


**Type 1 Diabetes Mellitus  
Impact Evaluation Study**

Center for Health Research and Innovation



Submitted to:  
Hinduja Foundation

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## Executive Summary

The report provides a comprehensive evaluation of the Type 1 Diabetes Intervention Program, led by the Hinduja Foundation, which aims to support children with diabetes and their caregivers in Mumbai, Pune, and Chennai. Through qualitative data analysis from interviews conducted with caregivers, healthcare providers, and beneficiaries, the report highlights the program's multifaceted impact on various aspects of diabetes management and the overall well-being of participants.

Key findings from caregiver interviews underscore the program's success in enhancing access to treatment and alleviating financial burdens associated with diabetes management. Caregivers express appreciation for the educational guidance, counseling sessions, and round-the-clock support provided by the program. Moreover, they note significant improvements in daily life and family dynamics, highlighting the positive impact of the program on psychosocial well-being and treatment adherence. However, challenges such as financial constraints, societal stigma, and geographical barriers to care persist, indicating the need for ongoing support and improvement efforts.

Healthcare providers emphasize the importance of comprehensive health services offered by the program, including counseling, diagnostic tests, treatment provision, and psychological support. They acknowledge challenges such as financial constraints and treatment adherence issues, underscoring the importance of sustained support and improvement initiatives. Furthermore, healthcare providers highlight the significance of educational initiatives in empowering children and their families to actively participate in disease management.

Beneficiary interviews reveal the transformative impact of the program on disease management and quality of life. Beneficiaries report improvements in physical health, academic performance, and social relationships, attributing these changes to effective disease management facilitated by the program. However, financial burdens and psychosocial challenges associated with diabetes management remain significant concerns for beneficiaries, highlighting the need for continued support and advocacy efforts.

The report concludes with a series of recommendations aimed at addressing key challenges identified, including ensuring adequate supply of medical items, raising awareness in schools and communities, improving access to healthcare through insurance coverage, and prioritizing treatment for co-morbidities. These recommendations aim to further enhance the program's effectiveness in providing comprehensive support to children with Type 1 Diabetes and their families.

In summary, the Hinduja Foundation's Type 1 Diabetes Intervention Program has made significant strides in improving access to diabetes care and enhancing the overall well-being of participants. However, ongoing efforts are necessary to address remaining challenges and ensure that all children with diabetes receive the support they need to thrive.

## Introduction

Type 1 Diabetes Mellitus (T1DM) remains a pervasive chronic condition, necessitating continuous management to prevent complications. Effective T1DM care programs stand as pillars of support for individuals navigating this journey. T1DM can be due to genetic, environmental or disorder in immune cell regulation resulting in autoimmune disorder or can be idiopathic in nature with unknown cause<sup>1</sup>. There is no cure for T1DM but it can be managed by maintaining normal blood sugar levels by external insulin support and maintaining an appropriate lifestyle. Even though the disease is manageable, the high treatment cost involved results in high mortality and higher complication rate. The International Diabetes Federation India report 2000 – 2045 mentioned that India has around 230 type-1 diabetes mellitus (T1DM) children per 1000 children<sup>2</sup>.

The Type 1 Diabetes Intervention Program, spearheaded by the Hinduja Foundation, is dedicated to providing comprehensive support to children with diabetes and their caregivers in Mumbai, Pune, and Chennai. This impact report delves into the outcomes of the program, emphasizing the experiences of caregivers, health care providers and beneficiaries and the tangible benefits resulting from the interventions.

By examining qualitative data from the study population, this compiled report from three sites elucidates key themes such as service provision, treatment-seeking behavior, treatment adherence, patient education, comprehensive health services, educational support, psychosocial well-being, overcoming financial barriers and the impact of interventions on the quality of life. Through this comprehensive analysis, our aim is to highlight the Foundation's holistic approach, aimed at improving health outcomes and identifying the challenges among caregivers, beneficiaries and health-care providers to provide insights to the foundation to take necessary action in future.

### Sites of Study:

The study was conducted at three hospitals i.e. (1) Madras Diabetes Research Foundation (MDRF), Chennai, (2) P.D. Hinduja Foundation and Medical Research Centre (HFMRC), Mumbai and (3) KEM Hospital and Research Centre, Pune.

### Interventions from Hinduja Foundation:

The Hinduja Foundation has been supporting children from low-socioeconomic backgrounds suffering with T1DM since 2019 by funding three hospitals in India for the care of these patients. The interventions are given in the form of treatment support by providing free of cost insulin, syringes, SMBG Kit, lab tests, etc. Further, support is extended by providing free medical consultation by doctors, diet counselling by dieticians, education on use of syringes, insulin, etc. by diabetes educator, and established a peer and family support group for the beneficiary and their care givers to ensure physical, emotional, and psychological well-being by engaging senior T1DM patients with a long history of diabetes to a junior patient (currently enrolled in the study) under the “Diabuddy” approach.

## Methodology

### Study Population:

To study the impact of interventions provided by Hinduja Foundation at three hospitals, qualitative interviews were conducted at the three sites. The following were the population:

### Sampling approach and selection of participants:

**Sampling approach for Focus Group Discussion with Caregivers:** Caregivers of beneficiaries belonging to age group i.e. 2-5 Y, 5.1 – 10 Y, 10.1 Y- 15 Y and 15.1 Y – 19 Y were grouped and listed for the selection of the participants based on their convenience and availability for the focus group discussion (Figure 1). From each group, a minimum of two caregivers completing three years in the intervention group were selected to get better information of their experiences.

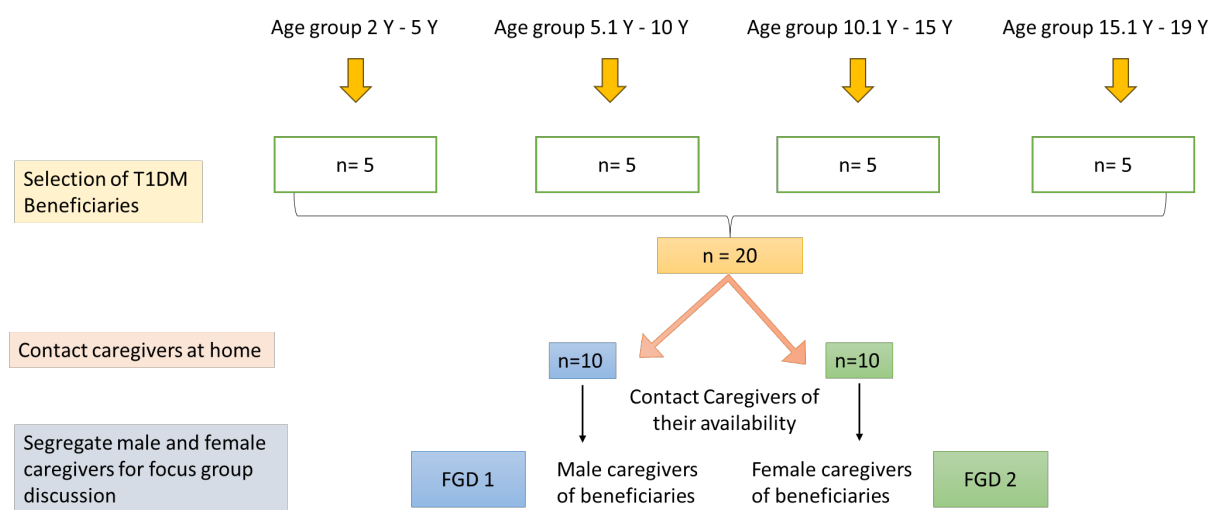


Figure 1: Selection criteria for FGD participants

**Sampling approach for case study with beneficiaries:** To understand the experience of the beneficiaries, the case study with one male and one female per diabetes facility center at Mumbai, Pune and Chennai was conducted. The participants were randomly selected from the age group of 14 Y – 19 Y (Figure 2) by the study team and were communicated to the hospital team to ascertain the availability of the participants on the day of the interview. The consent of the parents was received, and assent was taken from the child participant.

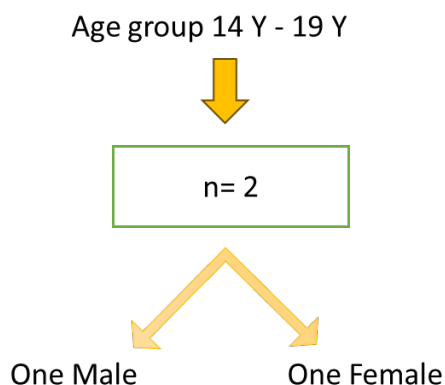


Figure 2: Selection criteria for case study with beneficiaries.

**Sampling approach for the in-depth interview with health service providers:** Per site, two in-depth interviews (IDI) were conducted following the criteria mentioned in Table 1.

Table1: Selection criteria for KII with health care providers at each diabetes facility

| Service Provider        | MDRF Chennai | HFMRC Mumbai | KEM Pune |
|-------------------------|--------------|--------------|----------|
| Dietician               | √            |              |          |
| Psycho-social counselor |              | √            |          |
| Diabetes Educator       |              |              | √        |
| Consulting doctor       | √            | √            | √        |

**Number of participants:**

At each site, one FGD with male and another with female caregivers was conducted with 10-14 participants in each group. IDI with healthcare providers and case studies with beneficiary children were conducted in one-to-one interaction.

**Tools for the interviews:**

Questionnaires for conducting FGD with caregivers, case studies with beneficiary children and IDI with healthcare providers were designed and pretested before conducting final interviews. Caregiver satisfaction forms were also designed to check the level of satisfaction.

**Analysis:**

The interviews conducted were recorded and word-by-word manual transcription and translation were conducted. The interviews were analyzed openly, with relevant codes grouped into themes, subthemes and categories based on the study's objectives and then analyzed thematically.

**Results:**

**Key takeaways from the Interviews with Caregivers**

**Improved access to treatment**

The program has significantly improved access to diabetes care for children through various referral mechanisms. Caregivers, both male and female, have been referred to the program through word of mouth, online searches, direct contact with healthcare professionals. As one caregiver from Chennai expressed,

*"My husband's friend's daughter is undergoing treatment in this hospital and he informed us about the services of this hospital."*

Another participant from Mumbai said,

*"I came to know about this hospital through Google, I searched at internet for treatment of type 1 diabetes."*

Additionally, financial support from the foundation has played a crucial role in making diabetes management more affordable and accessible to marginalized communities.

A care giver from Pune mentioned,

*"Perhaps it would never have been possible to start the treatment if it wasn't under this foundation."*

Ease of enrolment into the project also made the project accessible to people. As noted by another caregiver:

*"Rajkumar and Rahul told us about the Hinduja project. Child's photograph, Aadhaar number etc. were shared with the hospital and my child was included in Hinduja intervention."*

### **Positive Responses to the Services Provided:**

Caregivers who engaged in the program have conveyed positive feedback regarding the services offered. They particularly appreciated the educational guidance, counseling sessions, assistance with insulin administration, monitoring of blood glucose levels, and dietary support. These components have significantly contributed to empowering caregivers in effectively managing their children's diabetes.

*"They guide us about diet & nutrition"* – Female care giver (Chennai)

*"We were guided on how to inject insulin, where the injection to be given..."* – Female caregiver (Chennai)

Moreover, the program's emphasis on round-the-clock support, educational resources, and peer networks has empowered caregivers to navigate the complexities of diabetes management with confidence.

*"Sometimes when you call at night, they get it right away."* A caregiver from Pune said appreciating the round the clock services provided.

Another caregiver from Chennai highlighted the impact of counseling to parents

*"While our children get diagnosed for the first time for diabetes, it was very scary situation. The team gave us counselling and our concerns were addressed."*

### **Impact on Daily Life and Family Dynamics:**

The program has had a profound impact on the daily lives and family dynamics of caregivers and children with diabetes. It has helped alleviate emotional and financial burdens, fostered a sense of community support, and promoted inclusivity by addressing social stigma and misconceptions surrounding diabetes. One caregiver from Mumbai shared,

*"We can spend more on food since we get insulin supplied from here."*

Additionally, the program has facilitated greater independence in diabetes management among children, enabling them to lead fulfilling lives despite their condition.

*"My son knows how to find it, even if he is playing, if the sugar level decreases, he immediately comes and informs me,"* stated a caregiver from Chennai.

## Impact in tackling Challenges and adopting Coping Strategies:

While the program has been successful in addressing many challenges associated with diabetes management, caregivers still face obstacles such as financial constraints, distance to healthcare facilities, and societal stigma.

*"Distance.....it takes at least three hours for us to come here from (village's name)" – Female Care giver (Pune)*

*"If this service is available in Salem, which is closer to my place, it will be very useful to avoid long distance travel." - Male caregiver (Chennai)*

*"One kid's mother came home and said don't play with him, he will also get diabetes." – Female Care giver (Pune)*

However, the program has equipped caregivers with coping strategies, including peer support networks, educational resources, and advocacy initiatives, to overcome these challenges effectively. As one caregiver from Pune expressed,

*"Initially, we did not know for how long the kids should be allowed to play and how much insulin to be given, how many times etc. Now it's all good"*

*"Sharing experiences with them (other care givers) helps us a lot"*

Through collaborative efforts and a commitment to inclusive healthcare, the program has empowered caregivers to navigate the complexities of Type 1 diabetes management with resilience and determination.

## Key takeaways from the interviews of Health care providers

### Impact of Comprehensive Health Services:

The Type 1 Diabetes Intervention Program by Hinduja Foundation provided a range of services aimed at holistic diabetes management for children. This included counseling, diagnostic tests, treatment and medication provision, glucometer support, and, in some cases, insulin pumps. Health care providers emphasized:

*"We provide counseling, take history, make them understand about the medicine, educate them on hyper- hypo management." (Healthcare Provider - Chennai).*

*"We provide insulin, their investigation, consultation, and strips to the children along with monitoring and regular medicine" (Healthcare Provider - Pune).*

The program included age focused psychological support too, in which the health workers focused on building a rapport with the patients first. This support helped the patients to approach the patients to openly discuss their problems with the staff.

*"We identify the children who need psychosocial support, especially mostly adolescents..." – Health Care provider - Chennai.*

The hospital hosts events such as an annual day to provide the children with an opportunity to showcase their talents like dancing or singing. This implies a commitment to fostering a supportive and inclusive environment where the patients can express themselves and celebrate their abilities.

Additionally, it indicates a focus on community engagement and the promotion of self-expression and creativity among the children.

"We conduct programs like annual day so that they can come and dance and exhibit whatever talents they have." – Healthcare worker, Chennai

This comprehensive approach ensured that patients receive holistic care under one roof, eliminating barriers to accessing essential services.

### **Significance of Educational Support about the Disease and Empowerment:**

Educational initiatives play a crucial role in empowering children with T1DM to manage their condition effectively. Healthcare providers emphasize the importance of educating children and their families on healthy dietary practices and self-management techniques. As one provider states,

*"We educate them on the importance of eating a healthy diet rather than eating something"* (Healthcare Provider - Chennai).

*"We educate them about complications like kidney disease, eye problems... So, they take care to prevent them..."* (Healthcare provider – Pune)

Patient education emerges as a cornerstone in ensuring adherence to treatment protocols. By educating patients and their families about the disease, treatment options, and self-care practices, healthcare providers empower them to actively participate in their care. A provider emphasizes,

*"We don't say here like that, we educate the whole family"* (Healthcare Provider - Pune).

### **Impact on Psychosocial Well-being:**

Addressing the psychosocial needs of children with T1DM is essential for their overall well-being. The healthcare providers identify adolescents as a particularly vulnerable group requiring psychosocial support. By adopting a friendly and supportive approach, providers aim to create a conducive environment for open communication and emotional support. As noted by one provider from Chennai,

*"We treat them as a friend or sister so it will be easier for them to converse with us."*

### **Addressing Financial Barriers and Accessibility:**

Financial constraints posed significant challenges for families in accessing healthcare services for children with T1DM. They highlighted the importance of ensuring equitable access to essential medications and monitoring supplies. Despite efforts to provide support, some families struggle to afford necessary treatments, leading to concerns about treatment adherence and health outcomes. As one provider observes,

*"There are parents who cannot afford it and asking multiple doses of insulin when we say to increase the dose of insulin"* (Healthcare Provider - Chennai).

The availability of free services under the Hinduja Foundation project significantly influences patients' decisions to seek treatment. Patients are more inclined to seek care when financial barriers are removed. One provider noted,

*"A major factor for them is that they have all these free of cost, so they come" (Healthcare Provider - Pune).*

This underscored the importance of eliminating financial constraints to ensure equitable access to healthcare services.

#### **Attitude Towards Intervention:**

The acceptance and adherence to healthcare interventions vary among children and caregivers, influenced by factors such as stigma, fear, and perceived benefits. While some families express gratitude for the support received, others face challenges in adhering to treatment regimens and attending regular follow-ups. Providers emphasized the need for ongoing education and support to address misconceptions and promote positive health-seeking behaviors. One provider acknowledges, *"Accepting the intervention is not a problem but following or coming and having regular follow-up like once in 3 months and 6 months once is a challenge" (Healthcare Provider - Chennai).*

Regular follow-up appointments play a crucial role in improving treatment compliance among T1DM patients. Patients are more likely to adhere to treatment plans when provided with ongoing support and monitoring. A provider observes,

*"Because of regular follow-ups and the facilities, they are getting under this project, their compliance has been increased" (Healthcare Provider - Pune).*

This highlights the significance of continuity of care in optimizing health outcomes.

#### **Influence of Staff Attitude on Treatment Experience:**

The attitude and behavior of hospital staff significantly impacted patients' treatment experiences. A supportive and empathetic approach from healthcare providers fostered trust and enhanced patient satisfaction. As expressed by a provider,

*"The entire staff starting from Sir (means the Doctor here)...attitude of Sir is very different (sensitive) towards the patients" ) - Healthcare Provider - Pune).*

This underscores the importance of compassionate care in fostering positive treatment experiences.

#### **Need for Continuous Support and Improvement:**

Continuous support and improvement are imperative to meet the evolving needs of T1DM patients. Providers emphasize the importance of sustaining initiatives and reaching a greater number of children in need. One provider reflects,

*"Trying to keep this (project) going for a maximum number of days and trying to reach the maximum number of kids" (Healthcare Provider - Pune).*

This underscores the commitment to ongoing improvement and expansion of services.

Key takeaways from interviews with the beneficiaries

### **Importance of Treatment and Disease Management:**

Effective treatment and disease management are essential components of diabetes care programs. Beneficiaries in Chennai highlighted the role of healthcare providers in guiding them through treatment regimens, including insulin administration and dietary management. One beneficiary mentioned,

*"Before the treatment, I was very weak and lean....Doctors trained me on insulin, doing tests and joined me in Hinduja scheme."*

Regular monitoring of blood sugar levels and adherence to treatment plans were emphasized as key strategies for disease management. In Mumbai and Pune, beneficiaries echoed similar sentiments, emphasizing the importance of self-care efforts and support from healthcare providers in managing their condition.

### **Impact on Quality of Life:**

The impact of diabetes care programs on the quality of life of beneficiaries was a recurring theme. Beneficiaries across all locations reported improvements in various aspects of their lives, including physical health, academic performance, and social relationships. One beneficiary mentioned,

*"My studies, health, and performance have definitely improved." -Male beneficiary - Chennai*

Another beneficiary from Pune mentioned.

*"Before treatment, I was lazy and unable to concentrate in studies. "Now sugar level is under control, and I can manage everything."*

Effective disease management facilitated by healthcare programs enabled beneficiaries to lead active and fulfilling lives, minimizing the impact of diabetes on their daily activities and aspirations for the future.

### **Financial Burden and Healthcare Expenses:**

Financial considerations emerged as a significant determinant of access to diabetes care services. Beneficiaries in Mumbai and Pune highlighted the financial burden associated with managing diabetes, particularly in the absence of adequate insurance coverage or financial support. Initiatives offering free or subsidized healthcare services, such as those provided by the Hinduja Foundation, were instrumental in alleviating financial stress for beneficiaries and improving access to essential medications and supplies. One beneficiary mentioned,

*"After joining Hinduja's Program we could balance our financial management." – Male beneficiary -Chennai*

*"Because of the high cost and also as my father works in a tea shop, we could not afford for the treatment." – Female Beneficiary Chennai*

*"Now we do not have to spend high costs as before for pre-checkup, full-body checkup." - Female Beneficiary Chennai*

### **Psychosocial Impact of the Program on Beneficiaries**

Living with diabetes brought forth a myriad of psychosocial challenges.

But beneficiaries found solace in the program's support network and coping mechanisms. From family support to engaging in hobbies and positive thinking, beneficiaries demonstrated resilience in the face of adversity. The program's emphasis on psychosocial support and counseling underscored its commitment to addressing the holistic needs of beneficiaries. A beneficiary mentioned,

*"We should not feel bad because we have that (diabetes). We should stay nice."* - Female beneficiary Chennai

*"Sometimes (when asked if they ever feel sad), when people in front of me are having some sweet or something which I cannot eat. Then I try to distract myself."* – Female beneficiary Mumbai

The verbatims implied the impact of the program on the beneficiary's resilience and positive mental health.

### **Healthcare System Navigation and Communication:**

Navigating the healthcare system and effective communication with healthcare providers emerged as critical factors influencing the beneficiary experience. Clear communication channels, including WhatsApp groups and regular follow-up calls, facilitated access to information and support for beneficiaries. However, challenges such as language barriers underscored the need for culturally sensitive and patient-centered approaches in healthcare delivery.

### **Overall Challenges**

The Type 1 Diabetes Intervention Program faces several challenges that impact its effectiveness in providing comprehensive support to children and their families. Disease management proves difficult due to factors such as inadequate access to testing supplies, as highlighted by caregivers expressing concerns about insufficient strips for frequent testing. Additionally, challenges in insulin administration arise, with some parents initially refusing insulin for their diagnosed children, and others requiring multiple individuals to assist with insulin injections due to resistance or fear. Understanding and managing diet alongside insulin dosage pose further difficulties, particularly regarding carbohydrate counting, which some caregivers find daunting. Stigma and fear surrounding insulin treatment and potential complications also hinder effective management, as some patients and families face social judgment and anxiety. Compliance with treatment regimens presents another hurdle, impacting patients' quality of life and posing challenges for healthcare providers in ensuring adherence. Moreover, barriers to care, including geographical distance, transportation limitations, and perceived stigma, impede patients from accessing necessary healthcare services regularly. Additionally, self-administration of drugs and coping strategies present challenges, such as children feeling different from their peers or requiring special accommodations for insulin administration in school settings. Overall, addressing these challenges is crucial for the program to optimize its support for children and families managing Type 1 Diabetes effectively.

## **Recommendations**

**Supply Adequacy:** Provide a three-month supply of necessary items like testing strips and insulin to beneficiaries to ensure they have enough for their needs. This prevents frequent shortages and ensures better management of diabetes.

**Minimize Finger Pricking:** Instead of frequent finger pricking, provide sensors to children with diabetes to monitor their glucose levels. This reduces damage to their fingers and provides a more comfortable means of monitoring.

**Awareness and Support in Schools:** Create awareness among teachers and students about type one diabetes to address stigma, discrimination, and logistical challenges faced by children with diabetes in schools. Provide private spaces for insulin injections and storage to ensure their needs are met.

**Educational Material:** Print information related to type one diabetes on book wrappers for school textbooks to educate students and parents, fostering better understanding and support within the community.

**Health Insurance Coverage:** Develop health insurance policies that cover type one diabetes to provide financial support for necessary treatments and medications.

**Health Campaigns:** Develop mass media health campaigns at the village level to promote early identification and treatment of type one diabetes, improving overall awareness and access to care.

**Data Collection and Research:** Include type one diabetes in the Health Management Information System (HMIS) report of the Government of India to gather statistical data and conduct research for better understanding and management of the disease.

**Access to Social Welfare Schemes:** Ensure that children with type one diabetes are included in social welfare schemes for chronic conditions, leveraging national-level policies to provide them with necessary support and assistance.

**Treatment for Co-morbidities:** Provide free treatment for co-morbidities experienced by children with type one diabetes to address their holistic health needs and reduce financial strain on families.

**Care giver Satisfaction survey report:**

The care givers were asked if they are getting the specific intervention to them on time. The results of the survey are summarized in the table below.

| Intervention                     | Yes (In percent) | No (In percent) |
|----------------------------------|------------------|-----------------|
| Glucometer                       | 95.45            | 4.54            |
| Insulin                          | 100              | 0               |
| Syringes                         | 95.45            | 4.54            |
| Guidance on use of interventions | 100              | 0               |
| Psycho-social support            | 72.72            | 27.27           |
| Doctor's consultation            | 95.45            | 4.54            |
| Dietician counselling            | 86.36            | 13.63           |
| Follow up on insulin corrections | 81.81            | 18.18           |

The survey findings provide valuable insights into the timeliness of interventions delivered to caregivers within a hospital setting for pediatric diabetes management. Notably, the overwhelming majority of caregivers reported receiving critical interventions such as insulin and glucometers promptly, underscoring the program's success in ensuring timely access to essential medical supplies. However, while caregiver satisfaction was high for interventions such as guidance on usage and doctor's consultations, there were notable gaps in the consistent delivery of psycho-social support, dietician counseling, and follow-up on insulin corrections. These findings suggest areas for improvement in delivering holistic care, particularly in addressing the emotional and educational needs of caregivers alongside medical treatment. Addressing these gaps could lead to more comprehensive support for

patients and their families, thereby potentially improving treatment adherence and health outcomes in pediatric diabetes management within hospital settings.

## Conclusion

The Type 1 Diabetes Intervention Program, led by the Hinduja Foundation, has brought about transformative changes in the lives of children with diabetes and their caregivers across Mumbai, Pune, and Chennai. Through its holistic approach, the program has not only addressed barriers to care but also provided comprehensive services and fostered community support. As a result, access to diabetes management resources has significantly improved, enhancing the overall quality of life for participants. Looking ahead, sustained investment in diabetes interventions and advocacy efforts is imperative to ensure that every child with diabetes receives the necessary support to thrive. Through collaborative endeavors and a steadfast commitment to inclusive healthcare, we can envision a brighter future for children living with diabetes and their families.

In Chennai, healthcare providers, supported by the Hinduja Foundation, play a pivotal role in supporting children with T1DM and their families. Through comprehensive services, educational initiatives, and psychosocial support, they address the diverse needs of patients. Despite challenges such as financial constraints and attitude towards intervention, innovative approaches like insulin pumps and continuous glucose monitoring systems offer promising avenues for improving health outcomes. By addressing systemic issues and fostering collaborative partnerships, Chennai's healthcare ecosystem, guided by the Hinduja Foundation, can strive towards greater equity, accessibility, and empowerment for children with T1DM.

Similarly, the Hinduja Foundation's Type 1 Diabetes Control Program in Pune and Mumbai serves as a beacon of hope for individuals grappling with the challenges of managing diabetes. By breaking down barriers to care, offering comprehensive services, and nurturing community support, the program has significantly enhanced access to diabetes management resources and improved the quality of life for patients. Continued prioritization of patient-centered care, promotion of health equity, and attention to the holistic needs of individuals living with diabetes are crucial for furthering positive outcomes and enhancing the overall quality of life for all beneficiaries.

The shared perspectives of beneficiaries participating in diabetes care programs underscore the multifaceted nature of diabetes management and the pivotal role of healthcare programs in supporting individuals throughout their journey. By addressing broader themes such as access to healthcare services, treatment and disease management, financial burden, psychosocial impact, and healthcare system navigation, diabetes care initiatives can amplify their effectiveness and extend their reach. Sustained efforts towards prioritizing patient-centered care, advancing health equity, and meeting the holistic needs of individuals living with diabetes remain essential for achieving improved outcomes and enhancing the quality of life for all beneficiaries.

## Summary

| Facilitators  | Barriers   | Recommendations  |
|---|--|--|
| Collaboration among healthcare providers, patients, and caregivers promotes holistic care and comprehensive disease management.                                       | Limited availability of CGM  | Increase funding and ensure adequate insulin and glucose strip supply  |
| Friendly approach of health care workers.   | Reluctance to use needles to check glucose levels.   | Use CGM sensors instead of lancets.  |
| Financial Assistance and free services is mandatory for patients to adhere to the treatment as the out of pocket expense for a type 1 diabetes patient is astronomic. | Social Stigma: From schools and inside the community.  | Develop mass media health campaigns at the village level to promote early identification and treatment of type one diabetes, improving overall awareness and access to care.           |
|   | People are often misled into believing that alternative medicine systems can replace insulin therapy, leading them away from conventional treatment paths. | Print information related to type one diabetes on book wrappers for school textbooks to educate students and parents, fostering better understanding and support within the community. |
|   | Lack of awareness about Type 1 diabetes in community which leads to late diagnosis and treatment initiation.   | Improve IEC  |
|   | No facility to treat or manage the co morbidities associated with diabetes.  | Long term complications and its management to be considered while making policies for Type 1 diabetes management.  |

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