

ISPAD Allan Drash Fellowship report - Dr. Dhivyalakshmi Jeevarathnam

Host Center: Division of Pediatric Endocrinology and Diabetes, Dept. of Pediatrics, Stanford University - School of Medicine

Host Center Supervisors: Dr. David Maahs and Dr. Priya Prahalad

Duration: 6 weeks (from 22nd January 2019 to 5th March 2019)

It is a great honor to be a recipient of ISPAD's Allan Drash Fellowship for the year 2018. The Division of Pediatric Endocrinology and Diabetes, Stanford University is one of the renowned centers in the world and pioneers in diabetes care and research. It is indeed a moment of pride to be selected at Stanford University for the fellowship.

Through electronic communications and during ISPAD 2018 (held in Hyderabad), I was able to discuss with my mentor Dr. Priya Prahalad regarding my learning objectives for the fellowship. My objectives for the fellowship were to learn about multidisciplinary team care in diabetes, insulin pumps, CGMs and to learn about conducting a research program in diabetes. I was able to learn all my fellowship objectives at Stanford. Indeed, on the first day of my fellowship, me and my mentor Dr. Priya scheduled a timetable to cover all my learning objectives.

The following is the summary of my fellowship at Stanford University.

Out Patient services:

1) In the diabetic clinic, I was able to observe the multidisciplinary approach in diabetes care by team comprising of attending physician, fellows, diabetic educators, dieticians and psychologists. These sessions were extensive, patient centric and very informative. It is indeed a surprise for me that most of the diabetes care like diabetes education to new onset type 1 diabetes children, initiation of CGMS and initiation of insulin pumps were done as outpatient care. The advantage of this approach is that it minimizes hospital stay and the financial and psychological burden to the patient and family. This was quite contrast to the practice in India, where doctors do most of the talking in the limited time available and an extensive diabetes education or initiation of diabetes technologies are not possible in the outpatient setting. I plan to implement a team approach in my practice for the care of diabetes children.

2) I was able to observe the software for CGMS and pump downloads and was able to learn how to interpret the data. I have observed almost all kinds of insulin pump and CGMS initiation and I was fortunate to observe some of these patients on their follow-up too. I was able to learn about the fine tuning of insulin regimen in insulin pumps and the difficulties faced by the patients due to these technologies. All these experiences will help in the appropriate selection of diabetes technology for a patient in my practice.

3) Point of care HbA1C is something new to me, and I have observed the processing too. I have also learnt about patient centered way of asking leading questions during patient interview. I have also observed telehealth care for selected patients by the division.

4) I have attended the pre pump and CGMS classes - these were education sessions for the patient and family members regarding diabetes technologies. These classes were a revelation for me, where the patient and family decide about the type of technology that is best suitable for the child. I plan to implement such sessions in my practice.

5) In addition to diabetes clinic, I had opportunity to observe endocrinology clinic, bone clinic and gender clinic. Apart from the regular endocrine clinic, there are specialty/ sub centre clinics run by Stanford, and I have observed the care at one of these specialty clinics too.

Inpatient Services:

During my fellowship, I was able to go for inpatient rounds in the pediatric ward and in the ICU. I have observed the care for diabetes children as inpatient, the management protocol of DKA and other endocrine emergencies.

Academics:

I have attended the weekly division meet where all the faculties will gather and discuss about all the admitted endocrine patients as well as complex outpatient cases. I have also attended the seminars, journal clubs and some of the fellows teaching programs.

PROJECT ECHO T1D - I have attended the weekly Medical education webinar on type 1 diabetes for primary care physicians. There will be didactic lectures and case discussions. All the sessions were interesting, I was able to observe the difficulties faced by primary care physicians, and I was able to relate the same situation even in my practice. This is a very innovative education tool for Primary care practitioners. I plan to implement such webinars in my practice in India.

Research:

Stanford's Pediatric endocrinology and diabetes division is a renowned centre for diabetes research in the world. Since one of my learning objective was to learn about setting up a research program, I was able to attend the weekly research team meetings, where I had the opportunity to observe discussions about the ongoing studies in newer diabetes technologies. These projects were really interesting, novel, innovative and amazing projects and I was fortunate to attend these meetings.

Others:

I have also learnt about organizing camps for diabetes children, which was much more structured than what I do in my practice. Apart from the patient care and research, Stanford also has an extensively developed electronic health records system.

The entire diabetes team (Consultants, CDEs, Nurse practitioners, dieticians) and all the consultants, fellows and other supporting staff of the pediatric endocrinology division were very friendly and supporting. I was able to observe many interesting patients and was able to share my experiences with some of the visiting students and residents. Lastly, at the end of my fellowship, I was asked to deliver a talk about diabetes care at my Institute in Chennai (Sri Ramachandra Institute of higher education and research) and what would be the changes I would be implementing with my learning from Stanford.

Changes that can be implemented in my practice in India, from my learning at Stanford:

- 1) Learning at Stanford made me realize the much needed team approach for type 1 diabetes in my practice, hence establishing a multidisciplinary team will be the priority change to implement.
- 2) To conduct patient education programs like pre pump and CGMS class and to implement diabetes technologies in patient care.
- 3) Since I work at a tertiary care medical college, training primary care physicians using programs like PROJECT ECHO T1D is possible and this will certainly modify the care for type 1 diabetes children in the long run.
- 4) Improved data collection and to use software for glucometers, CGMS and pump downloads.
- 5) Increased interest in research and publication

There are different set of problems we face in a resource limited setup e.g. no insurance coverage, poor affordability of analog insulin, patients reluctant to disclose diabetes diagnosis to schools, no trained teachers at school for care of children with diabetes, etc. My learning at Stanford has boosted me to work more in these aspects for children with diabetes.