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Diabetes Care in Conflict Zones: Time for Action Is Long Overdue

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Armed and civil conflicts cause a significant loss to human life and are a significant cause of disability. Furthermore, many people are adversely impacted by the broader effects of war.[1] Being seen as a "*national priority*" by politicians and military leaders, war diverts human, financial, and material resources from those who need it to survive the war effort. It particularly damages the infrastructure supporting healthcare. Conflicts force people to flee their homes in search of safety. In addition to impacting physical health, conflicts adversely affect the mental health of both those actively involved in conflict and civilians. Displacement increases the risk of contracting infectious diseases as a result of reduced access to water, food, and sanitation. Noncommunicable diseases (NCDs), such as diabetes, cardiovascular diseases, and respiratory conditions can also increase, and their control can deteriorate or be lost entirely due to multiple factors beyond the present discussion. Special groups at increased risk include women, children, and those with mental disorders.[1]

The developing regions had more than their fair share of civil and armed conflicts for several decades after the Second World War.[2] Other than the Yugoslav war and the Russian invasion of Ukraine, most conflicts have occurred in Africa and Asia and, more specifically, in the Middle East and North Africa (MENA) (►**Table 1**).

Diabetes has been mainly underserved in humanitarian settings. The actual scope of the problem has not been established, and it is not known which interventions are effective, feasible, and cost-effective in these contexts. The increasing prevalence of type 2 diabetes mellitus (T2DM) in developing regions presents an added challenge as diabetes care must compete for resources with infectious diseases.[3] The scarcity of financial resources and appropriate staff means that many people with T2DM have complications, and those with type 1 diabetes mellitus (T1DM) have reduced life expectancy. Concerning T1DM arguably the most immediately life-threatening NCDs, the supply and cost of insulin, blood glucose monitoring, and diagnostic tools are barriers for both humanitarian responders and their host countries, as well as patient adherence, life expectancy, quality of life, follow-up, and provider training in diabetes care. The very low prominence of these issues in the international medical literature by authors and editors does not recognize them as a priority emphasizing the need for more regional venues of communication to address relevant subjects.[4]

In the current issue of the journal, Alali and Afandi[5] describe the quality of care for patients with T1DM receiving treatment in a private endocrinology service in Syria. They presented a cross-sectional medical record review for patients with T1DM followed at a private clinic run by a certified endocrinologist. They included 197 T1DM patients with a median age of 16 years, and a median duration of diabetes was 4 years. The poor glycemic control was reflected in a mean hemoglobin A1c of 9.1%, with a narrow range of 8.7 to 9.5%. About two-thirds of the patients use premixed insulin, and less than half reported undertaking regular self-monitoring of blood glucose two or more times daily. Furthermore, hypoglycemia and diabetic ketoacidosis were reported in 62.4 and 54.4% of patients. Although the study is cross-sectional, and the sample size is small, the paper underpins the state of an unprivileged population worsened by the ongoing armed conflict in Syria at home or in refugee camps.[6,7] The study very clearly exemplifies the impact of

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Table 1 The distribution of armed conflicts between developed and developing regions in post second world war

Developing world: (Africa and Asia)	Europe and the developed world
Israeli-Palestinian Conflict, 1948 onward Malayan Emergency, 1948–1960 Korean War, 1950–1953 Kenya Emergency, 1952–1960 Vietnam War, 1955–1975 Suez Crisis, 1956 Brunei Revolt, 1962–1963 Indonesian Confrontation, 1963–1966 Aden Emergency, 1963–1967 Gulf War, 1990–1991 Sierra Leone Civil War, 1991–2002 War in Afghanistan, 2001–2014 Iraq War, 2003–2011 Libya Conflict, 2011–present Syria Conflict, 2011–present Yemen Conflict, 2014–present	The Troubles, 1968–1998 Cyprus Emergency, 1955–1959 Falklands War, 1982 Bosnian War, 1992–1995 Kosovo War, 1998–1999 Russian invasion of Ukraine 2022

Adopted from the Imperial War Museum. Timeline of 20th and 21st century wars.
Available from.https://www.iwm.org.uk/history/timeline-of-20th-and-21st-century-wars

conflicts that have been endemic in the Middle East.[2] Similar reports reflected on situations in Yemen and Iraq.[8,9] T1DM is of particular concern since it needs an organized healthcare system and is fatal without insulin treatment.[10,11]

A meeting convened in Boston in 2019 attempted to address the humanitarian and other global health factors, discuss the immediate needs and barriers to tackling diabetes in humanitarian crises, and adopt a unified, action-oriented agenda to address the pressing global health issue of diabetes in crises settings. The meeting ended up by issuing the "Boston Declaration."[12] In the first instance, it was recognized that there are substantial gaps in care for diabetes in all low-resource settings. Furthermore, it was highlighted that diabetes in humanitarian crises deserves special attention for several reasons. First, people with T1DM who cannot access insulin and continuity of care in a crisis are at acute risk of death in a clear violation of the principles of the Humanitarian Charter and UN Universal Declaration of Human Rights, including the right to life with dignity. Second, the management of diabetes requires an uninterrupted supply of essential medicines, field-based laboratory diagnostics, and continuity of care, adoption of healthy lifestyle behaviors, cardiovascular risk reduction, and management of comorbidities including depression and hypertension, and secondary prevention of complications.[12]

Table 2 The Boston declaration's four primary targets over 3 years

- Unified and strengthened advocacy
- Universal access to insulin and other essential medicines and diagnostics for glycemic and blood pressure control in humanitarian crises
- Establishment of a unified set of clinical and operational guidelines for diabetes in humanitarian crises
- Improved data and surveillance

The Boston declaration set four primary targets to work toward over the following 3 years (►**Table 2**).[12] Despite the altruistic intentions of the Alliance, it is noteworthy that the declaration was based where no armed conflicts happened in the living memory. Also, only a single signatory was from the world's hottest zones, namely the MENA region. Hence, it could be readily predicted that the declaration is unlikely to be recognized for what it claimed. A quick questionnaire to a group consisting of 146 senior endocrinologists practicing in the Middle East, 67 out of 69 respondents denied any knowledge of the Boston declaration or its context reflecting the lack of uptake by the most relevant people. It would have been more appropriate to have had the meeting and the declaration nearer to the most relevant parts of the world. Internationally, only a single citation could be detected in PubMed in contrast to the Declaration of Istanbul on ethics of organ transplantation, which received over 80 citations to date. The moral of the story is that international institutions should come nearer to the regions in need, involve their physicians, and support their institution rather speak down to them from their ivory towers.

In conclusion, chronic diseases in general acquire increasing importance during humanitarian crises. People with diabetes, particularly T1DM as highlighted by AlAli and Afandi,[5] face numerous obstacles in these settings. It is the responsibility of the international community across all sectors to rise and meet these challenges and promote the health and dignity of all people with diabetes during humanitarian response. Ownership of the efforts and solutions should be embedded in the affected regions rather than from remote positions for the ownership to be felt where it is needed most.

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