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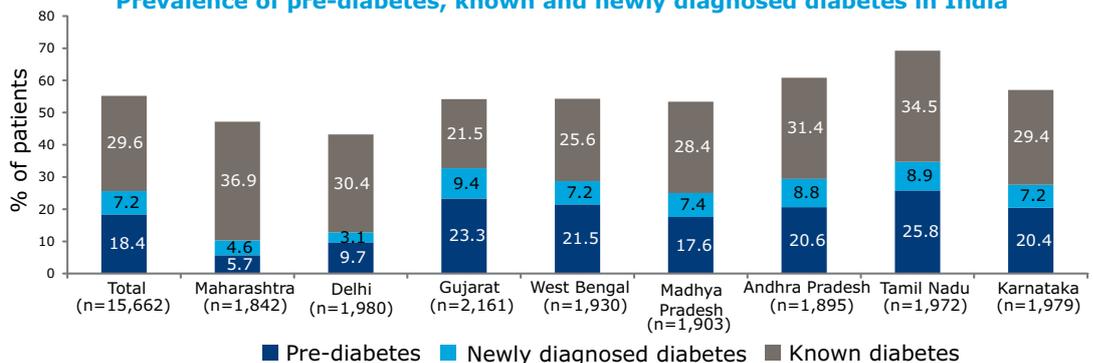
Management of diabetes in primary care setting: Indian perspective

Diabetes in India: Current scenario

- Second highest population with diabetes; estimated prevalence of 61.3 million in 2011 which is expected to increase to 101.2 million by 2030¹
- ICMR-INDIAB study indicates 62.4 million people with diabetes and 77.2 million people with pre-diabetes²
- Recent data suggests- prevalence of diabetes is in excess of 25% in most states³
- Major determinants: age, body-mass index, waist-hip ratio, low physical activity, family history
- Nearly 60% of Indians might develop diabetes or pre-diabetes by the age of 60⁴, as age is a significant determinant of diabetes and pre-diabetes
- Burden of diabetes increases with associated micro- and macro-vascular complications affecting the productivity and economy

contd. in page 2

Prevalence of pre-diabetes, known and newly diagnosed diabetes in India³



contd. from page 1

Barriers for diabetes management in India

Diabetes being a chronic condition and progressive in nature, requires continuous medical care to prevent acute and long-term complications. However, in India, majority of people with diabetes are diagnosed either when they manifest with clinical symptoms or accidentally during routine investigations for other co-morbidities. To help patients get maximum benefit, it is essential to equip them and their families with right knowledge and skills enabling them to take control of the way diabetes is managed. It is important that every person with diabetes keeps well-informed, up-to-date information on diabetes and adheres to their physician's advice which would improve the quality of diabetes care, including the improvement of metabolic control, and diabetes self-management.

Barriers to diabetes management⁵

Among patients

- Low socio-economic status and poor access to public healthcare infrastructure
- Non-adherence due to fear of hypoglycaemia, injection pain, high cost of medication, embarrassment, regimen complexity, low emotional well-being
- Religious sensitivities and requirements like fasting
- Lack of effective self-monitoring of blood glucose levels

Among physicians

- Clinical inertia owing to concerns over hypoglycaemia and weight gain
- Lack of evidence-based practice, patient counselling, poor referrals to specialists

Management of diabetes in the community

Management of patients with diabetes requires a comprehensive approach which includes diabetes education, an emphasis on lifestyle modification, effective monitoring of glycaemic control, adoption of patient-centric approach in diabetes care and improvising motivational skills and training of physicians. Steps for management of diabetes include:

- Screening for diabetes should be considered for all adults of more than or equal to 30 years of age⁶
- Effective treatment that can minimise the risk of severe microvascular and macrovascular complications should be initiated⁷
- Patient's current level of glycaemic control should be determined using either fasting plasma glucose or HbA_{1c} test (if available) as diagnostic test
- Patients with diabetes should be counselled about risks of progression to diabetes and rationale for implementing preventive strategies
- Target range for HbA_{1c} (<7%) that can be safely achieved should be determined, considering individual risk, benefit, and patient's preference⁸

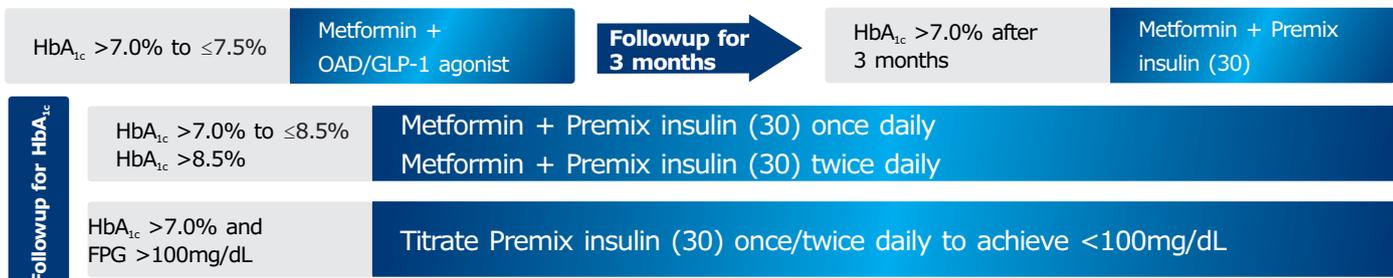
- Glycaemic target goals should be achieved using most cost-effective and least invasive techniques⁹
- Patient should be assessed for knowledge, performance skills, and barriers (psychosocial, personal, or financial) before initiating long-term disease management^{5,10}
- Patients should be initiated on non-pharmacological interventions like healthy diet, adequate physical activity and lifestyle modifications
- When treatment goals are not achieved with diet and exercise, pharmacologic therapy should be initiated along with lifestyle modifications
- When selecting an agent, the efficacy, contraindications, drug interactions, side effects and patient's level of knowledge should be considered
- Risks of proposed therapy should be balanced against potential benefits, based on patient's medical, social, and psychological status
- Patients on oral medication and experiencing extreme hyperglycaemia should be evaluated for insulin therapy
- Patients for whom insulin treatment is necessary should be identified
- Use of insulin therapy should be individualised, and managed by a healthcare team experienced in managing complex insulin therapy¹¹
- Suitability of the set glycaemic targets for a given patient should be determined by healthcare professionals
- Healthcare team should ensure proper patient monitoring and maintenance of glycaemic control through regular follow-up
- The frequency of patient appointments needed to evaluate effectiveness of the treatment strategy should be identified and adjusted if necessary
- Appropriate intervention for high risk patients should be determined and treatment should be adjusted accordingly⁹
- Additional information in response to patient's questions about new treatments or advanced treatments should be provided
- Patient with diabetes in need of urgent referral to a multi-disciplinary team should be identified and referred accordingly

Points to remember

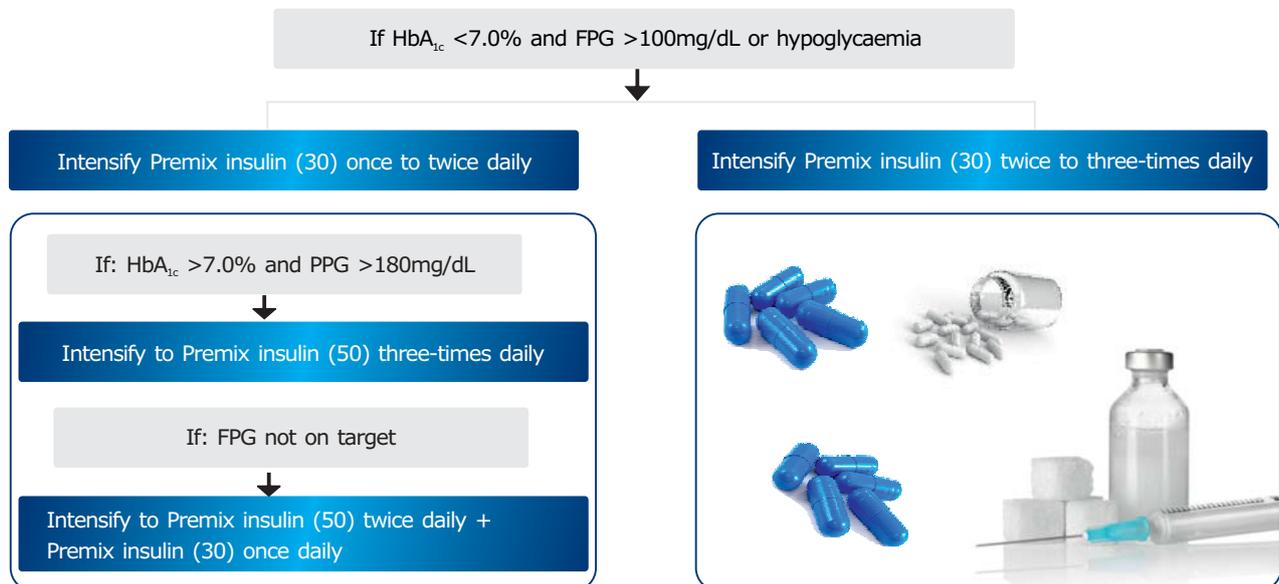
- Early diagnosis and implementation of preventive strategies for diabetes must be emphasized to minimize the risk of vascular complications
- Physicians should ensure the availability of assessment tools for diabetes that are both accurate and easy to use; dissemination of assessment tools on a large scale may be considered, where possible
- A multifaceted approach including patient education, effective treatment strategies and regular monitoring must be adopted for successful management of diabetes

Treatment algorithm for type 2 diabetes mellitus¹²

First line treatment



Continuation of the titration algorithm for different cases



Start insulin

At diagnosis

If:
FPG >250mg/dL
PPG >300mg/dL
HbA_{1c} >9.0%

Or if patient has:
Systemic infection
Sepsis
Acute myocardial infection
Unstable angina
Diabetic ketoacidosis
Pregnancy
Perioperative care

OAD failure

If:
FPG >150mg/dL
PPG/RBG >200mg/dL
HbA_{1c} >8.5%
Despite receiving optimal dose of 2 or 3 OADs

- Metformin: 500mg BD or TDS given during or after meals; Maximum 3gm/Day
- Glipizide: 5mg pre-breakfast or Lunch; Maximum 15mg/Day
- Glibenclamide: 2.5mg-5mg OD/BD/TDS; Maximum 15mg/Day

Start with once daily 10 units

- In the morning: If the pre-dinner blood glucose is high
- In the evening: If the pre-breakfast blood glucose is high

Titrate according to following schedule¹³

Pre-blood glucose (mg/dL)	Change in insulin dose (U)
≤ 100	-2
100 - 110	0
110 - 140	+2
140 - 180	+4
≥ 180	+6

Split the dose when dose is >30 units

50% pre-breakfast	50% pre-dinner
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Adapted from: INCG, J Assoc Physicians India. 2009;57 (Sup 1):42-46¹³

Abbreviations: OAD: Oral anti-diabetic drug; GLP-1 Glucagon like peptide-1; HbA_{1c} : Glycated haemoglobin; FPG: Fasting plasma glucose; PPG: Post-prandial plasma glucose;

Adapted from: Das AK et al. In: Muruganathan A, ed. Medicine Update. Vol. 23. The Association of Physicians of India. 2013

Changing Diabetes® Barometer in Madhya Pradesh

Changing Diabetes® Barometer was launched in Madhya Pradesh (MP) on 17th June, 2013, at Bhopal by the government of Madhya Pradesh in association with Novo Nordisk Education Foundation (NNEF). A memorandum of understanding (MoU) was signed between Dr. Sanjay Goel, Director, Public Health and Family Welfare, MP and Mr. Vinay Ransiwal, Trustee, NNEF. This project aims to undertake a massive diabetes control program by:

- Creating mass awareness of diabetes and improving treatment with focus on reducing complications related to diabetes
- Conducting diabetes screening programs
- Enabling practical diabetes training camps for medical professionals, paramedics and community workers
- Encouraging people to adopt healthy practices through various educational training programs
- Setting up of Pilot diabetes clinic by NNEF in Bhopal, Gwalior and Datia and help government to establish similar clinics in all district headquarters across MP

A diabetes clinic was inaugurated on this occasion by the chief guest of the event, Shri Pravir Krishn, Principal Secretary Health, government of MP. Dr. Geetha M, Director, NRHM, MP and Dr. Veena Sinha, Civil Surgeon, J.P.Hospital, were invited as special guests for the inauguration. Dr. Anil Shukla will run the clinic with all the support from NNEF.



Dr. Sanjay Goel signing MoU



Mr. Vinay Ransiwal signing MoU



Exchange of file, NNEF and government of MP



Inauguration of diabetes clinic by Shri Pravir Krishn

Till date, CDB team has screened more than 2,70,000 people across Goa, Bihar, Gujarat, Puducherry and Andhra Pradesh

Aims of CDB

CDB is a global initiative by Novo Nordisk which aims to:

- Capture important dimensions of the fight against diabetes and establish measurable key performance indicators, allowing tracking and guidance of healthcare improvements
- Develop few centres as diabetes specialty clinics by building infrastructure at various healthcare centres and capacity building through various training programs for doctors and paramedics
- Improve the standard of diabetes care in the state to reduce complications associated with uncontrolled diabetes
- Strengthen government healthcare system to build the trust of common man in management of diabetes
- Motivate government to provide best possible treatment to people with diabetes, even to poorest of poor people

Voice of eminent people

“The foremost thing that one needs to learn is to accept Diabetes as a condition and not treat it like a disease. A regular check-up and healthy diet coupled with exercise can go a long way in controlling and managing Diabetes. In our country every individual above 30 should check for diabetes so that it can be detected as early as possible,”

Dr. Sanjay Goel, DPHW, MP

“We are glad to have partnered with NNEF to launch this state-wide program. Diabetes is a growing healthcare concern and there is an imperative need to address the issue at the mass level and create awareness among people. In fact encouraging people to adopt healthy practices through various educational training programs will be one of the tasks that we will take up through this program. We now plan to start a ‘Diabetes Clinic’ in all district headquarters for which the government will invest.”

Shri Pravir Krishn, Principal Secretary Health, MP

CDB in Gujarat

Changing Diabetes® Barometer was launched in Gujarat in June, 2012, with screening and awareness programs in the district of Ahmedabad. The learning from the Ahmedabad district was analysed and was implemented in Dahod, the 2nd district of Gujarat in January, 2013, to improve the access for diabetes care at the community. Implementation of the program in this region resulted in development of diabetes care at the grass root level, with improved diagnosis and treatment that led to greater adherence to treatment. These plans helped in developing integrated diabetes care at the 1st referral unit of a given healthcare system which resulted in further improvement in the diagnosis, treatment and adherence to treatment.

Diabetes screening results from Ahmedabad and Dahod

Combined results	No.	%
Days of screening	357	-
People screened	58897	-
People with newly detected diabetes	1237	2.10
Diabetes detection rate	8089	13.73
People with controlled diabetes	2569	37.49
People with uncontrolled diabetes	4283	62.51
People with pre-diabetes	5546	9.42
Average HbA _{1c}	5076	9.43

Diabetes training program at Dahod

First healthcare workers (HCWs) diabetes training program in Gujarat was conducted in Dahod on 18th April, 2013 with 92 HCWs comprising of supervisors, field health workers (FHW) and multipurpose healthcare workers (MPHW) from Dahod. The workshop was facilitated by Dr. Kartikeya Parmar, Asst. Prof. of Medicine, who also manages the diabetes OPD in B.J. Medical College, Ahmedabad. Dr. (Mrs) D.B.Rathod, Chief District Health Officer (CDHO) of Dahod district made the session multilingual and interactive by discussing the key aspects of the workshop. Most interesting aspect of the workshop was "Self administration of insulin and self-monitoring of blood glucose level (SMBG)" which created lot of enthusiasm among participants.

The key-points discussed in the workshop were:

- Role of HCWs in optimizing diabetes care
- What is Changing Diabetes® Barometer? How would it help the community? Project, process and expectations
- Diabetes introduction and overview
- Audio visuals (videos about diabetes)
- Diabetes education from FHW perspective
- Insulin administration: Hands on training workshop
- Complications of the eye due to diabetes
- Roll out of follow up plans for FHW and supervisors

It was concluded from the session that the HCWs would be instrumental in following up the patients with diabetes as well as facilitate the diagnosis of new patients from different communities based on the sign and symptoms of the disease.



Dr. (Mrs) D.B.Rathod, CDHO, Dahod addressing the HCW



Participants at workshop on diabetes training



Diabetes training of HCWs at workshop

Diabetes training workshop at Ahmedabad

The training workshop was conducted at Ahmedabad on 15th and 16th April, 2013, with an objective to train doctors from PHCs, CHCs and district hospitals in diabetes management. Fifty three doctors from various PHC/CHC/district hospitals of Ahmedabad participated in the workshop. Key faculties included Dr. Asha N Shah, Prof. and HOD of Medicine, B.J. Medical College and Civil Hospital; Dr. Himanshu Rana, Assoc. Prof. and HOU of Medicine, GMERS Medical College, Gotri, Baroda; Dr. Sunil Panjwani, Assoc. Prof. and HOU of Medicine, Sir T.Hospital and Medical College, Bhavnagar; Dr. Kartikeya Parmar, Asst. Prof. of Medicine, B.J. Medical College and Civil Hospital; Dr. Arti Trivedi, Additional Prof. of Medicine, PDU Medical College, Rajkot; Dr. Samir Zargar, Medical Advisor, Novo Nordisk and Mr. Clifford D'souza, Project Manager, CDB Gujarat. The key note speaker was Dr. Neelam Patel, CDHO, Ahmedabad, who spoke on "Effective Management of Diabetes through Public-Private-Partnership framework-Implementation of Changing Diabetes[®] Barometer". The key points covered in the workshop were:

- What is Changing Diabetes[®] Barometer? How would it help the community? Project processes and expectations
- Implementation of diabetic management system at PHC and introduction of online diabetes registry
- Definition, classification, diagnosis and pathophysiology of diabetes
- Treatment protocols and algorithm, oral antidiabetic drugs and non-insulin injectables; insulin therapy in diabetes management
- Acute and chronic complications of diabetes (diabetic ketoacidosis, HONK, diabetic foot, micro and macrovascular complications)
- Strategies to prevent development of diabetes
 - Benefits of early insulin initiation
 - Indian National Consensus Group guidelines in management of diabetes

The faculties facilitated the learning and made the sessions interactive by discussing and simplifying the topic. They also deliberated the practical aspects of diabetes management in day to day practice. The participants were enthusiastic, receptive and participative which made the workshop lively.



Diabetes training workshop at Ahmedabad



Participants attending the training at workshop



Training of HCWs at workshop



Dr Kartikeya Parmar demonstrating insulin administration at workshop



Participants at HCW training workshop

Diabetes diagnosis, treatment and follow-up at PHCs

PHCs play a vital role in the changing health scenario both in chronic and acute state, as they are the first referral for any health requirements. With more than 70% of the population living in rural area, they have limited access to medical care. National Population Stabilisation Fund reported that, in Gujarat around 50% of the patients travel more than 5 kms and 23% travel more than 10 kms to reach a PHC for their daily health needs. Due to lack of proper facilities and infrastructural support in addition to low adherence to evidence-based-practices among physicians in PHCs, most cases of medical needs are being referred to CHCs and area hospitals or district hospitals. In view of this, PHCs which are primarily preferred for screening of diabetes by patients should upgrade and focus on improved therapeutic approach including insulin management for the treatment of diabetes. Changing Diabetes[®] Barometer was able to implement and improve the diabetes management at the PHCs.

CDB in Puducherry

Healthcare provider (HCP) training

The CDB-Puducherry in association with Directorate of Health and Family Welfare Services (DHFWS), government of Puducherry, conducted a comprehensive training program for 538 paramedical staffs from 13th to 29th May, 2013. This program was intended to provide training in diabetes screening, recording data and management at the PHC level. Dr. K.V.Raman, Director of DHFWS, government of Puducherry, addressed the program and was attended by auxiliary nursing midwifery, staff nurses, pharmacists, lab assistants, field health workers, health inspectors and health assistants from DHFWS.

Dr. Nilamani, Deputy Director (IEC), Dr. K.Shanthimathi, Deputy Director (Public Health), Dr. Samir Zargar, Medical advisor (Novo Nordisk India Pvt. Ltd.), with Dr. R.N.Seshasainan, Head of Department of Medicine (Indira Gandhi Government Hospital and Post Graduate Institute at the National Rural Health Mission) were among the others who attended the program.



Training of HCPs during CDB program at Puducherry

Key findings from CDB program in Koodapakam

The enrolled people were screened for height, weight, waist hip ratio (WHR), blood pressure/random blood sugar (RBS)/glycosylated haemoglobin (HbA_{1c}) (wherever warranted) as a part of CDB program. Evaluations were performed at PHCs and various other locations convenient to public.

Key findings of the study	Population statistics	%
Population of PHC Koodapakam	9518	-
Population above 30 years	4355	45.75
Total no. of persons evaluated till 11.6.13	2686	-
Persons found to be pre-diabetes	86	3.20
Persons found to be hypertension	139	5.17
Persons found to be diabetes mellitus	Old: 177; New: 124; Total: 301	11.20
Persons found to be hypertension + diabetes mellitus	Old: 38; New: 12; Total: 50	1.86
Persons found to be normal	1967	73.23

CDB is a unique program



Dr. K.V.Raman
Director, DHFWS,
Govt. of Puducherry

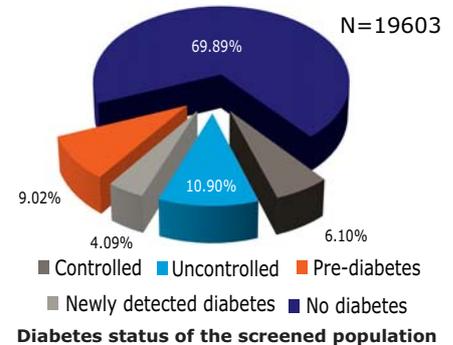
Message from Dr. K.V.Raman, Director, DHFWS, Government of Puducherry

The Government of Puducherry in association with Novo Nordisk Education Foundation (NNEF) had initiated the CDB program on diabetes management and other non-communicable diseases across the Union Territory of Puducherry. It is a unique program in which the patients above 30 years of age were evaluated for diabetes, hypertension, dyslipidaemia and thyroid disorders. The results obtained paved way for the government to adopt appropriate strategy to encourage lifestyle modifications in the public, so as to detect early, and also to prevent complications from non-communicable diseases.

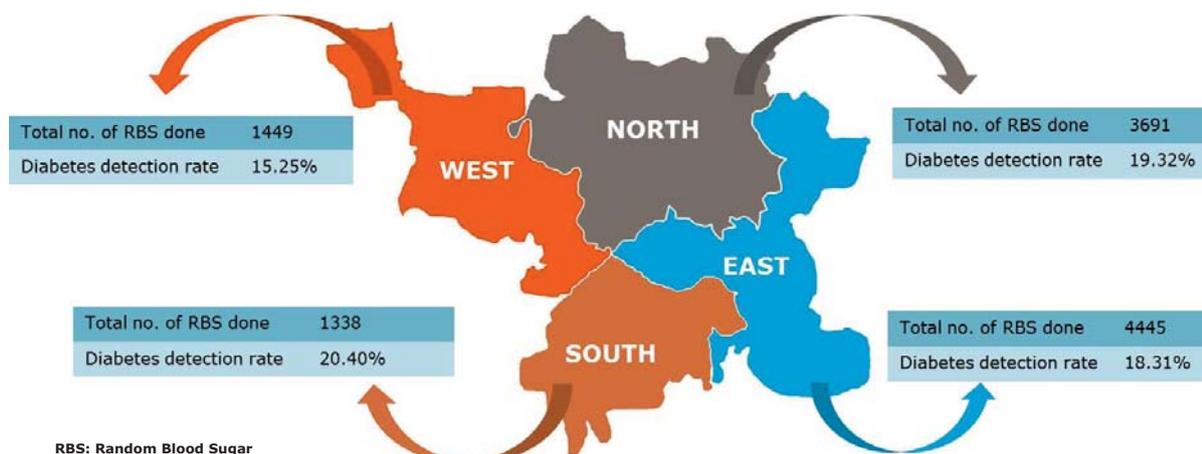
CDB in Andhra Pradesh

NNEF in collaboration with government of Andhra Pradesh (AP) has launched the CDB program on 17th December, 2012, for the prevention and control of diabetes in AP. Given below are the key findings of data obtained during CDB program that was conducted at Hyderabad from 17th December, 2012 to 27th June, 2013. First insights of screening data:

- Total number of people screened: 19603
- Known diabetes: 17.0% (n=3328)
- People with controlled diabetes: 6.1% (n=1191)
- People with uncontrolled diabetes: 10.9% (n=2137)
- People with newly diagnosed diabetes: 4.09% (n=802)
- Overall diabetes detection rate: 21.1% (n=4130)
- People with pre-diabetes: 9.0% (1768)
- Total number of patients screened for HbA_{1c}: 40.1% (n=1656)
- Average HbA_{1c}: 9.12%



Diabetes detection rate in urban healthcare centres from four zones of Hyderabad



- **UHCs of East Zone:** Musheerabad, Tilak Nagar, Harrajpenta, Malakpet, Jambag Park, Madannapet, Gaddiannaram, Shalivana Nagar, Esamia Bazar, RFPTC, Mettuguda, Boiguda, Chutalbasti, Kuttivelodie, Chilalguda, Gandhi, Mohammad Guda
- **UHCs of West Zone:** Sriram Nagar, Borabanda, Vinayak Nagar, Banjara Hills, Showkath Nagar, Jubilee Hills
- **UHCs of North Zone:** Panjagutta, Gaganmahal, DBR Mills, Bogulkunta, Chintal Basti, Nampally, Sayed Nagar, Niloufer, Shanthi Nagar, Khairthabad
- **UHCs of South Zone:** Charminar, Umdha Bazar, Edi Bazar, Panjesha - 1, Panjesha - 2, Taramidan, Aman Nagar

CDB program is very beneficial



Dr. Laxman Panjesha,
Medical Officer, UPHC
Panjesha-I, Hyderabad, AP

Message from Dr. Laxman Panjesha, Medical Officer, Hyderabad

Nowadays diabetes is the most important topic which one is essential to know people due to their sedentary life. The 2 day camp organised by NNEF at UPHC Panjesha-I was very helpful for people to know their diabetic status. The technique employed to estimate blood sugar is very painless and the report also comes within a minute. The technique is very easy to do and public are also very attentive due to the short time for result. You can do this type of camp in every 6 months which is most useful to people.

MEDICAL OFFICER
UPHC PANJESHA-I
H. No. 22-5-447, Aganval Colony,
Near Sardar Market, Panjesha,
Alija Kolla X Roads, Hyderabad

CDB program is encouraging and outstanding



**Dr. Abdul Quddus,
Senior Public Health Officer,
UHNC, Suraj Bhan,
Hyderabad, AP**

Message from Dr. Abdul Quddus, Senior Public Health Officer, Hyderabad

It gives me pleasure to write about the Changing Diabetes® Barometer (CDB) awareness and education program camp conducted. This program has been initiated to give awareness and caution to patient on their hypertension and diabetic status as well as for their life styles. This is really an outstanding work of this system to reach the poor and poorest of poor. I wish them good luck as almost 2000 patients have been given awareness about their health in my cluster during the camp which is really a very useful program arranged by NNEF.

Dr. Abdul Quddus
24/8/2013
Dr. Abdul Quddus
Senior Public Health Officer
UHNC Suraj Bhan
Hyderabad.

Changing Diabetes® in Children (CDiC)

Updates from CDiC

Changing Diabetes® in Children (CDiC) is a Novo Nordisk initiative, undertaken in India by NNEF. The key focus of the program is to improve access to diabetes care and improve outcomes in children with type 1 diabetes mellitus (T1DM). This program offers comprehensive diabetes care to children with T1DM below 18 years from the poor section of society, which includes access to proper medication, monitoring, diagnostics and consulting.

Apart from this, children camps, healthcare provider training workshops, consensus meets and website are the other components of this program emphasising the need for better diabetes management and improved patient outcomes. Through this program, NNEF has reached 4000 children below the poverty line across India. On 19th 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 International Diabetes Federation. This book which captures the proceedings from the 1st CDiC international consensus meet on Diabetes in Children.



Patient education program in progress at MV Diabetes centre- CDiC centre at Chennai



HCP program in progress- CDiC centre at Kanpur, conducted by Society for Pediatric and Adolescent Diabetes



Snakes and Ladders game being distributed in PEP at Cochin

Achievements of CDiC in India

- Healthcare professionals trained on management of T1DM: 1450
- Children camps conducted: 120; Children with T1DM reached: >3,000
- Distributed patient friendly diabetes education tools
- Released booklet on "Diabetes in Children" capturing the proceedings of the consensus meet and recent advances in the management of T1DM, by Sir Michael Hurst, President, IDF on 19th April, 2013 at the Diabetes India conference, Cochin
- Created special curriculum for diabetes educator and initiated first diabetes educator workshop at Kanpur: more than 90 diabetes educators and nurses participated
- Organised children education camps to address every need of the child with T1DM; created and distributed educational material on request, e.g., travelling and diabetes, sick day management, managing diabetes in school, etc.
- Displayed poster on step-wise management of diabetic ketoacidosis and made available to all medical practitioners on request

CDB in Bihar

Launch of diabetes speciality clinics in Bihar

NNEF in collaboration with government of Bihar signed a MoU to set up 41 Primary Centre for Diabetes Care (PCDC) clinics across 20 districts of Bihar to ensure appropriate treatment is made available to people with diabetes. The MoU was signed between Mr. Sanjay Kumar, IAS (Secretary, Health-cum-Executive Director State Health Society, government of Bihar) and Mr. Melvin Oscar D'souza, Managing Trustee, NNEF, on July 10th, 2013 at State Health Society, Patna. PCDC is a part of CDB program.

This project undertakes a massive diabetes control program in Bihar and aims to:

- Establish PCDC to strengthen the diabetes care across the state
- Improve diagnosis and treatment rate for better diabetes management
- Initiate early therapy to avoid any complications of diabetes
- Develop few centres as diabetes specialty clinics by building infrastructure for improvement of disease diagnosis at early stage
- Provide free screening of blood samples and counselling for people with diabetes across Bihar

People who were diagnosed with diabetes, entered the diabetes registry and were given comprehensive diabetes care at PCDC with upgraded infrastructure. With encouraging results from the established 6 clinics in the three districts, 41 new PCDC clinics would be launched in a phased manner in 20 districts of Bihar. The PCDC clinic facilitates screening, diagnosis, and comprehensive care for individuals diagnosed with diabetes.



Exchange of MoU files



Coverage of MoU signing in media
(The Telegraph, Thursday, 11th July, 2013)



CDB data was presented by Sri R.P.Ojha (IAS), Additional Secretary, Department of Health, government of Bihar at State Health Systems (SHS) Workshop, 28th-29th June, 2013, Coorg, Karnataka.

Phase wise planning for CDB

Phase I

- Increase awareness and diagnosis of diabetes
 - Launch of mobile van to create awareness and collect data

Phase II

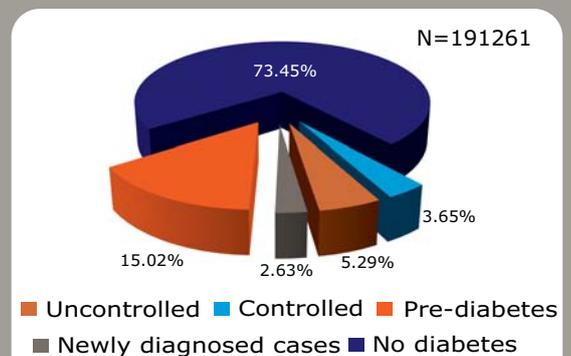
- Increase trained doctors and paramedics
 - Train doctors (at Steno diabetes centre) and paramedical staff of government hospitals in diabetes
- Upgradation of health centres
 - Continue diabetes awareness and education
 - Build consensus for optimal medical intervention
 - Launch of a "diabetes registry"
 - Capacity building, provide training and educational material

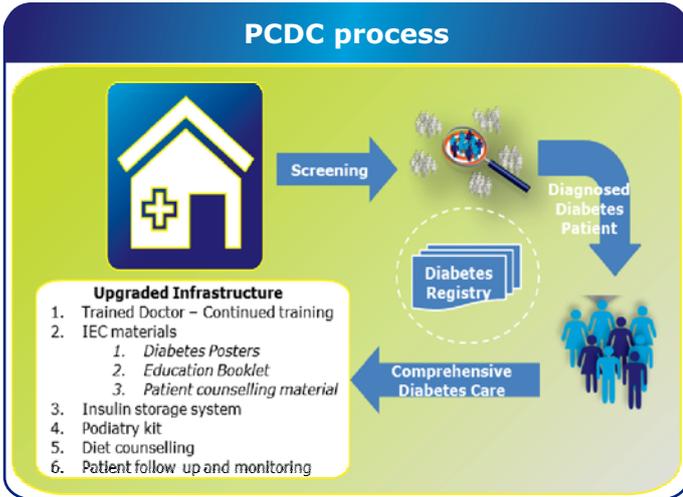
Phase III

- Measure, monitor and report
 - Screening registered patients on insulin/oral antidiabetics for improvement in glycaemic control and quality of life
 - Publish phase III data for consensus for early use of insulin

Key findings in Bihar

The CDB program is running successfully from 20th April, 2011 in the urban and rural areas of Patna, Bhagalpur, and Nalanda districts of Bihar; at PHCs, CHCs, area hospitals, district hospitals, teaching hospitals and other public places and NGOs. People were screened for diabetes and pre-diabetes.





PCDC planned as per MoU

Place	No. of PCDC
Patna and Bhagalpur	4 each
East Champaran, Purnia, Rohtas and Kaimur	3 each
Nalanda, Darbhanga, Muzaffarpur, West Champaran and Araria	2 each
Bhojpur, Banka, Munger, Nawada, Vaishali, Samastipur and Katihar	1 each

CDB plays crucial role in diabetes management in community



Dr. P.B. Mishra
Consultant Cardiologist
and General Physician,
Apollo Hospital,
Bhagalpur

Message from Dr. P.B. Mishra, Apollo Hospital, Bhagalpur

For past 12 years I was practicing medical science. I did not have any dream for this community. But with this turning point in life, a dream have emerged for the community who are prone for developing diabetes and for the community who at any time in life get their leg amputated, get dependent on dialysis for more survival or had heart attack followed by constant dependency on doctors and hospitals. And these all happens due to poor management of diabetes. This dream was all about, how we can prevent these things for the community, not merely for the patient attending our clinic. And this dream was the outcome of the workshop arranged by Novo Nordisk. The purpose was dual. First how to identify individuals prone for developing diabetes and to prevent diabetes in them and second purpose was to prevent complication in patient already having diabetes. Experts of their respective fields from India and Denmark were present in Hotel La Meridian at Cochin, Kerala, India to train us what are the tools, how to get these goals, how to identify and solve the global problem of diabetes both at the level of individual and at the level of community. One part of training was to experience how we feel if we our self are diabetic and how we feel if we have daily finger prick for sugar assessment and subcutaneous injections over the abdomen. Again the purpose was dual. First we learned that both are almost painless. Second we felt how life gets turned if we are bound to have timely injections daily. We really had developed empathy for our diabetic patients. This empathy which was already in our brain had reached our soul also. We had good interaction with our trainers and among ourselves. I wish at all hospitals, diabetic OPD should get open to identify the problem of diabetes in community. They should develop their ways how to overcome difficulties in getting data updates, medicines, and insulin injection for the diabetic patients regularly with proper follow-up and directions to prevent future complications in diabetic persons.

Dr. P. B. Mishra
MO, Sadar, Hospital, Bhagal.

CDB is landmark step towards diabetes management



Dr. M. Hayat,
Member, Association
of Physicians of
India, Member
Endocrine Society of
Indian Physician and
Diabetologist, Bihar

Message from Dr. M. Hayat, Diabetologist, Bihar

The steps towards changing diabetes among Indian population and worldwide taken by Novo Nordisk Education Foundation is great and for the larger benefits of the patients, doctors, paramedics and public health workers. I duly acknowledge and admire this effort with few suggestions:

- CDB program should also include private sector doctors and clinics, as majority of the diabetic population move towards these clinics, rather than only relying on government hospitals.
- The screening program should also take place in public place and some private clinics, so that we collect information of large herds of population.
- Insulin should be made available at cheaper price/free of cost with government participation as it is life saving for type 1 diabetes mellitus (T1DM) and irreplaceable for gestational diabetes mellitus.
- Education program by NNEF was really an eye opener and landmark step towards changing diabetes management. It should be farranged periodically for updating knowledge, sharing experiences and progressing towards expertise in the field of diabetes, in particular T1DM, so that NO CHILD SHOULD DIE OF DIABETES.

Dr. M. Hayat
15-3-13

Foods to be avoided in diabetes

Red light foods are “stop and think” foods. These foods are low in essential nutrients and fibre; high in calories, fat or sugar; or hydrogenated oils or trans-fats. These foods include most fried foods, fast foods and highly processed packaged food. These foods contain lots of energy but not many essential nutrients. These foods causes your sugar levels to become high and make it harder for you to lose weight. These foods need to be avoided or taken in really small quantity occasionally. While eating these foods it is important to consider how much and how often.

Green and yellow light foods can easily become red light foods when they are processed in certain ways. For example, remember the green light carrot that became the yellow light carrot halwa as it has now been cooked with extra sugar and milk. Another notable fast food transformation is yellow light potatoes that become red light french fries.

The farther a food is processed the more likely it is to become a “Red light.”



Diet in diabetes: Red zone food items

- Sugar: Food items rich in sugar like candies, sweets, cakes, cookies, ice-creams
- Fat: Food containing fat like beef, pork, hot dogs, red meat, eggs and poultry, liver, shell fish and other animal protein
- Drinks: Alcohol, sugar sweetened beverages, chocolate syrup, milk shakes
- Whole milk or milk products: Butter, ghee, cheese and other dairy products
- Carbohydrates: white rice, bread, baked food, pizza and pastas
- Fruits: Mango, banana, chickoo, custard apple;
- Vegetables: Potato, sweet potato, colocasia yam, tapioca

The Diabetes Puzzle

Search red zone food items in the puzzle.

1. Alcohol
2. Barfi
3. Cakes
4. Chocolates
5. Donuts
6. Frenchfries
7. Gulabjamun
8. Jalebi
9. Laddu
10. Noodles
11. Pies
12. Pizza
13. Poori
14. Potatochips
15. Redmeat

S	A	W	Z	O	C	C	A	K	E	S	G	P	E	D
E	E	L	H	A	X	K	L	T	U	E	O	K	M	S
L	Z	I	Y	T	J	U	C	J	T	T	Q	P	T	F
D	I	Y	R	E	J	L	O	V	A	A	T	U	D	F
O	V	F	S	F	P	M	H	T	E	L	N	C	T	O
O	N	O	V	B	H	G	O	Z	M	O	E	P	W	F
N	P	Q	Y	A	A	C	L	C	D	C	O	B	S	L
O	Q	W	P	S	H	R	N	S	E	O	V	B	I	K
F	J	J	P	I	G	M	F	E	R	H	T	Q	T	H
L	I	N	P	P	Z	B	M	I	R	C	O	L	A	G
Q	L	S	L	V	J	Z	Y	P	D	F	U	O	F	Q
S	Z	V	M	H	G	X	A	O	G	D	B	W	R	A
K	C	U	S	T	H	U	G	R	D	C	S	K	K	D
A	U	Y	X	A	N	U	M	A	J	B	A	L	U	G
Z	Z	J	A	B	R	N	L	C	O	E	G	P	I	O

References

1. Prevalence of diabetes. <http://www.idf.org/diabetesatlas/5e/the-global-burden>
2. Anjana RM et al. Diabetologia. 2011; 54(12): 3022-7.
3. Joshi SR et al. Diabetes Technol Ther. 2012; 14(1): 8-15.
4. Qiao Q et al. Diabetes Care. 2003; 26(6): 1770-1780.
5. Wangnoo SK et al. IJEM 2013; 17(4): 594-601.
6. http://www.who.int/nmh/publications/ncd_report_full_en.pdf
7. Holman RR et al. N Engl J Med. 2008; 359: 1577-89.
8. American Diabetes Association. Diabetes Care. 2013; 36 (1): S11-66.
9. Management of Diabetes Mellitus Update Working Group. In: Veterans Health Administration and Department of Defense. Version 4. 2010.
10. Karla S et al. IJEM 2013; 17(3): 376-95.
11. Inzucchi SE et al. Diabetologia. 2012; 55(6): 1577-96.
12. Das AK et al. In: Muruganathan A, ed. Medicine Update. Vol. 23. The Association of Physicians of India. 2013.
13. Indian National Consensus Group. J Assoc Physicians India. 2009; 57 (Suppl 1):42-6.

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