politically and financially has few precedents. However, the reward for these efforts will be scientific knowledge that is transparent, accessible, generated fairly, and fully accessible and available to improve society and save lives. We urge all those working on disparate parts of this enterprise to coordinate efforts to achieve an open research enterprise for the benefit of all.

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Displaced people's perilous journeys: border violence as a public health issue

The 21st century has seen displacement of migrants and refugees unprecedented since World War 2. As of the end of 2022, of the 108 million people who had to leave their homes because of persecution, conflict, violence, or human rights violations, 62·5 million were internally displaced, 35·3 million were refugees, and 5·4 million were officially asylum seekers.[1] However, the number of people still in transit in search of protection or a better life is unknown. Whether they are Venezuelans trying to reach the USA, Senegalese trying to reach the Canary

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Islands, or Ethiopians trying to reach Saudi Arabia, or whether they are Guineans crossing the Sahara, Afghans crossing the Evros River, or Rohingyas crossing the Andaman Sea, the only figures that we have about these people are the conservative statistics produced by the International Organization for Migration of the number of deaths worldwide: 58 280 in 10 years.[2] But what about those who survived? In Europe, an indirect source is the number of asylum seekers, since most people arriving after forcible displacement apply for refugee status. In 2022, not counting Ukrainians who were granted temporary protection, there were 881 000 people seeking asylum, mostly from Syria, Afghanistan, Venezuela, and Türkiye.[3] This means at least an equivalent number of people travelled from their home country to their host country in the previous months or years. Yet, we know little of the journey of this approximately 1 million displaced people.

As part of a 5-year research at the border between Italy and France, we conducted a study of 790 African and Middle-Eastern people received in June and December of 2020 and 2021 at the Briançon shelter in the French département of Hautes-Alpes: 27% had travelled for less than a year, 35% between 1 and 2 years, and 38% more than 2 years.[4] The journey had lasted more than 12 months for 85% of Africans. In one of the 90 biographies we collected, a man from northern Nigeria recounted that he left his village with his 2-year-old son after an attack by the terror group Boko Haram that decimated his family. In the Sahara, the pick-up truck transporting 24 passengers broke down. For 3 days they were left without water. The child died. Later, in Libya, they were kidnapped, beaten, and forced to work. One of the man's jailers once pushed him from the third floor of a building. He broke his leg. For 2 months he had excruciating pain but, being undocumented, could not go to the hospital. Countrymen who had also fled Nigeria eventually took him to cross the Mediterranean Sea in a makeshift boat with 57 other people, but the engine stalled and they remained adrift for 2 days before being rescued. He finally reached Europe. There are many such tragic stories of wounds and trauma along the road.

While there exist medical data about migrants and refugees at their arrival[5] or in the following years,[6] sometimes with a gender focus—especially in terms of violence and discrimination against women and sexual minorities[7]—the journey as such remains a blind spot in most public health studies. Indeed, epidemiology cannot follow mobile populations whose itineraries are undetermined, with unpredictable interruptions and clandestine crossings of borders. However, one cannot ignore these long periods when people already exposed to appalling situations in their home countries often become the targets of criminal gangs, militias, and the police, as well as being subject to dire circumstances and dehumanising practices during their journey, all deeply embodied through both physical and psychological harms. Depression, suicide, or addiction to cheap drugs can occur as travellers become discouraged by repeated failures at borders.[8] Women are particularly affected by sexual abuse or exchange of sex for basic necessities, and because pregnancy or the need to care for children can hinder the continuation of their journey.[9]

The tribulations that displaced people face on their way to and through Europe are closely connected to European policies. On the Saharan route (taken by Guinean, Ivorian, Malian, Sudanese, and other sub-Saharan people who reach Maghreb through the desert and then cross the Mediterranean), the EU has delegated the control of its borders to African countries.[10] It has negotiated, with Niger, a repressive legislation against mobilities northward, compelling smugglers to take tracks far away from main roads and expose passengers to dangerous conditions;[11] with Morocco, Algeria, and Tunisia, the return of sub-Saharan people to their countries, thus legitimising their deportation

to the desert, where some die of thirst; and with Libya, the gift of coast guard boats to intercept inflatable dinghies whose passengers are then incarcerated. On the Balkans route (taken mostly by Afghan, Iranian, and Syrian people, who travel from Türkiye to Italy via southern Europe), Greece and Croatia, which the President of the European Commission has described as the shields of the continent,[12] have special forces that arrest migrants and refugees, beat them, dispossess them of their goods, submit them to forced undressing and other humiliations, before illegally pushing them back across the border.[13] Despite being documented by official institutions, these practices are denied by the governments and ignored by the EU.[14] Mistreatment of displaced people by police, military, and border forces of other countries has also been documented, such as in Calais, France.[15] Externalisation and normalisation of violence, with both physical and mental health consequences, thus characterise the border regime. While non-governmental organisations such as Alarm Phone, SOS Méditerranée, Médecins Sans Frontières, Médecins du Monde, and others combat these issues, public health actions should also address them. It is indeed its role.

In the same way that structural violence affecting socioeconomically disadvantaged people has long been recognised as relevant to public health,[16] so should be border violence affecting displaced people.

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Integrating HIV, hypertension, and diabetes primary care in Africa

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Hypertension and diabetes are to 2023 what HIV was to 2003—a global health crisis causing countless premature deaths and stunting global economic development with an epicentre in sub-Saharan Africa.

There is good news: in the past two decades, astounding progress has been made in averting HIV-related deaths globally. Proving wrong the pessimists who believed that HIV treatment would never be possible in Africa, we learned that the real problems were the unreasonably high cost of antiretroviral therapy and the low standard of care in primary care health systems.[1] National governments partnered with global donors to build excellent, equitable HIV primary care systems where antiretroviral therapy is provided free of cost. The world set ambitious goals for HIV diagnosis (90% diagnosed), antiretroviral treatment (90% on treatment), and HIV viral load suppression (90% suppressed). Tremendous progress has been made towards those goals, particularly

For **the 90–90–90 goals** see https://www.unaids.org/en/resources/909090