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Changing Diabetes in Children

Novo Nordisk

Submitted as part of Access Accelerated

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The information in this report has been submitted by the company concerned to the Access Observatory at Boston University. The information will be updated regularly. For more information about the Observatory go to www.accessobservatory.org

The information contained in this report is in the public domain and should be cited as: Novo Nordisk, Changing Diabetes in Children (2021), Access Observatory Boston, US 2021 (online) available from www.accessobservatory.org

Program Description

Program Overview

1 Program Name

Changing Diabetes in Children

2 Diseases program aims to address

- Diabetes: Type 1

3 Beneficiary population

- Age group: Children under 5 years, adolescents 5-14 years
- Gender: All genders
- Special populations: Low income, middle income

4 Countries

- Cameroon
- Guinea
- Democratic Republic of the Congo
- Kenya
- Uganda
- Tanzania
- Ethiopia
- India
- Bangladesh
- Cote d'Ivoire
- Senegal
- Sudan
- Cambodia
- Myanmar

5 Program start date

January 11, 2009

6 Anticipated program completion date

Completion date specified.

7 Contact person

Ulrik Uldall Nielsen (uuni@novonordisk.com)

8 Program summary

Changing Diabetes® in Children is a public-private partnership launched by Novo Nordisk in 2009. It is aimed to improve access to care and life-saving medicine and supplies for children and adolescents up to 25 years old with type 1 diabetes living in low resource settings.

Global partners include Roche, the International Society for Pediatric and Adolescent Diabetes (ISPAD), and the World Diabetes Foundation (WDF). Changing Diabetes® in Children consolidates national efforts to address local barriers to healthcare, supporting ministries of health in developing comprehensive diabetes care solutions together with national diabetes associations and other implementing partners.

Memorandums of understanding have been developed with governments in programme countries in order to ensure coordination in the short term and sustainability in the long term.

The programme is structured around quality components aimed at building a holistic care system to bring all elements of necessary diabetes care closer to the children. In collaboration with national health authorities, Changing Diabetes® in Children ensures a rural reach, in order to reduce travel time and travel costs for children and families to access adequate care.

The quality components include:

1. Patient education and advocacy. Changing® Diabetes in Children has developed patient education materials adapted to children and adolescents. The innovative and locally adapted materials for patient education feature step-by-step visual instructions and are ISPAD approved. The comprehensive set of patient education materials has been developed in English, French, Swahili and Amharic and is available for download from novonordisk.com/cdic

2. Training of healthcare professionals. Changing Diabetes® in Children has developed adapted training for healthcare professionals in low-resource settings. The training manual supports education and training on important type 1 diabetes topics, such as diagnosis of type 1 diabetes and the organisation of type 1 diabetes care. A comprehensive set of training materials has been developed in English, French, Hindi and Spanish and is available for download from novonordisk.com/cdic

3. Supporting the establishment of national clinics. In collaboration with national health authorities, Changing Diabetes® in Children establishes or refurbishes clinics as an integrated part of national healthcare systems, ensuring coverage in rural and remote areas.

4. Medical supplies and cold chains. Novo Nordisk human insulin is donated along with blood glucose monitoring equipment and medical supplies, while national supply chains have been strengthened through the establishment of cold chains.

URL: <https://www.novonordisk.com/cdic>

Program Strategies & Activities

9 Strategies and activities

Strategy 1: Community Awareness and Linkage to Care

ACTIVITY	DESCRIPTION
Communication	<p>Comprehensive set of patient education materials developed to increase understanding of type 1 diabetes and diabetes camps for youth living with type 1 diabetes. In addition, a training manual for healthcare providers is developed, so healthcare providers can accurately diagnose and treat type 1 diabetes.</p> <p>Localised and adapted social media campaigns to raise awareness about type 1 diabetes and local awareness campaigns through diabetes associations.</p> <p>Adapted patient education material is developed and translated to increase the understanding and self-management for children living with type 1 diabetes.</p>
Planning	Staff planning awareness campaigns and diabetes camps for youth living with type 1 diabetes.
Technology	A comprehensive training manual for healthcare providers working in low-resource settings is developed, to increase knowledge about type 1 diabetes.
Mobilization	Changing Diabetes® in Children strengthens local diabetes associations, youth diabetes associations and parent associations.
Funding	Changing Diabetes® in Children funds local advocacy through national diabetes associations and implementing partners.

Strategy 2: Health Service Strengthening

ACTIVITY	DESCRIPTION
Planning	Changing Diabetes® in Children staff and implementing partners plan the care for children and youth living with type 1 diabetes.
Training	<p>Changing Diabetes® in Children has developed adapted training for healthcare professionals in low-resource settings. The training manual is based on the outcome of local workshops with diabetes experts, in collaboration with the International Society for Pediatric and Adolescent Diabetes.</p> <p>A comprehensive training manual for healthcare providers working in low-resource settings is developed, to increase knowledge about type 1 diabetes.</p>
Infrastructure	Establishing and refurbishing of CDiC clinics embedded in national health systems, along with the improvement of existing infrastructure (HbA1c machines and reagents, measuring scale and weight scale, PC, inventory, etc.).
Technology	Patient registry system to facilitate systematic data collection and patient follow-up.
Management	Case record files are provided as well to ensure proper clinical follow-up.
Funding	Funding provided for the establishment and refurbishing of type 1 diabetes clinics.

Program Strategies & Activities

9 Strategies and activities cont.

Strategy 3: Health Service Delivery

ACTIVITY	DESCRIPTION
Diagnosis	Training of healthcare providers to ensure adequate and timely diagnosis.
Treatment	When children and adolescents are diagnosed with type 1 diabetes, they are provided with insulin, glucometers and strips, medical supplies, HbA1c tests and adapted diabetes education.

Strategy 4: Supply Chain

ACTIVITY	DESCRIPTION
Planning	Planning sessions to adequately forecast need for medical supplies.
Training	Training of personnel to ensure cold chain.
Infrastructure	Since its inception, Changing Diabetes® in Children has strengthened national systems for the storage and transport of insulin and other essential equipment. This has included setting up ordering procedures to ensure that individual clinics can forecast their needs and establish cold chains that work within the individual country settings.

Strategy 5: Regulation & Legislation

ACTIVITY	DESCRIPTION
Advocacy	The programme brings together key opinion leaders to shape the discussion on the importance of recognizing type 1 diabetes in children as a health concern in low and middle income countries. Together with partners, we advocate for the provision of free insulin and glucose meters for children with type 1 diabetes through the government or the insurance scheme of the National Health Insurance Fund (NHIF).

Strategy 6: Medicine Donation

ACTIVITY	DESCRIPTION
Advocacy	The programme brings together key opinion leaders to shape the discussion on the importance of recognizing type 1 diabetes in children as a health concern in low and middle income countries. Together with partners, we advocate for the provision of free insulin and glucose meters for children with type 1 diabetes through the government or the insurance scheme of the National Health Insurance Fund (NHIF).

Program Strategies & Activities

9 Strategies and activities cont.

Strategy 6: Medicine Donation

ACTIVITY	DESCRIPTION
Donation	Through the programme Novo Nordisk donates human insulin to the implementing partners.
Delivery	Novo Nordisk covers costs related to clearance, distribution, cold chain, taxes as applicable for each country.
Communication	Through strengthened local diabetes associations, the programme aims to increase the awareness about Changing Diabetes® in Children clinics and the possibilities for comprehensive care.

10 Strategy by country

STRATEGY	COUNTRY
Community Awareness and Linkage to Care	Cameroon, Guinea, Democratic Republic of the Congo, Kenya, Uganda, Tanzania, Ethiopia, India, Bangladesh, Cote d'Ivoire, Senegal, Sudan, Cambodia, Myanmar
Health Service Strengthening	Cameroon, Guinea, Democratic Republic of the Congo, Kenya, Uganda, Tanzania, Ethiopia, India, Bangladesh, Cote d'Ivoire, Senegal, Sudan, Cambodia, Myanmar
Supply Chain	Cameroon, Guinea, Democratic Republic of the Congo, Kenya, Uganda, Tanzania, Ethiopia, India, Bangladesh, Cote d'Ivoire, Senegal, Sudan, Cambodia, Myanmar
Regulation & Legislation	Cameroon, Guinea, Democratic Republic of the Congo, Kenya, Uganda, Tanzania, Ethiopia, India, Bangladesh, Cote d'Ivoire, Senegal, Sudan, Cambodia, Myanmar
Medicine Donation	Cameroon, Guinea, Democratic Republic of the Congo, Kenya, Uganda, Tanzania, Ethiopia, India, Bangladesh, Cote d'Ivoire, Senegal, Sudan, Cambodia, Myanmar

Companies, Partners & Stakeholders

11 Company roles

COMPANY	ROLE
Novo Nordisk	Contribution with in-kind donations of insulin; funding of all components of the project including local project management, development of training materials, advocacy and awareness raising events locally and globally.
Roche	Contribution with in-kind donations of strips and glucometers.

12 Funding and implementing partners

PARTNER	ROLE/URL	SECTOR
Diabetic Association of Bangladesh	Local partner in the implementation process. https://www.dab-bd.org/#	Voluntary
Univeristy of Conakry, Donka Teaching Hospital	Local partner in the implementation process	Public
Kenya Diabetes Management and Information Center	Local partner in the implementation process https://dmi.or.ke/	Voluntary
Kenya Ministry of Health	Local partner in the implementation process http://www.health.go.ke/	Public
Uganda Ministry of Health	Local partner in the implementation process https://health.go.ug/	Public
St. Francis Hospital - Nsambya	Local partner in the implementation process http://www.nsambyahospital.or.ug/about-us/	Voluntary
Tanzanian Diabetes Association	Local partner in the implementation process http://www.tdatz.or.tz/	Voluntary
Tanzania Ministry of Health	Local partner in the implementation process http://www.moh.go.tz/en/	Public
Cambodia Ministry of Health	Local partner in the implementation process http://moh.gov.kh/?lang=en	Public
Memisa, DRC	Local partner in the implementation process	Voluntary
Democratic Republic of Congo Ministry of Health	Local partner in implementing process https://www.minisanterdc.cd/	Public
BDOM - Bureau Diocésain des Oeuvres Médicales	Local partner in the implementing process http://bdombkv.org/crbst_4.html	Voluntary

Companies, Partners & Stakeholders

12 Funding and implementing partners cont.

PARTNER	ROLE/URL	SECTOR
Diabetes Care Organization	Local partner in the implementation process	Voluntary
Cameroon Ministere de la Sante Pub-	Local partner in the implementation process	Public
Novo Nordisk Education Foundation	Local partner in the implementation process http://nnef.in/	Voluntary
HoPiT - Health of Population in Transi- tion Cameroon	Local partner in the implementation process	Voluntary
World Diabetes Foundation (WDF)	WDF has provided support to the capacity building of healthcare provid- ers and establishment of clinics. https://www.worlddiabetesfoundation.org/	Voluntary
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Co-funding the CDiC project in Cambodia through a public private part- nership agreement with Novo Nordisk. https://www.giz.de/en/html/index.html	Public
International Society for Pediatric and Adolescent Diabetes (ISPAD)	ISPAD has developed a basic training manual for HCPs on the manage- ment of type 1 diabetes in children, as well as patient education materials. In some countries ISPAD has also been part of the initial training faculty to build local type 1 diabetes expertise. https://www.ispad.org/	Voluntary
Ethiopian Diabetes Association	Local partner in the implementation process http://www.diabetesethiopia.org.et/	Voluntary
Ethiopian Ministry of Health	Local partner in the implementation process http://www.moh.gov.et/	Public
Ministere De La Sante Et De L'Hygiene Publique, Ivory Coast	Local partner in the implementation process	Public
Le Ministre de la Santé et de l'Action Sociale de la Republique Du Senegal	Local partner in the implementation process http://www.sante.gouv.sn/	Public
Association Senegalaise de Soutien Aux Diabetiques (ASSAD)	Local partner in the implementation process https://assad.sn/association-senegalaise-de-soutien-aux-diabetiques/	Voluntary
Sudan Ministry of Health	Local partner in the implementaion process http://www/fmoh.gov.sd	Public
Myanmar Ministry of Health and Sports	Local partner in the implementation process http://www.mohs.gov.mm/	Public
Myanmar Pediatric Society	Local partner in the implementaion process	Voluntary
JAD Association of Côte d'Ivoire	Local partner in the implementation process https://jad-ci.org/	Voluntary

Companies, Partners & Stakeholders

13 Funding and implementing partners by country

PARTNER	COUNTRY
Association Senegalaise de Soutien Aux Diabetiques (ASSAD)	Senegal
Le Ministre de la Santé et de l'Action Sociale de la Republique Du Senegal	Senegal
Cambodia Ministry of Health	Cambodia
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Cambodia
Diabetic Association of Bangladesh	Bangladesh
Ethiopian Ministry of Health	Ethiopia
Ethiopian Diabetes Association	Ethiopia
Kenya Diabetes Management and Information Center	Kenya
Kenya Ministry of Health	Kenya
Ministere De La Sante Et De L'Hygiene Publique, Ivory Coast	Côte d'Ivoire
Myanmar Ministry of Health and Sports	Myanmar
Myanmar Peadiatric Society	Myanmar
St. Francis Hospital - Nsambya	Uganda
Uganda Ministry of Health	Uganda
Sudan Ministry of Health	Sudan
Diabetes Care Organization	Sudan
Tanzania Ministry of Health	Tanzania
Tanzanian Diabetes Association	Tanzania
Univeristy of Conakry, Donka Teaching Hospital	Guinea
Novo Nordisk Education Foundation	India
Cameroon Ministere de la Sante Publique	Cameroon
HoPiT - Health of Population in Transition Cameroon	Cameroon
Memisa, DRC	Democratic Republic of the Congo
Democratic Republic of Congo Ministry of Health	Democratic Republic of the Congo
BDOM - Bureau Diocésain des Oeuvres Médicales	Democratic Republic of the Congo
World Diabetes Foundation	[No response provided]
International Society for Pediatric and Adolescent Diabetes	[No response provided]
JAD Association of Côte d'Ivoire	Côte d'Ivoire

Companies, Partners & Stakeholders

14 Stakeholders

STAKEHOLDER	DESCRIPTION OF ENGAGEMENT	REQUESTED OR RECEIVED FROM STAKEHOLDER
Government	[No response provided]	Infrastructure: Yes Human Resources: Yes Funding: Yes Monitoring or Oversight: Yes Other resource: No

STAKEHOLDER	DESCRIPTION OF ENGAGEMENT	REQUESTED OR RECEIVED FROM STAKEHOLDER
Non-governmental organization (NGO)	[No response provided]	Infrastructure: No Human Resources: No Funding: Yes Monitoring or Oversight: Yes Other resource: No

STAKEHOLDER	DESCRIPTION OF ENGAGEMENT	REQUESTED OR RECEIVED FROM STAKEHOLDER
Faith based organization	[No response provided]	Infrastructure: Yes Human Resources: Yes Funding: No Monitoring or Oversight: No Other resource: No

STAKEHOLDER	DESCRIPTION OF ENGAGEMENT	REQUESTED OR RECEIVED FROM STAKEHOLDER
Other	Academic evaluator: University College London (UCL)	N/A

Local Context, Equity & Sustainability

15 Local health needs addressed by program

1) The incidence of type 1 diabetes among children is increasing in many countries, particularly in children under the age of 15 (1). More than 1.1 million children and adolescents have type 1 diabetes worldwide. Many of them live in low- and middle-income countries with limited or no access to diabetes care². In some countries in sub-Saharan Africa, it has been reported that life expectancy for a child with newly diagnosed type 1 diabetes can be as short as one year³.

Unlike type 2 diabetes, type 1 diabetes is not related to lifestyle or being overweight, and there is no known way to prevent it. Children living with type 1 diabetes require daily doses of insulin to manage their blood glucose levels.

In many low-resource countries, children lack access to insulin, blood glucose monitoring and appropriately trained health professionals. This can lead to poor blood glucose control and subsequent severe health complications and early death⁴.

2) The CDiC partnership works together with local implementing partners, to ensure that the programme is suitable for the local context. For example, the education material for healthcare providers and children is created for lower resource settings and can be translated when needed. Furthermore, the clinics are adjusted with equipment to ensure that all clinics can provide a standard of care.

3) Type 1 diabetes is in general not recognized as health problem at the beginning of the project implementation, which has gradually changed with the established diagnosis and treatment in the project countries. In several countries, through the advocacy work of key opinion leaders and the CDiC programme the government has made a commitment to take over the insulin supply.

a How needs were assessed

Needs were assessed stake-holder dialogues and consultations in informal manners via Teams meetings. The key-opinion leaders per country were invited to participate.

b Formal needs assessment conducted

No.

16 Social inequity addressed

This programme aims to address social inequity, by bringing healthcare closer to the patients who are in need. The programme aims to have a rural reach in every country, so that the rural population does not fall behind the urban population.

Local Context, Equity & Sustainability

17 Local policies, practices, and laws considered during program design

POLICY, PRACTICE, LAW	APPLICABLE TO PROGRAM	DESCRIPTION OF HOW IT WAS TAKEN INTO CONSIDERATION
National Regulations	Yes	Collaboration with Ministry of Health within existing regulations, formalized in memorandum of understanding.
Procurement Procedures	Yes	Within existing public procurement system.
Standard Treatment Guidelines	Yes	Where available, however most project countries have no standard treatment guidelines available for type 1 diabetes at start of project.
Quality and Safety Requirements	Yes	In accordance with local and Novo Nordisk requirements.
Remuneration scales and hiring practices	Yes	No hiring or remuneration of health care professionals through Novo Nordisk.

18 How diversion of resources from other public health priorities are avoided

Integration into national healthcare systems, for example by memorandums of understanding with the Ministry of Health in the respective country. In addition, whenever it is possible the type 1 diabetes care will take place in already existing infrastructure to ensure embedding into national healthcare systems. Furthermore, the training that healthcare providers receive is an add-on to already existing knowledge. This serves the purpose to create awareness around type 1 diabetes so diagnosis can be made timely, for example when a child is presented at the emergency room.

19 Program provides health technologies (medical devices, medicines, and vaccines)

TYPE	COMMERCIAL NAME	INTERNATIONAL NON-PROPRIETARY NAME AND/OR INN
Medicine	Human insulin (Actrapid, Insulatard, Mixtard)	---
Device	Glucometer (Accu-Chek, Accu-Check strips, Accu-Check soft-clix and lancets)	---

20 Health technology(ies) are part of local standard treatment guidelines

Yes.

21 Health technologies are covered by local health insurance schemes

Yes. Dependent on the country, insulin may be covered by local health insurances.

Local Context, Equity & Sustainability

22 Program provides medicines listed on the National Essential Medicines List

Yes, Human Insulin.

23 Sustainability plan

From the start, the Changing Diabetes® in Children (CDiC) partnership has included local stakeholders, such as the national ministries of health, national diabetes associations, civil society organisations, and faith based groups, with the goal of ensuring local ownership and avoid creating any parallel structures that might not be sustainable on the long term.

The programme ensured that the training of HCPs is based on local needs and resources, using local and future diabetes experts in becoming trainers as well to ensure the knowledge will also be passed on. In some countries, type 1 diabetes experts from one CDiC country have been used to facilitate training in another CDiC country to ensure knowledge-transfer and learnings between different programme countries.

All CDiC programme countries should develop handover plans showing their ability to transition, including patient support. Because countries have joined the CDiC at different periods in time, we expect that countries that have been enrolled in the programme the longest have more capacity to operate on their own. As a result, the end of the programme will be gradual over time and will differ from country to country.

In this context, Novo Nordisk will continue to work with local stakeholders to ensure that they are able to operate on their own. In parallel, we will ensure a continuous supply of insulin to the children enrolled in the programme.

Additional Program Information

24 Additional program information

In many of the countries CDiC is present, there is no standard care for children with type 1 diabetes. There even may be a lack of stable insulin supply or high mark-ups in pharmacies.

Changing Diabetes in Children offers comprehensive, quality diabetes care. This holistic approach underlines that treating type 1 diabetes is not only a matter of access to insulin. Furthermore, the partnership works in strong collaboration with national ministries of health to strengthen local capacity. By training healthcare professionals to adequately diagnose type 1 diabetes and by our advanced training, we strengthen local efforts further. The clinics that are refurbished or established are also integrated into national healthcare systems to ensure a rural reach.

a Potential conflict of interest discussed with government entity

Yes. Clearly communicated that CDiC is a humanitarian initiative, which is not linked to the business.

25 Access Accelerated Initiative participant

No.

26 International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) membership

Yes.

Resources

- 1 International Diabetes Federation. IDF Diabetes Atlas, 6th edition, Brussels, Belgium, 2013. 20 October 2014. Available from: http://www.idf.org/sites/default/files/EN_6E_Atlas_Full_0.pdf
- 2 International Diabetes Federation. IDF Diabetes Atlas, 8 ed. Brussels, Belgium: International Diabetes Federation; 2017.
- 3 Beran D, Yudkin JS. Diabetes care in sub-Saharan Africa. *The Lancet*. 2006; 368(9548):1689-1695.
- 4 World Health Organization. Global report on diabetes. World Health Organization; 2016.

Program Indicators

PROGRAM NAME

Changing Diabetes in Children

27 List of indicator data to be reported into Access Observatory database

INDICATOR	TYPE	STRATEGY	2009	2010	2011	2012	2013	2014
1 Number of children enrolled	Output	Health Service Strengthening	713 people	1,328 people	4,748 people	9,710 people	11,511 people	12,071 people
2 Number of children that received diabetes education	Output	Community Awareness and Linkage to Care	---	---	---	---	---	---
3 Number of children that attended diabetes camps	Output	Community Awareness and	---	---	---	---	---	---
4 Number of healthcare professionals trained	Output	Health Service Strengthening	---	119 people	980 people	1,462 people	1,811 people	1,375 people
5 Number of clinics established or strengthened	Output	Health Service Strengthening	10 buildings	3 buildings	41 buildings	21 buildings	18 buildings	20 buildings
6 Number of donated insulin vials	Output	Medicines Donation	---	---	---	---	---	---

INDICATOR	TYPE	STRATEGY	2015	2016	2017	2018	2019	2020
1 Number of children enrolled	Output	Health Service Strengthening	13,494 people	13,970 people	16,078 people	19,368 people	21,802 people	23,152 people
2 Number of children that received diabetes education	Output	Community Awareness and Linkage to Care	26,497 people	32,008 people	36,302 people	29,196 people	24,870 people	9,641 people
3 Number of children that attended diabetes camps	Output	Community Awareness and Linkage to Care	4,766 people	4,093 people	594 people	583 people	1,687 people	875 people
4 Number of healthcare professionals trained	Output	Health Service Strengthening	799 people	2,070 people	1,898 people	1,134 people	1,574 people	469 people
5 Number of clinics established or strengthened	Output	Health Service Strengthening	0 buildings	1 building	24 buildings	39 buildings	31 buildings	1 building
6 Number of donated insulin vials	Output	Medicines Donation	---	---	224,923 insulin vials	263,916 insulin vials	264,623 insulin vials	306,960 insulin vials

INDICATOR Number of children enrolled

STRATEGY HEALTH SERVICE STRENGTHENING

ITEM	DESCRIPTION
Definition	The number of children who are actively enrolled in the CDiC program at the time of reporting. Enrolled children receive Type 1 diabetes care, HbA1c tests four times a year, human insulin, medical consultation, patient education and can attend diabetes camps.
Method of measurement	Counting the number of children enrolled according to registries at the clinics
28 Data source	Routine program data
29 Frequency of reporting	Once per year

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
30 Data collection	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Diabetic Association of Bangladesh; Univeristy of Conakry, Donka Teaching Hospital; Kenya Diabetes Management and Information Center; St. Francis Hospital - Nsambya; Tanzanian Diabetes Association; Ethiopian Diabetes Association; Association Senegalaise de Soutien Aux Diabetiques (ASSAD); Myanmar Peadiatric Society; JAD (I Help The Diabetic); HoPiT - Health of Population in Transition Cameroon; Memisa, DRC; Diabetes Care Organization; Novo Nordisk Education Foundation	The health care staff at the associated diabetes clinics registers the number of enrolled children in the CDiC program.	Ongoing
31 Data processing	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Diabetic Association of Bangladesh; Univeristy of Conakry, Donka Teaching Hospital; Kenya Diabetes Management and Information Center; St. Francis Hospital - Nsambya; Tanzanian Diabetes Association; Ethiopian Diabetes Association; Association Senegalaise de Soutien Aux Diabetiques (ASSAD); Myanmar Peadiatric Society; JAD (I Help The Diabetic); HoPiT - Health of Population in Transition Cameroon; Memisa, DRC; Diabetes Care Organization; Novo Nordisk Education Foundation	The local medical staff collects the data and reports on a monthly basis from the clinics and forwards them to the local project manager in a country. The local project manager report on a half- yearly basis in a written progress report to a Novo Nordisk country coordinator who then shares the data with the global program lead in Novo Nordisk's headquarters.	Every month

INDICATOR **Number of children enrolled**

STRATEGY HEALTH SERVICE STRENGTHENING

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
32	Data validation	The global program lead at Novo Nordisk's headquarters accumulates, reviews and validates the data reported by each of the country coordinators. The global program lead analyses the data for unexpected patterns in the data with the country coordinators. On a regular basis visits are conducted by the country coordinator to the facilities which include reviewing the data collection mechanisms with the partners.	

33 Challenges in data collection and steps to address challenges

In low-resource settings where Changing Diabetes in Children is present, healthcare providers have limited or no access to automated patient registry systems, and in the majority of places most patient files are still kept in paper-format. It is therefore sometimes a challenge to collect and aggregate data. We support structured data collection across clinics, with local project manager and validation at HQ level. Furthermore, Changing Diabetes in Children aims to support better national systems in order to ease the burden of the healthcare providers and provide optimal care for patients.

INDICATOR	2009	2010	2011	2012	2013	2014	2015	2016	2017
1 Number of children enrolled	713 people	1,328 people	4,748 people	9,710 people	11,511 people	12,071 people	13,494 people	13,976 people	16,078 people

INDICATOR	2018	2019	2020
1 Number of children enrolled	19,368 people	21,802 people	23,152 people

Comments:

In 2009, CDiC was implemented in 4 countries. In 2010, CDiC was implemented in 7 countries. In 2011, CDiC was implemented in 9 countries. In 2012, CDiC was implemented in 9 countries. In 2013, CDiC was implemented in 9 countries. In 2014, CDiC was implemented in 9 countries. In 2015, CDiC was implemented in 9 countries. In 2016, CDiC was implemented in 9 countries. In 2017, CDiC was implemented in 13 countries. In 2018, CDiC was implemented in 14 countries.

2020: Total actively enrolled in 2020.

ITEM	DESCRIPTION
Definition	The number of children who have received diabetes patient education at clinics
Method of measurement	Counting the number of children who received diabetes education according to registries at the clinics
28 Data source	Routine program data
29 Frequency of reporting	Once per year

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
30 Data collection	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Diabetic Association of Bangladesh; Univeristy of Conakry, Donka Teaching Hospital; Kenya Diabetes Management and Information Center; St. Francis Hospital - Nsambya; Tanzanian Diabetes Association; Ethiopian Diabetes Association; Association Senegalaise de Soutien Aux Diabetiques (ASSAD); Myanmar Peadiatric Society; JAD (I Help The Diabetic); HoPiT - Health of Population in Transition Cameroon; Memisa, DRC; Diabetes Care Organization; Novo Nordisk Education	The diabetes educators working in the diabetes clinics register the number of children receiving patient education.	Ongoing
31 Data processing	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Diabetic Association of Bangladesh; Univeristy of Conakry, Donka Teaching Hospital; Kenya Diabetes Management and Information Center; St. Francis Hospital - Nsambya; Tanzanian Diabetes Association; Ethiopian Diabetes Association; Association Senegalaise de Soutien Aux Diabetiques (ASSAD); Myanmar Peadiatric Society; JAD (I Help The Diabetic); HoPiT - Health of Population in Transition Cameroon; Memisa, DRC; Diabetes Care Organization; Novo Nordisk Education	The local medical staff collects the data and reports on a monthly basis from the clinics and forwards them to the local project manager in a country. The local project manager report on a half-yearly basis in a written progress report to a Novo Nordisk country coordinator who then shares the data with the global program lead in Novo Nordisk's headquarters.	Every month

INDICATOR **Number of children that received diabetes education**

STRATEGY COMMUNITY AWARENESS AND LINKAGE TO CARE

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
32 Data validation		The global program lead at Novo Nordisk's headquarters accumulates, reviews and validates the data reported by each of the country coordinators. The global program lead analyses the data for unexpected patterns in the data with the country coordinator. On a regular basis visits are conducted by the country coordinator to the facilities which include reviewing the data collection mechanisms with the partners.	

33 Challenges in data collection and steps to address challenges

In low-resource settings where Changing Diabetes in Children is present, healthcare providers have limited or no access to automated patient registry systems, and in the majority of places most patient files are still kept in paper-format. It is therefore sometimes a challenge to collect and aggregate data. We support structured data collection across clinics, with local project manager and validation at HQ level. Furthermore, Changing Diabetes in Children aims to support better national systems in order to ease the burden of the healthcare providers and provide optimal care for patients.

INDICATOR	2015	2016	2017	2018	2019	2020
2 Number of children that received diabetes education	26,497 people	32,008 people	36,302 people	29,196 people	24,870 people	9,641 people

Comments: N/A

ITEM	DESCRIPTION
Definition	The number of children who have attended a diabetes camp
Method of measurement	Counting the number of children attending a diabetes camps according to the registries
28 Data source	Routine program data
29 Frequency of reporting	Once per year

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
30 Data collection	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Diabetic Association of Bangladesh; Univeristy of Conakry, Donka Teaching Hospital; Kenya Diabetes Management and Information Center; St. Francis Hospital - Nsambya; Tanzanian Diabetes Association; Ethiopian Diabetes Association; Association Senegalaise de Soutien Aux Diabetiques (ASSAD); Myanmar Peadiatric Society; JAD (I Help The Diabetic); HoPiT - Health of Population in Transition Cameroon; Memisa, DRC; Diabetes Care Organization; Novo Nordisk Education	The diabetes educators report after each diabetes camp on the number of children attending a camp.	Ongoing
31 Data processing	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Diabetic Association of Bangladesh; Univeristy of Conakry, Donka Teaching Hospital; Kenya Diabetes Management and Information Center; St. Francis Hospital - Nsambya; Tanzanian Diabetes Association; Ethiopian Diabetes Association; Association Senegalaise de Soutien Aux Diabetiques (ASSAD); Myanmar Peadiatric Society; JAD (I Help The Diabetic); HoPiT - Health of Population in Transition Cameroon; Memisa, DRC; Diabetes Care Organization; Novo Nordisk Education	The local medical staff collects the data and reports on a monthly basis from the clinics and forwards them to the local project manager in a country. The local project manager reports on a half- yearly basis in a written progress report to a Novo Nordisk country coordinator who then shares the data with the global program lead in Novo Nordisk's headquarters.	Every month

INDICATOR **Number of children attended diabetes camps**

STRATEGY COMMUNITY AWARENESS AND LINKAGE TO CARE

3

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
32 Data validation		The global program lead at Novo Nordisk’s headquarters accumulates, reviews and validates the data reported by each of the country coordinators. The global program lead analyses the data for unexpected patterns in the data with the country coordinators. On a regular basis visits are conducted by the country coordinator to the facilities which include reviewing the data collection mechanisms with the partners.	

33 Challenges in data collection and steps to address challenges

In low-resource settings where Changing Diabetes in Children is present, healthcare providers have limited or no access to automated patient registry systems, and in the majority of places most patient files are still kept in paper-format. It is therefore sometimes a challenge to collect and aggregate data. We support structured data collection across clinics, with local project manager and validation at HQ level. Furthermore, Changing Diabetes in Children aims to support better national systems in order to ease the burden of the healthcare providers and provide optimal care for patients.

INDICATOR	2015	2016	2017	2018	2019	2020
3 Number of children attended diabetes camps	4,766 people	4,093 people	594 people	583 people	1,687 people	875 people

Comments:

2020: Heavily impacted due to COVID-19 outbreak.

ITEM	DESCRIPTION
Definition	The number of healthcare professionals who get trained on type 1 diabetes diagnosis and treatment by selected teaching hospitals. Training is provided to healthcare professionals during a 1-3 days course.
Method of measurement	Counting the number of healthcare professionals who completed the training according to participation registrations.
28 Data source	Routine program data
29 Frequency of reporting	Once per year

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
30 Data collection	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Diabetic Association of Bangladesh; Univeristy of Conakry, Donka Teaching Hospital; Kenya Diabetes Management and Information Center; St. Francis Hospital - Nsambya; Tanzanian Diabetes Association; Ethiopian Diabetes Association; Association Senegalaise de Soutien Aux Diabetiques (ASSAD); Myanmar Peadiatric Society; JAD (I Help The Diabetic); HoPiT - Health of Population in Transition Cameroon; Memisa, DRC; Diabetes Care Organization; Novo Nordisk Education	After each training session the trainers register the number of attending healthcare professionals by signing an attendance form.	Ongoing
31 Data processing	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Diabetic Association of Bangladesh; Univeristy of Conakry, Donka Teaching Hospital; Kenya Diabetes Management and Information Center; St. Francis Hospital - Nsambya; Tanzanian Diabetes Association; Ethiopian Diabetes Association; Association Senegalaise de Soutien Aux Diabetiques (ASSAD); Myanmar Peadiatric Society; JAD (I Help The Diabetic); HoPiT - Health of Population in Transition Cameroon; Memisa, DRC; Diabetes Care Organization; Novo Nordisk Education	The local project manager is responsible for registering the data on a monthly base and forwards them to the Novo Nordisk country coordinator. The country coordinator reports on a monthly basis to the global program lead at Novo Nordisk's headquarters. having attended the training.	Every month

INDICATOR **Number of healthcare professionals trained**

STRATEGY HEALTH SERVICE STRENGTHENING

4

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
32 Data validation		The global program lead at Novo Nordisk’s headquarters accumulates, reviews and validates the data reported by each of the country coordinators. The global program lead analyses the data for unexpected patterns in the data with the country coordinator. On a regular basis visits are conducted by the country coordinator to the facilities which include reviewing the data collection mechanisms with the partners.	

33 Challenges in data collection and steps to address challenges

In low-resource settings where Changing Diabetes in Children is present, healthcare providers have limited or no access to automated patient registry systems, and in the majority of places most patient files are still kept in paper-format. It is therefore sometimes a challenge to collect and aggregate data. We support structured data collection across clinics, with local project manager and validation at HQ level. Furthermore, Changing Diabetes in Children aims to support better national systems in order to ease the burden of the healthcare providers and provide optimal care for patients.

INDICATOR	2010	2011	2012	2013	2014
4 Number of healthcare professionals trained	119 people	980 people	1,462 people	1,811 people	1,375 people

INDICATOR	2015	2016	2017	2018	2019	2020
4 Number of healthcare professionals trained	799 people	2,070 people	1,898 people	1,134 people	1,574 people	469 people

Comments:

2020: Comprises both initial and advanced training.

ITEM	DESCRIPTION
Definition	The number of type 1 diabetes clinics established. An established clinic has been strengthened in its technical capacities (medical and laboratory equipment) for the diagnosis and treatment of type 1 diabetes
Method of measurement	Counting the number of diabetes clinics, that were strengthened to have the technical capacity to diagnose and treat type 1 diabetes, according to records of the implementing partners
28 Data source	Routine program data
29 Frequency of reporting	Once per year

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
30 Data collection	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Diabetic Association of Bangladesh; Univeristy of Conakry, Donka Teaching Hospital; Kenya Diabetes Management and Information Center; St. Francis Hospital - Nsambya; Tanzanian Diabetes Association; Ethiopian Diabetes Association; Association Senegalaise de Soutien Aux Diabetiques (ASSAD); Myanmar Peadiatric Society; JAD (I Help The Diabetic); HoPiT - Health of Population in Transition Cameroon; Memisa, DRC; Diabetes Care Organization; Novo Nordisk Education	The project partners report the number of established clinics in a given country.	Ongoing
31 Data processing	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Diabetic Association of Bangladesh; Univeristy of Conakry, Donka Teaching Hospital; Kenya Diabetes Management and Information Center; St. Francis Hospital - Nsambya; Tanzanian Diabetes Association; Ethiopian Diabetes Association; Association Senegalaise de Soutien Aux Diabetiques (ASSAD); Myanmar Peadiatric Society; JAD (I Help The Diabetic); HoPiT - Health of Population in Transition Cameroon; Memisa, DRC; Diabetes Care Organization; Novo Nordisk Education	The local project manager is responsible for registering the data on a monthly base and forwards them to the Novo Nordisk country coordinator. The country coordinator reports on a monthly basis to the global program lead at Novo Nordisk's headquarters.	Every month

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
32 Data validation		The global program lead at Novo Nordisk’s headquarters accumulates, reviews and validates the data reported by each of the country coordinators. The global program lead analyses the data for unexpected patterns in the data with the country coordinator. On a regular basis visits are conducted by the country coordinator to the facilities which include reviewing the data collection mechanisms with the partners.	

33 Challenges in data collection and steps to address challenges

In low-resource settings where Changing Diabetes in Children is present, healthcare providers have limited or no access to automated patient registry systems, and in the majority of places most patient files are still kept in paper-format. It is therefore sometimes a challenge to collect and aggregate data. We support structured data collection across clinics, with local project manager and validation at HQ level. Furthermore, Changing Diabetes in Children aims to support better national systems in order to ease the burden of the healthcare providers and provide optimal care for patients.

INDICATOR	2009	2010	2011	2012	2013	2014
5 Number of clinics established	10 buildings	3 buildings	41 buildings	21 buildings	18 buildings	20 buildings

INDICATOR	2015	2016	2017	2018	2019	2020
5 Number of clinics established	0 buildings	1 building	24 buildings	39 buildings	31 buildings	1 building

Comments:

2020: Heavily impacted due to COVID-19 outbreak.

ITEM	DESCRIPTION
Definition	The total number of vials donated by Novo Nordisk through the CDiC program. Donations include Insulatard, Actrapid and Mixtard
Method of measurement	Counting the vials donated according to reports from Novo Nordisk's affiliates on the number of vials donated to the CDiC program
28 Data source	Routine program data
29 Frequency of reporting	Once per year

	RESPONSIBLE PARTY	DESCRIPTION	FREQUENCY
30 Data collection	Company	The donated insulin is reported by Novo Nordisk's affiliates in the given countries. The donations are reported in number of vials.	Ongoing
31 Data processing	Company	At the end of the year Novo Nordisk's affiliates report to the global program lead in Novo Nordisk's headquarters on how much insulin has been donated in each of the program countries.	Once per year
32 Data validation		We have internal audits.	

33 Challenges in data collection and steps to address challenges

In low-resource settings where Changing Diabetes in Children is present, healthcare providers have limited or no access to automated patient registry systems, and in the majority of places most patient files are still kept in paper-format. It is therefore sometimes a challenge to collect and aggregate data. We support structured data collection across clinics, with local project manager and validation at HQ level. Furthermore, Changing Diabetes in Children aims to support better national systems in order to ease the burden of the healthcare providers and provide optimal care for patients.

INDICATOR	2017	2018	2019	2020
1 Number of children enrolled	224,923 insulin vials	263,916 insulin vials	264, 623 insulin vials	306,960 insulin vials

Comments: N/A

Appendix

This program report is based on the information gathered from the Access Observatory questionnaire below.

Program Description

PROGRAM OVERVIEW

- 1 Program Name
- 2 Diseases program aims to address:
Please identify the disease(s) that your program aims to address (select all that apply).
- 3 Beneficiary population
Please identify the beneficiary population of this program (select all that apply).
- 4 Countries
Please select all countries that this program is being implemented in (select all that apply).
- 5 Program Start Date
- 6 Anticipated Program Completion Date
- 7 Contact person
On the public profile for this program, if you would like to display a contact person for this program, please list the name and email address here (i.e. someone from the public could email with questions about this program profile and data).
- 8 Program summary
Please provide a brief summary of your program including program objectives (e.g., the intended purposes and expected results of the program; if a pilot program, please note this). Please provide a URL, if available. Please limit replies to 750 words.

PROGRAM STRATEGIES & ACTIVITIES

- 9 Strategies and activities
Based on the BUSPH Taxonomy of Strategies, which strategy or strategies apply to your program (please select all that apply)?
- 10 Strategy by country
If you have registered one program for multiple countries, this question allows you to provide a bit more specificity about each country (e.g. some countries have different strategies, diseases, partners, etc.). Please complete these tables as applicable. For each portion you have selected from above (program strategies), please identify which country/countries these apply.

COMPANIES, PARTNERS AND STAKEHOLDERS

- 11 Company roles
Please identify all pharmaceutical companies, including yours, who are collaborating on this program:

What role does each company play in the implementation of your program?
- 12 Funding and implementing partners
Please identify all funding and implementing partners who are supporting the implementation of this program (Implementing partners is defined as either an associate government or non-government entity or agency that supplements the works of a larger organization or agency by helping to carry out institutional arrangements in line with the larger organization's goals and objectives.)

a. What role does each partner play in the implementation of your program? Please give background on the organization and describe the nature of the relationship between the organization and your company. Describe the local team's responsibilities for the program, with reference to the program strategies and activities. (response required for each partner selected).

b. For each partner, please categorize them as either a

Public Sector, Private Sector, or Voluntary Sector partner. (Public Sector is defined as government; Private Sector is defined as A business unit established, owned, and operated by private individuals for profit, instead of by or for any government or its agencies. Generation and return of profit to its owners or shareholders is emphasized; Voluntary Sector is defined as Organizations whose purpose is to benefit and enrich society, often without profit as a motive and with little or no government intervention. Unlike the private sector where the generation and return of profit to its owners is emphasized, money raised or earned by an organization in the voluntary sector is usually invested back into the community or the organization itself (ex. Charities, foundations, advocacy groups etc.))

c. Please provide the URL to the partner organizations' webpages

13 Funding and implementing partners by country

If you have registered one program for multiple countries, this question allows you to provide a bit more specificity about each country (e.g., some countries have different strategies, diseases, partners, etc.). Please complete these tables as applicable. For each portion you have selected from above (funding and implementing partners), please identify which country/countries these apply.

14 Stakeholders

Please describe how you have engaged with any of these local stakeholders in the planning and/or implementation of this program. (Stakeholders defined as individuals or entities who are involved in or affected by the execution or outcome of a project and may have influence and authority to dictate whether a project is a success or not (ex. Ministry of Health, NGO, Faith-based organization, etc.). Select all that apply.

- Government, please explain
- Non-Government Organization (NGO), please explain
- Faith-based organization, please explain
- Commercial sector, please explain
- Local hospitals/health facilities, please explain
- Local universities, please explain
- Other, please explain

LOCAL CONTEXT, EQUITY & SUSTAINABILITY

15 Local health needs addressed by program

Please describe how your program is responsive to local health needs and challenges (e.g., how you decided and worked

together with local partners to determine that this program was appropriate for this context)?

- a How were needs assessed
- b Was a formal need assessment conducted

(Yes/No) If yes, please upload file or provide URL.

16 Social inequity addressed

Does your program aim to address social inequity in any way (if yes, please explain). (Inequity is defined as lack of fairness or justice. Sometime 'social disparities,' 'structural barriers' and 'oppression and discrimination' are used to describe the same phenomenon. In social sciences and public health social inequities refer to the systematic lack of fairness or justice related to gender, ethnicity, geographical location and religion. These unequal social relations and structures of power operate to produce experiences of inequitable health outcomes, treatment and access to care. Health and social programs are often designed with the aim to address the lack of fairness and adjust for these systematic failures of systems or policies.)*

*Reference: The definition was adapted from Ingram R et al. Social Inequities and Mental Health: A Scoping Review. Vancouver: Study for Gender Inequities and Mental Health, 2013.

17 Local policies, practices, and laws considered during program design

How have local policies, practices, and laws (e.g., infrastructure development regulations, education requirements, etc.) been taken into consideration when designing the program?

18 How diversion of resources from other public health priorities are avoided

Please explain how the program avoids diverting resources away from other public health priorities? (e.g. local human resources involved in program implementation diverted from other programs or activities).

19 Program provides health technologies

Does your program include health technologies (health technologies include medical devices, medicines, and vaccines developed to solve a health problem and improve quality of lives)? (Yes/No)

20 Health technology(ies) are part of local standard treatment guidelines

Are the health technology(ies) which are part of your program part of local standard treatment guidelines? (Yes/No) If not, what was the local need for these technologies?

21 Health technologies are covered by local health insurance schemes

Does your program include health technologies that are covered by local health insurance schemes? (Yes/No) If not, what are the local needs for these technologies?

22 Program provides medicines listed on the National Essential Medicines List

Does your program include medicines that are listed on the National Essential Medicines List? (Yes/No) If not, what was the local need for these technologies?

23 Sustainability plan

If applicable, please describe how you have planned for sustainability of the implementation of your program (ex. Creating a transition plan from your company to the local government during the development of the program).

ADDITIONAL PROGRAM INFORMATION

24 Additional program information

Is there any additional information that you would like to add about your program that has not been collected in other sections of the form?

a Potential conflict of interest discussed with government entity

Have you discussed with governmental entity potential conflicts of interest between the social aims of your program and your business activities? (Yes/No) If yes, please provide more details and the name of the government entity.

25 Access Accelerated Initiative participant

Is this program part of the Access Accelerated Initiative? (Yes/No)

26 International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) membership

Is your company a member of the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA)? (Yes/No)

Program Indicators

INDICATOR DESCRIPTION

27 List of indicator data to be reported into Access Observatory database

For this program, activities, please select all inputs and impacts for which you plan to collect and report data into this database.

28 Data source

For this indicator, please select the data source(s) you will rely on.

29 Frequency of reporting

Indicate the frequency with which data for this indicator can be submitted to the Observatory.

30 Data collection

- Responsible party:** For this indicator, please indicate the party/parties responsible for data collection.
- Data collection — Description:** Please briefly describe the data source and collection procedure in detail.
- Data collection — Frequency:** For this indicator, please indicate the frequency of data collection.

31 Data processing

- Responsible party:** Please indicate all parties that conduct any processing of this data.
- Data processing— Description:** Please briefly describe all processing procedures the data go through. Be explicit in describing the procedures, who enacts them, and the frequency of processing.
- Data processing — Frequency:** What is the frequency with which this data is processed?

32 Data validation

Description: Describe the process (if any) your company uses to validate the quality of the data sent from the local team.

33 Challenges in data collection and steps to address challenges

Please indicate any challenges that you have in collecting data for this indicator and what you are doing to address those challenges.

