

ISPAD Allan Drash Fellowship Report

Recipient: Dr.C.G.Delhikumar, India

Year Awarded: 2023

Duration: 4 weeks (February 8th- March 10th 2024)

Host centre: John Hunter Children's Hospital, New Castle, Australia

Fellowship supervisor: Prof. Bruce King

Introduction:

I am working in a tertiary care centre in southern India. Ours is a government institute that provides medical treatment free of cost to poor patients. In our pediatric department, we care for around 170 children with type 1 diabetes and no trained pediatric endocrinologist. I was awarded the Allan Drash clinical fellowship by ISPAD. I am immensely grateful to ISPAD for giving me financial assistance to undergo this training at John Hunter Children's Hospital, New Castle, Australia, for four weeks from 08-02-2024 to 10-03-2024 under Prof.Bruce King. This was my first international exposure to pediatric care, which had a profound impact and transformative experience for me.

Out-patient exposure:

I had ample opportunity to see how type 1 diabetes is managed on an OPD basis. In every day clinic, I would see around 12-15 diabetes children. I attended the morning pediatric endocrinology clinic with an endocrinologist, educators, and dietician. I was surprised to note that most children had HbA1c, 5.5 to 7%, which was much lower than our clinic's, around 7 to 10%. Apart from the treatment, I also learned how doctors and paramedical staff communicate with parents and children, which was a valuable learning experience. Further, Not only the endocrinologists but also educators and dieticians had appointments at John Hunter Hospital to clarify parents' doubts and assess their management. This reiterates how the team is paramount in managing type 1 children. In OPD, I learned about the interpretation of CGM and complications screening.

Inpatient exposure:

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Every day, I attended ward rounds with the endocrinologist, educator, dietician, and social worker. I learned about insulin titration, patient counseling, and DKA management. I also had the opportunity to visit the intensive care unit during my rounds. Even I saw many rare diabetes syndromes being managed during my rounds. I learned a wide range of ethnic and linguistic groupings of people with diabetes being managed. Also, attending a session for a child who is a migrant from Afghanistan along with a translator, diabetes educator nurse, and dietician was a great learning experience of how Australia provides diabetes care beyond language and ethnic barriers.

Diabetes technology:

All the type 1 children are under different brands of CGM in Joh Hunter Children's Hospital. I observed all kinds of CGM installations. In our hospital, CGM is unavailable, and patients are not affordable. Moreover, 70% of children are on insulin pumps there. I also had the opportunity to observe pre-pump counseling, pump installation, and post-installation correction and follow-up. It was impressive to observe how the pump reduced the burden of multiple insulin injections and improved the quality of life for children with type 1 diabetes. Also, it was enchanting that all expenses and required resources were covered under government insurance in Australia.

Educational session:

Prof. Bruce has conducted many teaching sessions for me on the following topics: basic pathophysiology of type 1 diabetes, blood sugar targets, and insulin management of type 1 dm, dietary management, especially for a fuss eater and grazing children, and psychology of sugar control. He reiterated how uncontrolled high sugar also results in hypoglycemia and further causes long-term complications. Prof. Bruce has vast experience with diabetes, and his depth of knowledge and wisdom are inspiring. He had particularly taught me difficult areas in type 1 diabetes management. He also meets with me once or twice a month, even now, and continues to guide me in various aspects of type 1 diabetes.

Sessions with the diabetes educator:

I attended many sessions with diabetes educator Mrs Michelle. It was a good learning opportunity to see how a team of diabetes educators conducted multiple sessions with newly

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diagnosed type 1 diabetes children and parents. They ensure patients understand and become confident in all aspects of diabetes management before discharge from the hospital. Further, they also provide telehealth supervision for all cases. I also learned about all practical elements of insulin injection, hypoglycemia management, exercise, type 1 DM, and sick day management. Further, Mrs. Michelle taught me about screening for cystic fibrosis-related diabetes, diabetes, school camp, alcoholism, and type 1 DM management. She also shared her experience in managing complicated cases. I also attended the pre-pump workshop for parents conducted by Dr. Meghan, a diabetic educator, and Mrs. Emma, a diabetic dietician. I also observed how diabetes educators play a crucial role in managing diabetes at school by educating and training teachers.

Sessions with dietician:

It was an enlightening experience for me to see how dieticians play an essential role in managing type 1 diabetes. I attended many sessions with a dietician, Mrs. Marchelle, and Mrs. Caramel. I learned about carb and non-carb diets, carb counting, meal planning, and usage of insulin titration charts according to exchange. Also, I received a resource for carb counting in the Indian diet, Mrs. Caramel.

SWIIM card:

SWIIM (Success With Intensified Insulin Management) is a unique insulin titration card used in John Hunter Hospital. This card is handy, simple to use, and very effective in blood sugar control. Prof. Bruce explained how it works. The algorithm used in this card considers premeal blood sugar level, insulin sensitivity factor, and carbohydrate exchange intake. Also, this card gives adjusted insulin doses for hypoglycemia levels. This method of insulin titration is the secret of success in John Hunter Hospital for effective management of type 1 diabetes. Prof. Bruce and Dr. Chris are generous enough to modify it from mmol/dl to mg/dl to use in our centre. Further, the guidance of Prof. Bruce helped me start a quality improvement trial in our centre using this SWIIM card.

Conclusion:

To conclude, this Allan-Drash fellowship helped me gain a wealth of knowledge about all facets of type 1 diabetes management. SWIIM card, carbohydrate exchange counting, CGM,

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and insulin pumps are entirely new learning to me. Also, attending the sessions with diabetes educators, dieticians, and endocrinologists helped me learn about intricate and subtle aspects of diabetes management. Also, this training will be instrumental in improving many aspects of diabetes care in our institute. Further, our continued interaction with Prof. Bruce inspires and empowers me to evolve diabetes care in our centre.

Acknowledgement:

I express my deep gratitude to ISPAD for giving me this training. I am immensely grateful to Prof. Bruce King for accepting me into his institute. Further, I am thankful to all the following for helping me during my training: Pediatric endocrinologist Dr. Komal, Dr. Chris Lawrence, Prof. Crouck, Dr. Pia and Dr. Prudence Lopez. Diabetes educator- Mrs. Michelle, Dr. Meghan. Dietician- Mrs. Caramel, Mrs. Emma