

Cancer control in crisis situations: What has the Syrian crisis taught us?

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This review addresses the critical issue of managing cancer care in the context of crises, with a focus on forced displacement due to conflicts. It highlights the impact of these events on essential cancer control measures. Using Turkey as a case study, the text discusses the country's response to the influx of refugees from the Syrian conflict, outlining the healthcare rights and protections available to refugees. The text concludes with policy recommendations for integrating cancer care management into national control plans and for prioritizing data collection on cancer care during crises.

Crisis can strike unexpectedly and affect anyone at any time. Individuals might find themselves forced to flee their home to escape war, face a death sentence from a disaster – be it an unexpected earthquake, flood, or insecurity due to armed or political conflict – or struggle with the fallout from a major economic downturn. These events can disrupt essential cancer control measures, including prevention, screening, diagnosis, and treatment. Such was the case during the recent armed conflicts and COVID-19 pandemic. The question for us – policy experts, specialists, and decision makers – is: What actions should we take?

Consider the issue of forced displacement. Typically, it is sudden, massive, and beyond control, leaving both the host country and the refugees, as well as their home country, unprepared. The impact on people's lives is profound and often irreparable, with insufficient data to support care provision as well as rapidly shifting and computing human priorities. This lack of intelligence hampers planning, implementing, and maintaining support strategies. As of October 2023, UNHCR reports 110 million forcibly displaced people worldwide, with 75% hosted in low- and middle-income countries (LMICs). Additionally, 76% have been displaced for five or more years, according to the UNHCR. Notably, 52% of originating from the Syrian Arab Republic, Ukraine, and Afghanistan (1). Forced displacement is a global issue, affecting regions including the Middle East, Latin America, sub-Saharan Africa, Europe, and beyond.

Overview of the refugee protection and healthcare rights in Turkey

In response to the Syrian conflict and other crises, Turkey has become a refuge for a significant number of displaced persons. UNHCR figures indicate that Turkey is home to the most substantial refugee population globally, with approximately 3.6 million people (1). These individuals are predominantly Syrian nationals receiving Temporary Protection, while others from Afghanistan, Iraq, and Iran benefit from International Protection.

As of 2 November 2023, there are 3,254,904 Syrian individuals under Temporary Protection. Additionally, by the year's end in 2022, Turkey had welcomed 33,246 International Protection beneficiaries (2). Although Turkey is a signatory of the 1951 Refugee Convention and the 1967 Protocol, it maintains a geographical limitation regarding the Geneva Convention. This limitation confines the official status of "refugee" to persons originating from European countries.

The protections are categorized as follows:

- ➔ Refugees: Those from European countries;
- ➔ International Protection: Individuals from non-European countries;
- ➔ Temporary Protection: Specifically for persons from Syria.

All individuals with Temporary Protection in Turkey are entitled to free healthcare services in public institutions within their registered province. This inclusive policy ensures that

beneficiaries, including migrants with cancer living in Turkey, have access to the necessary medical care.

Turkey's healthcare response to the Syrian refugee influx

Since the onset of the influx of Syrian refugees in 2011, Turkey's immediate priorities have been to provide refugees with shelter, food, safety, and emergency health services, including vaccinations and treatment for infections and trauma. Initially, healthcare was administered within refugee camps. As the number of Syrian refugees expanded and dispersed across various Turkish cities, the government broadened healthcare services to encompass state health centres and hospitals for providing free tertiary care as required. Subsequently, following the 2014 Regulation on Temporary Protection, Turkey successfully integrated refugee healthcare into its national system. By 2015, Syrian refugees gained access to comprehensive health services from primary to tertiary care, inclusive of specialized treatment at migration centres. Additionally, the government established "Migration Health Centres" nationwide and recruited Syrian medical professionals to bridge language and cultural barriers (3).

Despite partial funding from the European Union, the primary burden of expenditure rested with Turkey's national budget. By 2018, Turkey's expenditure on Syrian refugees had exceeded US\$ 30 billion, a significant commitment by any measure. The World Health Organization (WHO) acknowledged Turkey as a leading nation in restoring refugee health (4).

The SIHHAT Project signed between the European Union and the Ministry of Health of the Republic of Turkey in 2015 was the most comprehensive collaborative effort implemented on migration management in the field of health. The project launched at the start of 2017 and aimed to support and improve primary and secondary healthcare services provided by the Ministry of Health to Syrians under Temporary Protection (SuTP) in Turkey. The scope of healthcare services was extended 190 Migrant Health Centres in 32 provinces hosting the majority of Syrian refugee population, the capacity and quality of service provision were enhanced and access to services was increased through SIHHAT, which introduced a system working towards solutions to address healthcare needs of SuTP in their own language (5).

Within the scope of the SIHHAT Project, the Ministry of Health implemented the National Cancer Prevention Programme which applied to Turkish citizens for Syrian refugees as well. The Ministry of Health now offers cancer screening programmes through family physicians and mobile units. Similarly, cancer screening services for migrants are provided at Family Health Centres and through five mobile

cancer screening units financed by SIHHAT. These units are equipped with sampling equipment for both colorectal and cervical cancer, in addition to mammography machines. The target groups include women aged 40–69 for breast cancer screening, women aged 30–65 for cervical cancer screening, and men and women aged 50–70 for colorectal cancer screenings. As of November 2020, a total of 420,000 cancer screening services have been provided to SuTP (5).

Cancer care challenges for displaced Syrian refugees

Health research on forcibly displaced populations is scant. "Migration management" poses an intricate challenge with deep, lasting impacts but does not have a deep well of insight to draw upon. Specialized strategic focus is essential for refugee cancer care, given the significant number of affected individuals and the protracted nature of their displacement. Syrian refugees in Turkey are granted the same healthcare access as citizens, and the country has incorporated free healthcare for these refugees into its national health system. Nevertheless, managing cancer care remains complex for displaced populations, and the survival rates for Syrian refugees are low particularly for men, exacerbated by the hardships of displacement (6).

Our research collective from Turkey has conducted pivotal studies on Syrian cancer patients (6,7). The first work done in the city of Konya examined the status of 230 adult and 38 Children with cancer. The five most common cancer site specific cancers in adults were; breast, colorectal, lung and bronchus, central nervous system, and stomach. When the stages of patients at the time of diagnosis were examined 19.1% patients had the local disease, 40% had the loco-regional disease, and, 40.4% had metastatic diseases. The abandonment rates were estimated at 9.2% for this cohort and were higher in male than female patients (11.5% vs. 6.9%) The overall survival probability for the whole group was 37.5% at 5 years. When analyzing the children with malignant tumours, the three most common cancer by ICC3 were; Leukemias, Lymphomas, and reticuloendothelial neoplasms, and CNS neoplasms. Excluding Leukemia cases, among 43.3% of patients the stage of cancer at the time of diagnosis was advanced (Stage III and IV); 10.5% of patients had treatment abandonment. The two-years overall survival probability was 78.1%, dropping to 69.5% at the end of three years (6).

Notably, our second study published in *JAMA Open network* this year examined the care of Syrian cancer patients in southern Turkey, a region where over half the refugee population resides (7). We gathered data from eight university hospitals on the diagnosis and treatment of patients between 2011 and 2020 to evaluate treatment outcomes. Notable findings include an average time-to-diagnosis was 66 days for

adults and 28 days for children. The breast cancer, leukemia, and lymphoma were most prevalent among adults, while leukemia, lymphoma, and CNS tumours were most common in children. Metastatic disease was observed in 60% of patients across both age groups. A striking discovery was that 35.6% of adults and 14.5% of children experienced treatment-abandonment, despite having access. The five-year survival rates were reported at 17.5% for adults and 29.7% for children (7). While Turkey has made considerable progress in offering care to Syrian cancer patients, the high rates of treatment abandonment survival rates and subsequently low underscore the challenges faced by this population as a result of migration. The data speak to the need to seamlessly integrate cancer care into existing healthcare frameworks and to bolster national infrastructures to ensure refugees have access to enduring and effective cancer control strategies. It is incumbent upon all stakeholders to engage in rigorous research and disseminate insights gleaned from humanitarian crises to safeguard and inform future generations. This data underscores the critical need for targeted cancer care strategies within refugee populations and the importance of considering the unique challenges they face.

Palliative care, a vital component of cancer care, was discussed in a multi-stakeholder conference organized by our study group. The conclusion emphasized the need for a nationally co-developed strategy involving various stakeholders, setting actionable steps for integrated and comprehensive palliative care. The goal is to improve the quality of care and life for cancer patients and their families encompassing both the national and refugee populations (8).

The economics of cancer care in conflict-impacted populations is also a key consideration for policymakers. The R4HC (Research for Health in Conflict) research group estimated the cost of cancer care for Syrian refugees at €25.18 million in Turkey, €6.40 million in Lebanon, and €2.09 million in Jordan (9). These are substantial costs that need to be found both domestically and internationally. It's crucial to highlight that due to the conflict, cancer care in Syria has been significantly disrupted, and merely 23% of operational public hospitals in Syria offer cancer treatments in 2016 (10). Thus, for the foreseeable future the care and the costs of cancer care will be borne by the Turkish healthcare system.

Healthcare access barriers in the migrant population

Access to healthcare for displaced population is hindered by numerous obstacles, which our study categorized across three critical migration phases: pre-migration, migration, and post-migration.

Pre-Migration Phase: Challenges stem primarily from disrupted healthcare systems, and include:

- attacks on healthcare facilities and threats to staff;
- infrastructure destruction and looting of supplies;
- depletion of human resources due to injuries or lack of security;
- economic collapse.

Migration Phase: This phase is marked by:

- physical and mental stress;
- violence and abuse;
- perilous journeys;
- disconnection from social networks;
- limited access to medical care, resulting in high infection rates.

Post-Migration Phase (Migrant Perspective): Post-migration difficulties include:

- delays in diagnosis and lost medical records;
- inadequate health assessments upon arrival;
- unfamiliarity with new health systems;
- pre-existing health conditions;
- extended waits for legal registration;
- cultural differences in health beliefs and expectations;
- health literacy gaps, language barriers, and discrimination;
- financial strains due to lost income.

Post- Migration Phase (Host Country Perspective): The host country faces:

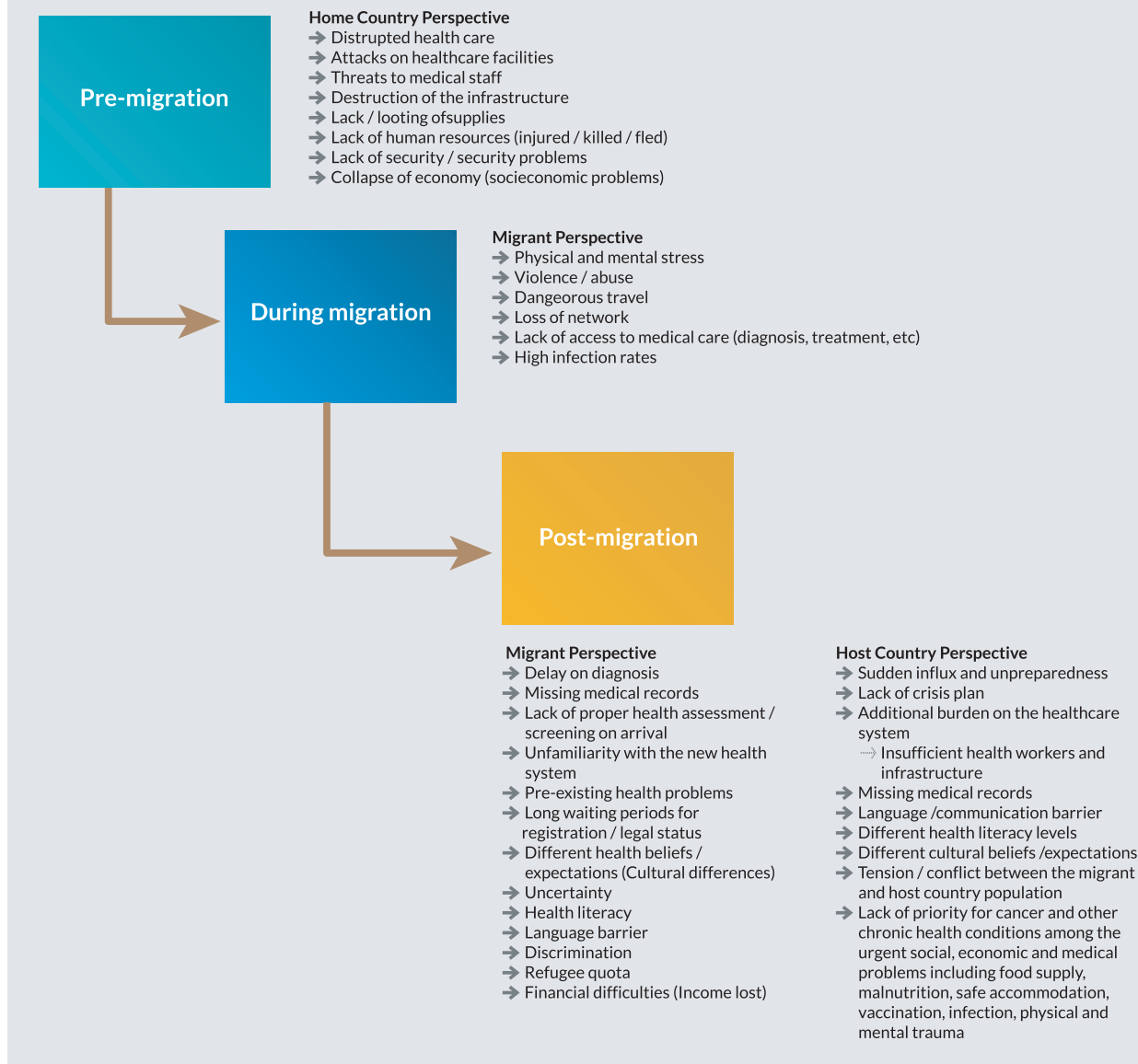
- sudden influxes and lack of preparedness;
- absence of crisis management plans;
- additional strains on the healthcare system;
- shortages of health workers and infrastructure;
- missing patient medical records;
- cultural and linguistic barriers;
- conflicts between migrant and local populations;
- overlooked chronic health issues like cancer due to immediate social, economic, and medical crises such as food shortages, unsafe living conditions, and the need for widespread vaccination and trauma support.

The figure summarizes “the phase-specific health-related risks and problems of forced migration” based on the earlier reports on forced displacement and our research group experience (7).

At the recent World Cancer Leader’s Summit in October 2023, two proposals were put forward to global cancer control communities and all stakeholders:

1. We strongly recommend that national cancer control programmes incorporate a dedicated section on managing cancer care during crises. Large-scale events, such as the COVID-19 pandemic and the conflicts in regions like

Figure 1: The phase-specific health-related risks and problems of forced migration (7)



Syria and Ukraine, pose a substantial risk of inadequate healthcare delivery, even in countries with robust systems. It is essential for stakeholders, policymakers, governments, and international organizations to collaborate on a global framework that improves the management of both acute and chronic healthcare needs amidst major migration crises.

2. Data collection and its exploitation into critical cancer intelligence should not be viewed as optional but rather as an integral component of crisis management plans. Consequently, governments and international entities must prioritize and invest in data and intelligence initiatives that capture cancer.

Clearly, the optimal solution is to prevent forced displacement in the first place. Nevertheless, the insights

gained from the Syrian crisis can inform the development and execution of strategies to enhance the health of refugees now and in the future. We, all, must take lessons from the recent worldwide conflicts and make plans for shaping the future of cancer control beyond normative national cancer control planning. ■

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