Insulin Regimen Patterns in UNRWA Fields: Gaps and Opportunities in Type 1 Diabetes Care.

Presenter : Zoheir Elkhatib
Chief Disease Prevention Control

Background Type 1 diabetes (T1D) management in humanitarian settings is difficult. Although UNRWA provides insulin across all Fields, treatment patterns vary, and glycemic control remains poor. We assessed regimen use to inform improvements in care for Palestine refugees.

Objectives

To assess insulin use among T1D patients (P), comparing basal–bolus regimens (I) with suboptimal or incomplete regimens (C), and to evaluate glycemic control outcomes (O) across UNRWA Fields.

Methods

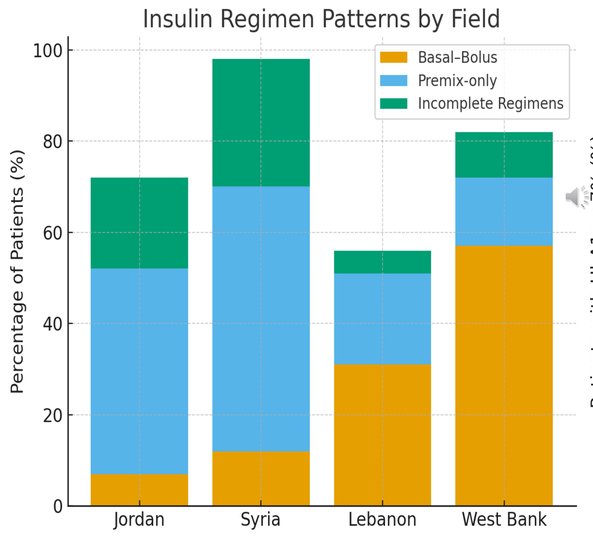
cross-sectional analytical study including all type 1 diabetes patients registered at UNRWA health centers across four Fields (Jordan, Lebanon, Syria, West Bank) between January and June 2025. This represented the entire census of available records (n = 1,937). Patient records were categorized into seven insulin regimen patterns.

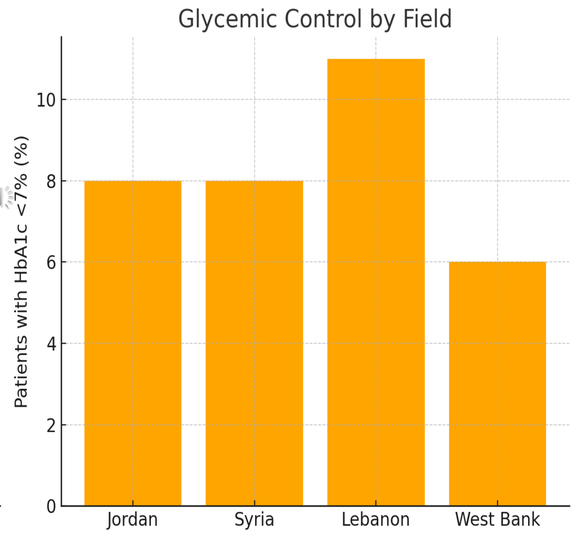
In addition to regimen data, we analyzed demographic variables including age and sex. Patients were grouped into five age categories: below 18 years, 18–29 years, 30–39 years, 40–59 years, and ≥60 years. Sex distribution was recorded as male or female.

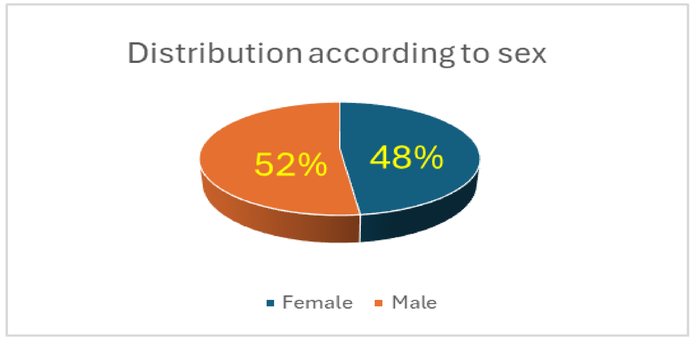
UNRWA

Key demographic findings

- Younger patients (<18 years) had a somewhat higher likelihood of being prescribed basal–bolus regimens, though still in the minority.
- Most patients were between 18–39 years, a group at high risk of long-term complications if glycemic control remains poor.
- Both sexes showed similarly poor glycemic control, with no major differences in HbA1c achievement by gender.
- Importantly, sex distribution was balanced, suggesting that differences in regimen patterns and outcomes are more likely due to system- and provider-level factors rather than demographic skew.







Discussion:

Despite UNRWA's policy of providing insulin free of charge to all registered T1D across fields, marked differences emerged across the four Fields. Several factors may explain these discrepancies Drivers: provider familiarity, access to endocrinologists, training gaps, conflict disruption, patient barriers.

Recommendations

-Standardization of care : reinforce adherence to agency-wide technical protocols across Fields
-Capacity Building: Investment in staff training in all fields.
-Expanding culturally appropriate diabetes education, including family involvement.
-Strengthening distribution systems will reduce any mismatch between availability and use of recommended insulin types.

Relevance: Lessons applicable to humanitarian T1D care globally.

Co-Authors: Ghada Ballout, Husam Alfudoli, Akihiro Seita
UNRWA HQ Amman

iada
International Alliance for Diabetes Action