

Progress Report – ISPAD Breakthrough T1D Fellowship (Year 1)

Fellow: Md. Kamrul Huda

Project: Incidence of Childhood, Adolescent, and Young Adult-Onset Type 1 Diabetes in Bangladesh (2019–2024)

Institution: BADAS Paediatric Diabetes Care & Research Center (PDRC), BIRDEM Women and Children Hospital, Dhaka, Bangladesh

Supervisor: Dr. Carine De Beaufort

Co-Investigators: Prof. Kishwar Azad, Dr. Steven James, Prof. Graham Ogle, Dr. Mohammed Ashraful Islam, Dr. Jayanthi Maniam

Project Overview

This fellowship project aims to establish reliable national data on the incidence of type 1 diabetes (T1D) among children, adolescents, and young adults in Bangladesh. Despite growing clinical experience indicating a rise in T1D, there has been no systematic documentation at the population level. The study focuses on Dhaka district to quantify new cases diagnosed between 2019 and 2024 and to explore age-, sex-, and time-related trends. These findings will contribute to national awareness, resource planning, and international comparisons.

Key Progress to Date

1. Protocol Finalization and Ethics Approval

The full research protocol was finalized in collaboration with the investigator team and approved by the Ethical Review Committee of the Diabetic Association of Bangladesh. All study procedures comply with international ethical standards.

2. Data Collection

Historical records from 2019–2024 for newly diagnosed T1D cases in Dhaka district have been collected from the BADAS Paediatric Diabetes Care & Research Center at BIRDEM Women and Children Hospital. This center serves as the country's largest referral site for pediatric diabetes and captures the majority of cases from the region.

3. Data Cleaning and Verification

Collected datasets have been cleaned, cross-checked, and coded to ensure completeness and internal consistency. Demographic and clinical variables have been standardized, and duplicate entries removed.

4. Ongoing Data Analysis

Descriptive and trend analyses are underway to estimate annual incidence rates and assess patterns by age, sex, and year of diagnosis. Preliminary exploration suggests an upward trend consistent with regional observations, though final statistical outputs are pending.

Next Steps

- Complete statistical analysis and prepare visual incidence summaries.
- Draft manuscript for submission to a peer-reviewed journal.
- Present preliminary results at the upcoming ISPAD 2025 Conference in Rio De Janeiro, Brazil .

Reflections

This first year has focused on building a validated dataset and analytic framework. The collaboration between Bangladeshi and international partners has been essential to ensure methodological robustness and comparability with global datasets. The project is on schedule for completion within the planned timeframe.