

## 2023 ISPAD “Allan Drash” Clinical Fellowship Report

**Emma Picasso Rivera, MD**

**Allan Drash Scholarship 2023 / 2-Month Report**

**Location:** Unit Endocrinology and Diabetes, Department of Paediatrics, Oslo University Hospital Ullevål

**Mentor:** Lars Krogvold PhD

**Date:** September–November 2024

I was honored to be the recipient of the 2023 ISPAD Allan Drash Clinical Fellowship. I consider it a unique opportunity that has broadened my professional perspective on managing T1D. This experience will enrich not only my practice but also that of my team. I feel extremely fortunate and honored to have had this opportunity and to be able to share what I have learned and shared in Norway with my colleagues in Mexico. I am deeply thankful to my mentor, Lars Krogvold, and the diabetes team at Ullevål Hospital for welcoming me and generously sharing their time, knowledge, and experience.

### Introduction

I am currently a pediatric endocrinologist at EnDi Clinic in Mexico City. This clinic follows an interdisciplinary model for managing type 1 diabetes (T1D). I work alongside four adult endocrinologists, a dietitian specializing in T1D, a diabetes educator with expertise in technology, and a psychologist. In Mexico, healthcare is available through both public and private systems. However, diabetes care is limited due to resource scarcity. I strongly believe that people living with type 1 diabetes should have access to comprehensive treatment and education that enhances their quality of life. Although this may seem out of reach for most people in my country, the EnDi Clinic team strives to make it our primary goal.

My medical training took place in Mexico through the National Autonomous University of Mexico (UNAM) at the Federico Gomez Children’s Hospital of Mexico (HIM). A particularly formative experience was working with Doctors Without Borders. In Mexico I have worked in both the public and private sectors, which I believe has broadened my perspective on the various approaches to healthcare in my country. Living in a country with such stark social disparities and witnessing firsthand how these inequities affect health—especially in chronic conditions—has made me passionate about enhancing accessibility to diabetes-related technology for economically and socially disadvantaged individuals.

I am a member of ISPAD and the JENIUS group. In Mexico, I am part of the Mexican Society of Pediatric Endocrinology (SMEP) and the Mexican Society of Nutrition and Endocrinology (SMNE), participating in the type 1 diabetes working groups of both societies.

### Objectives

- Learn about different technologies that improve the quality of life for children and young people living with T1D.
- Observe how interdisciplinary teams operate in Norway, identifying similarities and differences compared to our approach, and learn strategies that can be incorporated into my practice in Mexico City.
- Observe the functioning of the health system in a country with a democratic system in which social disparities are smaller compared to Latin American countries

## **Duration of Rotation**

My rotation began on September 16 and ended on November 1, lasting a total of six weeks. During the week of October 14–18, I took a break to attend the 50th ISPAD Conference in Portugal. This was an incredible opportunity to learn about cutting-edge topics and the challenges faced by other professionals worldwide, as well as to expand my professional network within ISPAD.

## **Clinical Experience in Norway**

During my stay in Norway, I focused on clinical work. I was included in the diabetes team and shadowed nearly all the physicians, diabetes nurses, and nutritionists specializing in diabetes care.

I participated in all the weekly diabetes team meetings and the monthly research meetings.

## **Research Meetings:**

- **September 22:** Highlights from the 60th EASD 2024 conference.
- **October 24:** Highlights from the 50th ISPAD conference.

## **Diabetes Team Meetings:**

These meetings are held weekly to discuss the most challenging cases. The team collaborates to find solutions, showcasing their unified approach to achieving the best outcomes for each case. Almost every meeting includes an academic session led by a member of the diabetes group. In one of these sessions, I shared the strategies we use in my clinic during the transition phase. I found great value in the sessions on type 2 diabetes in pediatric patients and the training on Omnipod 5.

## **Outpatient Clinic:**

Each consultation lasts approximately one hour per visit. Patients alternate between medical appointments and meetings with other team members, ensuring that every visit addresses the various skills needed to improve their lives with T1D.

Each diabetes team member works differently but follows a similar methodology, focusing on highlighting the positive aspects of diabetes management for each patient. This approach is highly motivating for the person living with T1D and their families. This empathetic approach for people living with a chronic condition is, in my view, ideal for showing families that the efforts they make are effective and showing the areas of opportunity that they can work on to achieve a better quality of life.

The majority of patients use insulin pumps, approximately 85% is using a pump, whereas 2/3 of them are on smart pump, the remaining 1/3 on Omnipod DASH. 95% is using a CGM. A minority use DIY systems and receive support from the medical team. Simple and concrete goals are set during consultations to achieve improvements by the next visit. The emotional impact on diabetes care is also a key focus.

## **Technologies Learned (Unavailable in Mexico):**

- **Insulin Pumps:** Tandem, YpsoPump, Omnipod Dash, and an introduction to Omnipod 5.
- **CGM Sensors:** Freestyle Libre 3, Dexcom G7.
- **Data Integration Platforms:** Glooko and Carelink (this last one is available in Mexico)

I significantly improved my knowledge of managing Medtronic 780G systems. This technology is now available in my country and learning about this will be of great utility to my consultants.

One of the most valuable moments for me was observing how diabetes nurses introduce families to available technologies. They explain all devices, their advantages and disadvantages, and allow families to choose the one that best suits their needs.

I greatly appreciated learning about Norway's national type 1 diabetes registry, directly from the professionals currently leading the project. This registry is highly successful because the different centers across the country collaborate to populate it, providing reliable and up-to-date information. 98% of the population living with T1D is included in this registry. This fosters healthy competition among the various centers to achieve better outcomes and management for this population. Knowing their data, for example, has promoted that the current HbA1c goal be 6.5% or 48 mmol/mol.

The healthcare system in Norway is vastly different from that of my country, as most people use the public system, which covers almost all their needs regardless of their social class. Even migrant populations have access to high-quality healthcare services. It was incredibly inspiring to observe how migrant children have access to the most advanced technologies available in Norway. Given my perspective and previous experiences working with refugees, this was one of the most valuable scenarios and it motivates me to think that at some point an action plan could be developed in Latin America so that migrants living with diabetes are less vulnerable.

I would like to highlight the effort they put into integrating all family members during consultations, particularly by arranging for a translator to ensure that all the information shared during the appointment is understandable. This enables families to maximize the benefits of both technology and education.

Adolescent care was particularly interesting to me. Patients can attend appointments alone starting at age 14 and decide who can access their information from age 16 onward. The diabetes team encourages the self-management of each of its consultants, I think they often achieve this successfully.

In the field of nutrition, I appreciated the approach of the dietitian, who provided guidance on best nutritional practices without imposing a rigid meal plan. I consider this to be a pillar of management and that flexibility within a balanced nutrition is key to successful treatment. I appreciate the material shared with me, I will be sure to share it with my team and other interested teams.

I had the opportunity to accompany one of the diabetes nurses to a meeting at a school to help ensure that a child adapted to their school environment in the healthiest way possible. This was particularly interesting to me, as I have recently been focusing more on this area, and I hope to integrate some of their practices into my own work.

### **New Onset Diabetes Inpatients**

When a child is newly diagnosed with type 1 diabetes, they are hospitalized to ensure that families receive the basic training they need to manage the condition at home. This moment is particularly important as it fosters a relationship of trust and respect between the family and the diabetes team. The learning process is highly structured, and one of its strengths is that each day families are visited by different members of the diabetes team. From the start, patients are connected to insulin pumps to determine their insulin requirements and receive the necessary training to use the pump outside the hospital.

Regarding nutrition, the hospital facilitates carbohydrate counting by providing pre-counted portions for all available food options, allowing families to input the exact amount of carbohydrates consumed.

I am grateful for having integrated me into these medical visits and having been flexible with the language, making an extra effort to speak English most of the time. This allowed me to understand most of the situations and on several occasions participate in the conversation.

## **Acknowledgments**

Something very special was the spontaneous opportunity to have a long and very rich conversation with Knut Dahl-Jørgensen about the DiVid project and the history of the evolution of type 1 diabetes in Norway. It was on my last day as a summary of everything I saw in the previous 6 weeks. I find it remarkable the work they have done over several generations to improve the care of their population living with type 1 diabetes.

I find the type of leadership and teamwork they achieve very inspiring. It is a team that encourages the participation of everyone and whose opinions are valuable in all areas. Without a doubt, it is one of the teams that makes you want to belong.

My deepest and most sincere thanks to each person with whom I exchanged ideas and moments. I will remember many of their perspectives, but above all their human warmth. It is difficult to mention them all in a few pages, but I know perfectly well that each one of them knows they left great teachings and memories in my path. Lars: thank you for all the time and energy you dedicated to me, you can be sure that I will use everything I learned as often as I can.

As always, thanks to the people who live with diabetes, who allow me to learn from them constantly and help me to develop better skills as a health care professional.

For those people who read my report, I can tell you that this rotation in Norway is extremely valuable and that if you are thinking of choosing this center, do not hesitate. Learning is a guarantee.

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