



Reaching Out DashBoard

No of Children 3970

No of HCP,s Trained 1553

No of Children Camps 140

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Editorial Desk



Dear Colleagues and Friends,

CDiC is a unique program which addresses the needs for comprehensive care for our children with type 1 diabetes from the poor section of society. It is a good opportunity for all of us to be of service and support to these needy children. Since, we have completed the registration phase, it is very important now, for us to ensure that all of these children consistently have good control of diabetes. As you all will agree, this can happen only by timely and regular follow up. We need to ensure that none of the registered children miss out on these benefits and are lost to follow up. We must focus on diabetes education to help them overcome psychosocial barriers in managing their type1 diabetes. Group diabetes education sessions through children camps can go a long way in ensuring improved follow-up and better outcomes. It can also aid in strengthening their resolve to defeat diabetes. It would be very pertinent now for all of us to strengthen our scientific data on type 1 diabetes so that our learning can be shared for betterment of all children with diabetes and the medical community.

I once again thank you for your passion and commitment.

With Regards,

Dr. K M Prasanna Kumar
Chairperson CDiC



Dear Colleagues

From the beginning 'Changing Diabetes in Children' program had a vision of bringing better outcomes for children with type1 diabetes through comprehensive care. To continue with our vision beyond 2014 , we need to review our understanding of the current burden of type1 diabetes in India , bring scientific data together and sensitize the health authorities & governments on this alarmingly complex problem . CDiC is a long term commitment which we all need to follow as our moral and social duty.

With Best Wishes

Prof. Ashok Kumar Das



Dear Friends

At Novo Nordisk, we aim to strengthen our vision of Changing Diabetes. We are committed to offering comprehensive diabetes care to the 4,000 children with type 1 diabetes from the poor families registered in the CDiC program, up to Dec 2014. At this crucial phase of this unique initiative, after completing the registrations, we are working towards finding ways to ensure regular follow-up of every registered child and finding innovative solutions to scale up and make this program sustainable in the long term.

In this direction, we have reintroduced the, "NovoAid" scheme. Under this scheme, free human insulin vials will be given to type 1 diabetes children below 18 years coming from economically underprivileged families across India. We hope that this step would bring smiles for many more children with type 1 diabetes and enable them to live healthy, long and productive lives.

Thanking you all for your support and commitment to changing diabetes in children in India.

Best Regards

Melvin D'souza,

Managing Trustee NNEF&

Managing Director Novo Nordisk India Pvt Ltd



CDiC - Moving ahead

Novo Nordisk Education Foundation, through its Changing Diabetes in Children (CDiC) programme reaches out to 4000 children below the poverty line across India, offering them access to comprehensive diabetes care. In the last 22 months after its initiation, the CDiC program, has so far trained 1553 HCPs on management of type 1 diabetes, conducted 140 children camps reaching out to > 4500 children with type1 diabetes, made very useful patient friendly diabetes education tools and HCP inputs on type1 diabetes management. The driving force behind the success of this program so far, has been the collaboration, passion and support extended by the Doctors & the support staff of the participating institutions, in implementing the planned activities of the program, both from the government & private sectors.

Having completed registrations, our key objectives now are to minimize drop-outs and thus ensure better health outcomes for these children. This can happen only through close monitoring and proper follow-up. In this direction, we have increased our interactions with the centers and are focusing on conducting more camps, documenting the topics discussed and monitoring the attendance. Through special program planned on WDD, we hope to increase the follow- up, have improved outcomes and smiles on faces of the children & their families.

Achievements of CDiC in India

- We have set up 20 main centres and 16 satellite centres across the country taking care of all basic needs for proper diabetes care of these registered children
- More than 275000 human insulin vials have been distributed
- 560000 syringes dispensed, 31G syringes have been given to make injecting insulin less painful
- 4000 Accucheck glucometers and 735000 strips have been provided to ensure proper monitoring of children
- More than 39000 tests performed, which include HbA1c, TSH, CBC, Microalbuminuria & Fundus examination.
- 1553 HCPs trained on management of type 1 diabetes
- Conducted 140 camps with the support of the CDiC centers & reached out to 4506 children with type 1 diabetes and more than 8000 people, including parents and siblings.
- On 19 Apr 2013, during the, "Diabetes India", conference at Cochin, we had the opportunity to release the booklet titled, "Diabetes in Children", by Sir Michael Hurst, President of the IDF.
- This book captures the proceedings from the 1st CDiC International consensus meet on Diabetes in Children. Its a handy reference material on type 1 diabetes, having insights on epidemiology, complications and recent advances in management of type 1 diabetes in India, its neighbouring countries and few African countries.
- Display poster on step wise management of diabetic ketoacidosis has been created and is being distributed. This input is also available to any Medical Practitioner on request
- Several innovative child friendly patient education tools have been created to help them understand how to self-manage their diabetes. This includes
 - o Mishti story books,
 - o NOTTI Toy (Novo Nordisk Teaches to Take Insulin) which demonstrates insulin site selection & rotation
 - o Snake and ladder game
 - o Make a healthy change folder
 - o Hypo kit and
 - o HbA1c calculator.
- Special curriculum on management of type1 diabetes, for diabetes educator workshop has been prepared. We will be conducting such workshops all over India in coordination with various CDiC centres.
- The first financial, inventory & process audit was conducted by an independent auditing firm and completed in all the centres by first week of August. It was heartening to see that this noble program is being run in a very systematic manner in all the centres.



HCP training

Apart from the primary objectives of improving access to proper medication, monitoring, diagnostics & consulting, the program incorporates several other key elements of diabetes management. This includes training of healthcare professionals to enhance their capabilities in diagnosis and treatment of children with type1 diabetes. We have distributed training manual and CD's prepared by ISPAD on Diabetes Management in the children and Adolescents to more than 1700 health care professionals.

Date	Venue	Place	Topic
24-Feb	IMA Hall	Raichur	Treating diabetes in children is different from Adults
17th Mar	Bilaspur	Bilaspur	Type 1 diabetes in children
17th Mar	SVIMS	Tirupathi	Diabetes in children
31st Mar	B. J. Wadia Hospital	Mumbai	
31st Mar	API Bhawan	Bangalore	Diabetes in children
14th Apr	J.J.M. Medical college	Davanagere	Diabetes in children
25th May	Kanpur	Kanpur	Diabetes educators meet



- In May we conducted the first diabetes educator program at Kanpur with the help of Dr Rishi Shukla, the centre director of the SPAD – CDiC center. This first program was a big hit and had more than 90 diabetes educators and nursing staff attending the same.
- The next in a series of HCP inputs; the, “DKA Management poster”, was released.



Empowering children and families through Diabetes education camps and education tools

Diabetes cannot be managed only by taking insulin, it's very important that the children also learn more about the disorder and its management since it has to be managed 24x7. More than 140 patient education camps have been held so far in partnership with the CDIC centres. The key topics currently being discussed in these camps are 1. Travelling and diabetes, 2. Understanding Diet, 3. Understanding HbA1c, 4. Sick Day management & 5. Taking Diabetes to school. Our key objectives are to ensure better outcome & least drop outs among these children, which can happen only through proper follow-up and care, these children camps go a long way to help us reach these objectives.

There has been a need for a structured curriculum for diabetes education for children with diabetes. With advise, inputs and suggestions from our CDIC centre directors, we have enlisted 27 topics. It would be great if we can cover all "Must know" topics in group education session for our children with type1 diabetes before 2014.

	Topics	Must Know	Good to know	Great to know
1	Taking Insulin Injection	Site and time in relation to food	Lipoatrophy and Lipodystrophy	
2	Taking Insulin Injection	Alternating sites/ rotation/ syringes/ pen/ refilling cartridges	Giving corrective doses of short acting Insulin	Self adjustment of insulin doses
3	Monitoring Blood Sugars	How and at what frequency to check sugars - When to contact doctor?	Maintaining blood sugar records / Monitoring Ketones/ Corrective doses of small doses of insulin	Interpretation and insulin dose adjustment according to blood sugar results
4	Understanding Diabetes	Basic understanding of diabetes	Why insulin is essential/ discussion on alternative medicines and diabetes	Future treatment options and hope in treatment of type 1 diabetes
5	Parent Education	Basic education about diabetes management	Counselling on psychosocial issues/ social behaviour/ strictness - how much essential	Dealing with difficult child
6	Understanding Hypoglycemia	Symptoms, sign and treatment of Hypoglycaemia	Causes and prevention of hypoglycaemia	Honeymoon phase - Newly diagnosed child with Diabetes
7	Diet & Diabetes	Basic guidelines on diet in people with diabetes	Diet- food exchange list	Diet - carbohydrate count and insulin dose adjustment
8	Understanding Hyperglycemia	Symptoms and signs of Hyperglycaemia	Causes, prevention and treatment of hyperglycaemia	Hyperglycaemia- relationship to DKA, taking care of mild ketones
9	Exercise & Diabetes	Importance of regular exercise	Precaution to take to prevent injuries and hypoglycaemia and DKA	Dose adjustments, professional and strenuous sports, aerobic and anaerobic exercises
10	To School with Diabetes	Taking diabetes to school- information for teachers and friends (Timely, positive and periodic)	Taking diabetes to school - Examinations, sports period, canteen food, annual day, picnics	Taking diabetes to school- psychosocial issues- Handling social comments and teasing
11	Travelling & Diabetes	Travelling and Diabetes - basic guidelines	Precautions while travelling with different modes- aeroplane, rail, taxi, to foreign lands	Adventurous travels, Pilgrimages



12	Understanding Insulin	Knowledge of insulin action which child takes	Knowledge of insulin actions of various types of insulins and regimes/ how to deal with insulin over dose	Insulin action and interaction with other hormones- sumyogi phenomenon
13	Sick day and Diabetes	Sick day management and Diabetes	Insulin dose adjustment during sick day/prevention of ketones	Taking care of mild ketones
14	Monitoring Blood Sugars	Understanding HbA1c		
15	Diabetes Complications	Prevention of Diabetes Complications	Knowledge of annual tests - what need to be done	Concomitant Illness
16	Festivals & Diabetes	Diabetes Management during festivals /religious functions - Basic guidelines	Diabetes Management during feasts	Diabetes Management during fasts - Ramdan/ Navratras
17	Alternative medicine in T1DM	Alternative medicine and type 1 diabetes/drawbacks / when it is allowed - when not		
18	Psychosocial aspects in T1DM	Discussion on Psychosocial issues	Peer support groups to handle such issues	Expert opinions on some topics like handling depression and neglect
19	Adolescence and diabetes	Diet, Exercise and Insulin for normal growth	Dealing with psychosocial issues and hormonal changes	Insulin dose adjustment according to hormonal changes
20	Careers & Diabetes	Career counselling and Diabetes	Managing Diabetes in various professions/shifts	
21	Marriage & Diabetes	Marriage and Diabetes	Pregnancy and Diabetes- pre pregnancy counselling	
22	Adulthood & Diabetes		Menstrual cycle and diabetes/erectile diabetes	
23	Foot care & Diabetes	Foot care and Diabetes		
24	Life & diabetes		Party and diabetes	
25	Life & diabetes		Alcohol, Tobacco and Diabetes	
26	Life & diabetes		Balancing Act	
27	Myths & Misconceptions	Myths and misconceptions- basic	Myths and misconceptions - regarding cure	Myths and misconceptions- regarding living with type 1 diabetes



HbA1c Ready Reckoner - Soon all the centres would be receiving wall mountable HbA1c ready reckoner. This would help children and their parents understand meaning of their HbA1c and take appropriate actions.



Having Type 1 Diabetes

Living with type 1 diabetes can sometimes be a difficult balancing act. A child with type 1 diabetes needs to take insulin shots, follow diet and exercise plan and monitor blood sugar levels. In spite of taking care the average person with type 1 diabetes suffers two episodes of hypoglycaemia per week and one episode of severe hypoglycemia per year(1). On the other hand, even after taking best precautions people with type 1 diabetes often develop high blood glucose levels also.

This happens because there are multiple reasons for high and low blood sugar levels. Let's try to understand.

Causes of Hypoglycaemia

Insulin Related

- Too much insulin : dose error
- Wrong Insulin : short acting instead of long acting
- Insulin injection time in relation to food
- Intra muscular insulin injection
- Insulin injecting site :overused (taking insulin in thigh before playing cricket)
- Taking wrong or more corrective dose of insulin

Diet and exercise Related

- Skipping food and snacks
- Too late food and snacks
- Consuming food containing very less carbohydrates
- Unusual activity – like walking while shopping
- Too much activity-like playing
- Increased or strenuous activity, sometimes hours later ("lag effect" of exercise)

Other Causes

- Illness, esp. gastrointestinal infection, meningitis
- Alcohol especially in teenagers (Does not cause hypo but makes it nearly impossible for body to self-correct since "liver is busy")

Causes of Hyperglycaemia

Insulin Related

- Insulin dosage understanding : taking less dose than what doctor has written
- Skipping insulin doses
- Insulin injecting site : Atrophy or lipotrophy
- Insulin injecting time in related to food
- Storage of insulin : Insulin at room temperature longer than 30 days

Diet and exercise Related

- Not following diet
- Taking food at wrong time
- Having only carbohydrate rich foods
- Child consuming simple sugars in juices/ honey/ alternative medicines
- Not exercising at all
- Anaerobic exercises without guidance

Other Causes

- Adolescence / Growth hormones/ Ovulation or menstruation changes
- Fear of hypoglycaemia
- Family related stress
- No one knows (Friends and relatives) about diabetes of child
- Somogyi Phenomenon
- Infection
- Taking cough syrup or steroidal medication for some ailment
- Concomitant illness- coeliac diseases, thyroid disorders

Next time when the child says I do not know why my sugars are high or low. Try to probe all possible causes, most of which are enlisted above.

1. 1... Cryer PE: Hypoglycemia in Diabetes: Pathophysiology, Prevalence, and Prevention. Alexandria, Va., American Diabetes Association, 2009, p.



Diabetes Educators Column

Diabetes Educators Column- This column is dedicated to diabetes educators, nurse educators, dieticians, social workers and parents who are involved in diabetes care. We hope you will like this column and help us making it better by your rich experience.

10 tips for the parents & the child with diabetes when progressing to higher class or joining new class in school.

For Parents

1. Although everyone may have known in old class that child had diabetes, it is essential for parents that in beginning of new session, they tell class teacher and other teachers about their child having diabetes.
2. Parents need to tell teachers that child may need to test blood sugars, take insulin injections or eat snacks or lunch at a certain time each day.
3. It is always good if parents teach child's teachers and friends to recognize and treat hypoglycaemia.

For Children

4. Be confident and tell your new friends about diabetes if you need to do that.
5. Take your insulin on time. Some of you may go to higher classes in which you have to spend more time in school. Take your insulin in cool pouch and take your afternoon dose on time.
6. It is always good if you take your food from home, if you want to eat at school canteen, choose wisely and check your sugar afterwards to see if you have chosen, food and taken insulin correctly.
7. New time table especially new time of games period may result in fluctuations of your blood sugar levels. It is better if you take your glucometer along with you and maintain food diary. You can discuss this with your doctors and make appropriate changes in insulin dose or food.

8. Some children will face teasing. If this happens to you, you're definitely not alone: even children without diabetes face it, be brave & ignore it. It is always good to share all your feelings with your parents. If it becomes too much, then contact your teachers to intervene. Show with your confidence and positivity that you can do everything which they can do.
9. On some occasions if you are not feeling well or are feeling uncomfortable, speak openly. Whatever happens, though, don't try to hide your condition by skipping treatments or eating foods that aren't on your meal plan — it'll just make you feel worse and risk getting sick at school.
10. Last, do not use diabetes as an excuse; this habit will do you more harm than good.



We thank everyone for their kind efforts for implementation of Changing Diabetes in children program. Please write to us about your views, stories and ideas which can add value in this program and newsletter at CDICINDIA@novonordisk.com.