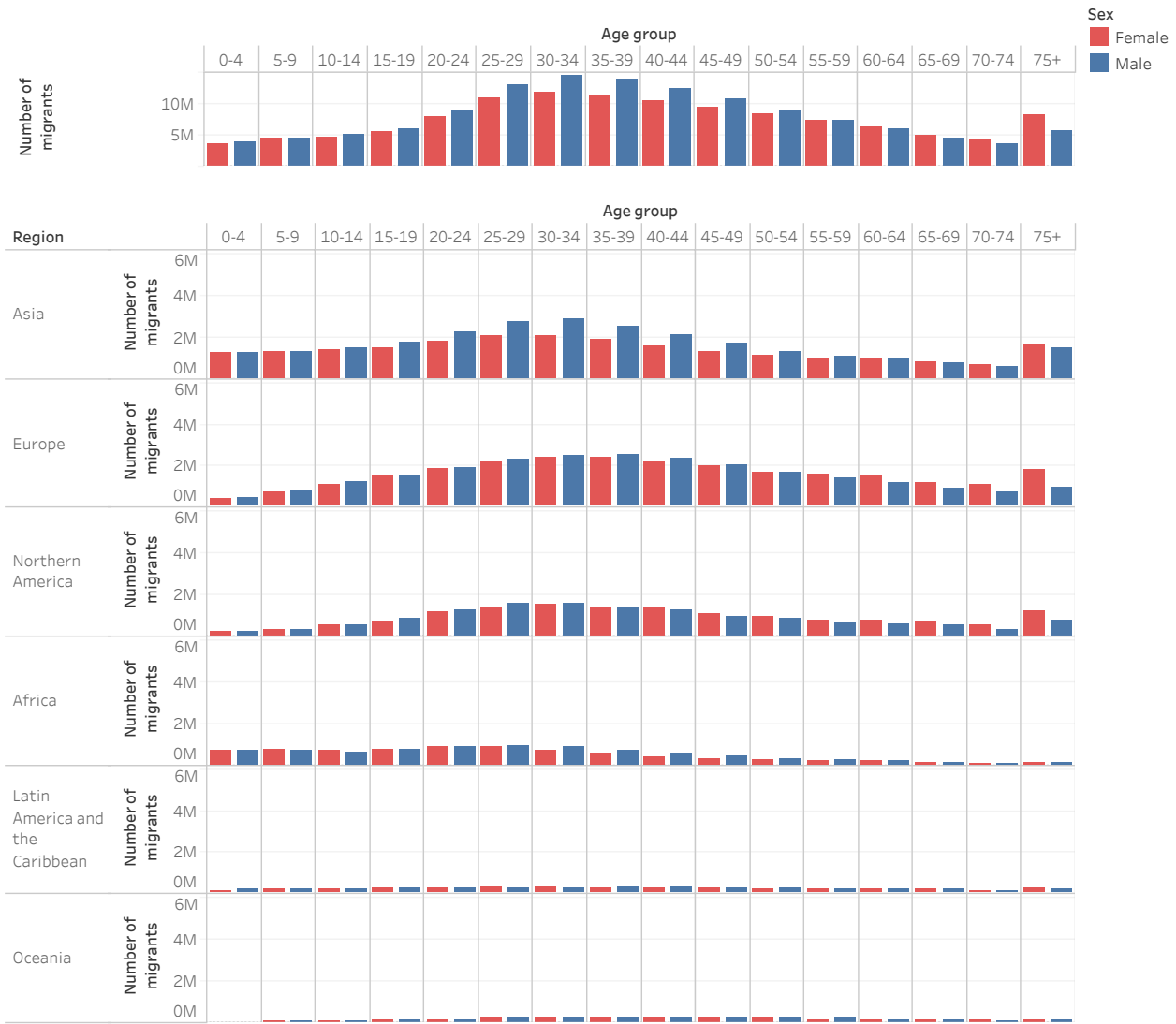


Figure

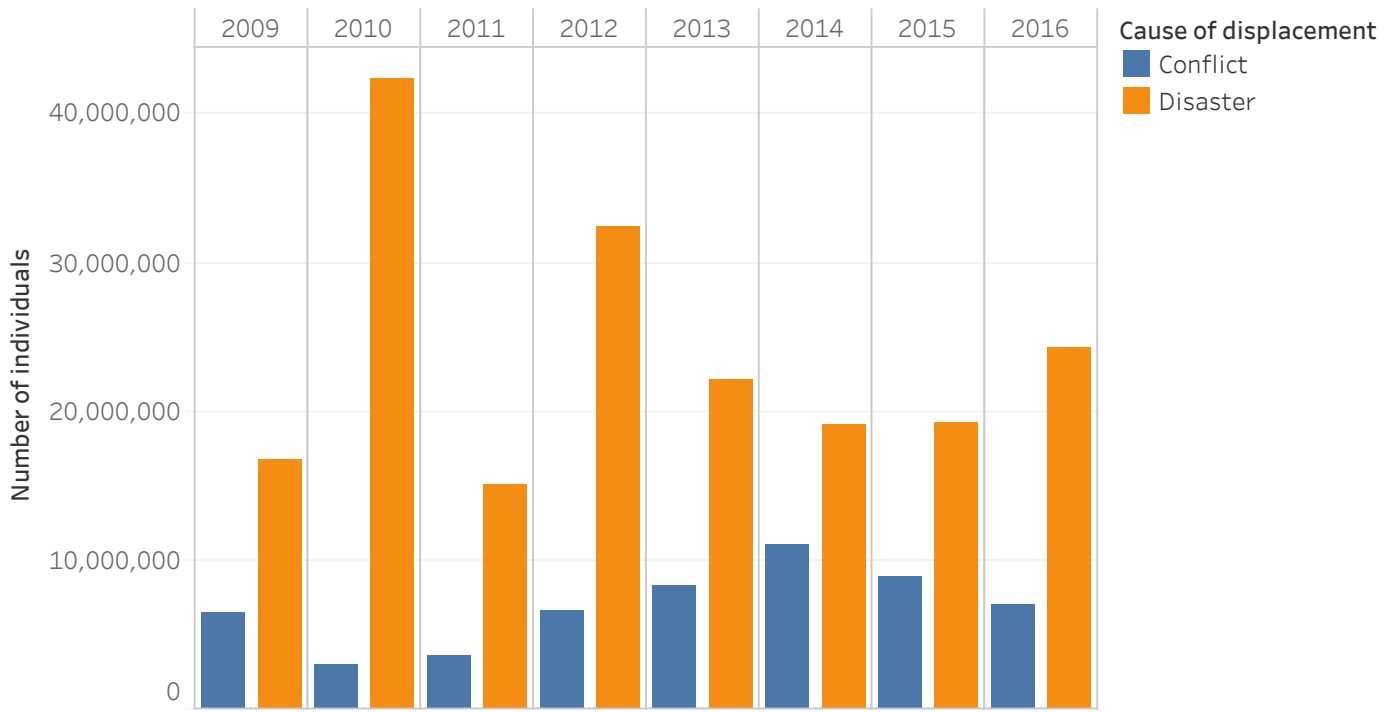


- Migrant subgroup**
- International (no subgroup)
 - Labour
 - Asylum
 - Refugee

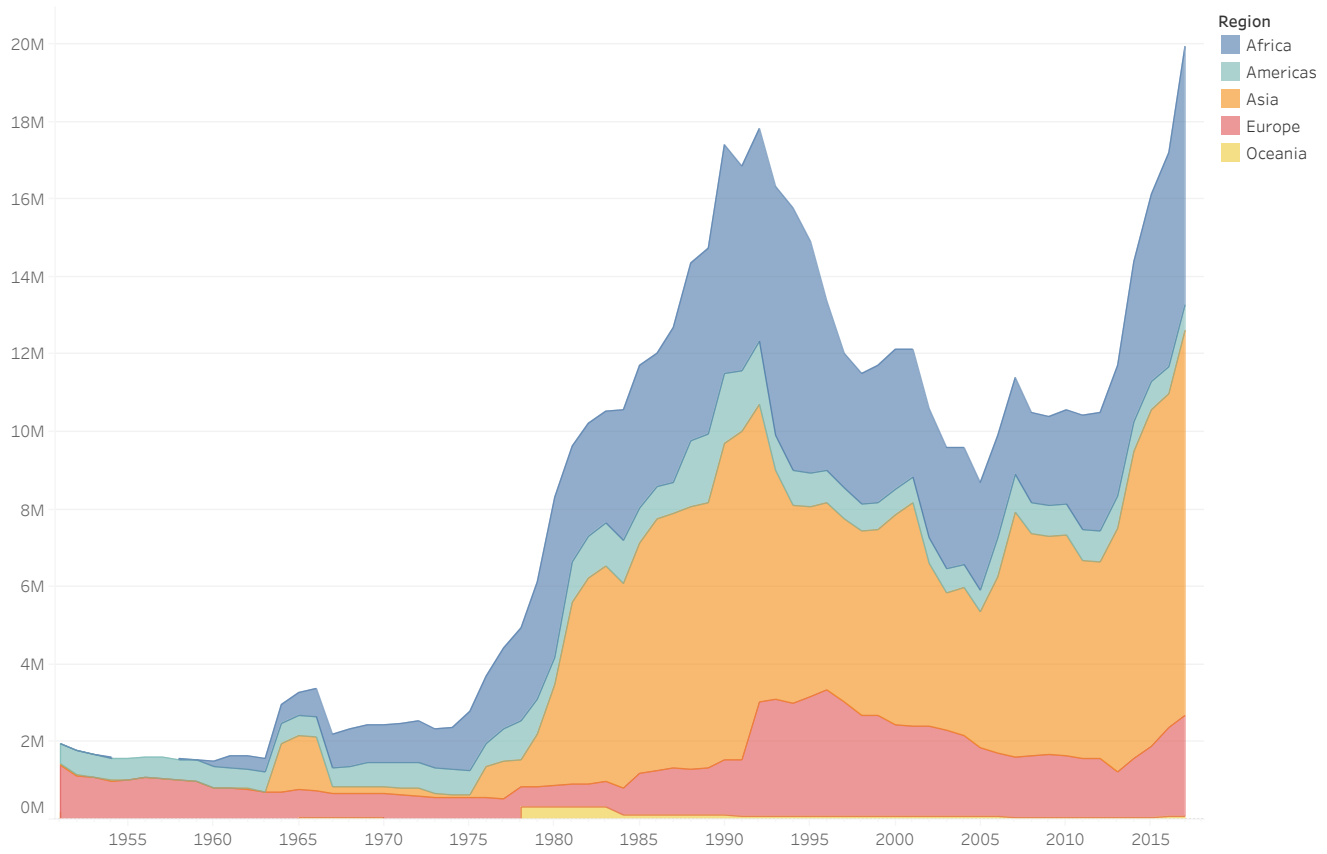
Figure



Figure



Figure



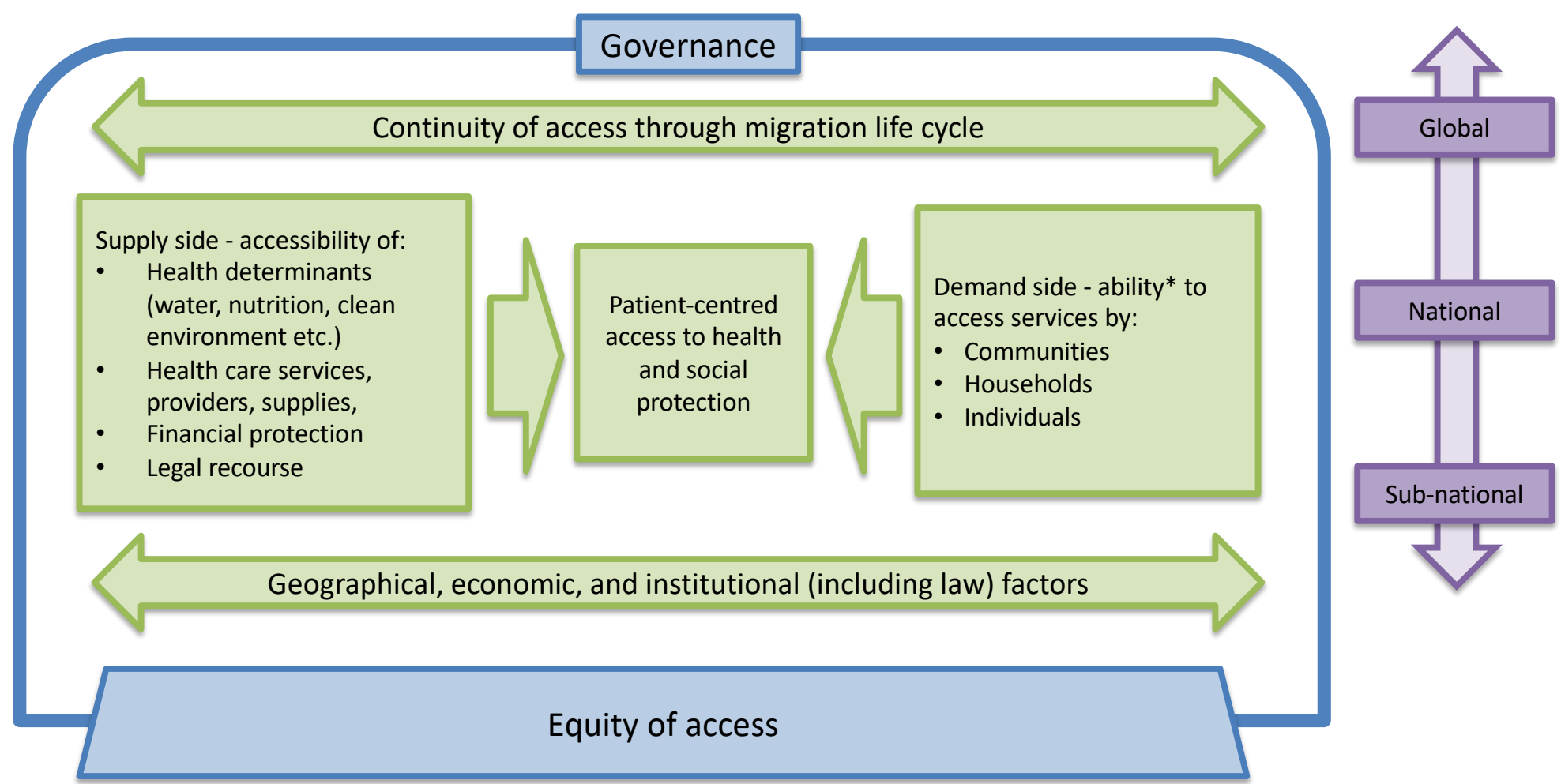
Figure



Figure



Figure



*social and cultural ability

Figure

