Medtronic
Engineering the extraordinary

IN SEARCH OF BASELINE PARAMETERS IN T1D IN LATIN AMERICA: A SYSTEMIC REVIEW OF GLYCEMIC CONTROL

Poster ID 127303
Code EE231

Authors: Ciorra A.[1], Lakkad M.[2], Paredes D.[3], Castro M.[3]
[1]Medtronic, Milan, Italy, [2]Medtronic, USA, [3] Medtronic, Santiago, Chile

Background & Objective:

- Diabetes mellitus (DM) is estimated to affect 32.5 million people in Latin America (LatAm), with a prevalence of 9.9% in the adult population.
- Achieving optimal glycemic control (GC), identified with HbA1c <7% and TIR >70%, is the primary goal of diabetes care; however, evidence on these parameters and related complications is scarce for T1D in LatAm.
- The availability of solidly collected data is fundamental for conducting localized economic evaluations that can determine the impact of T1D on healthcare systems in the region.

▶ **The objective is to identify critical baseline parameters to develop economic evaluations concerning rates of complications and glycemic control of T1D in Latin American countries.**

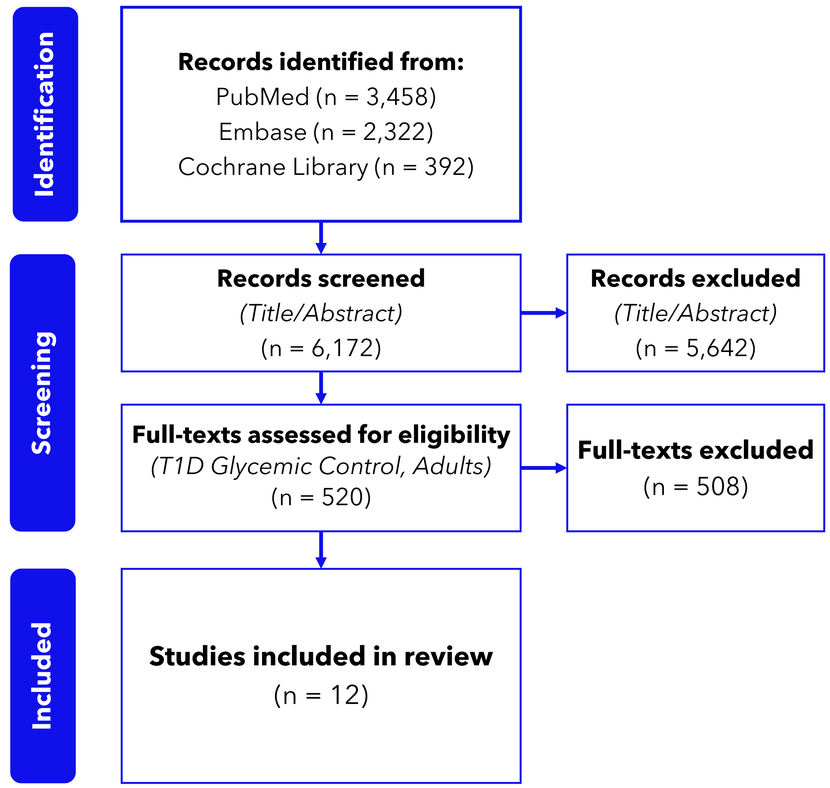
Methods:

- **Study design**: Systematic Literature Review.
- **Data Source**: PubMed, Embase, Cochrane Library.
- **Population**: People with insulin-dependent DM in LatAm.
- **Inclusion criteria**: 1) Quantitative studies reporting complication rates and/or healthcare resource utilization and costs associated with DM in LatAm. 2) Quantitative studies focusing on GC in adults with T1D.
- **Outcomes of interest** related to GC were HbA1c, TIR, hypo- and hyperglycemic events, and DKA.
- **Exclusion criteria**: Non-human studies, non-systematic reviews, qualitative studies and opinion pieces.
- **Identification**, **screening**, **review** and **selection** were performed by two independent reviewers.
- **Quality check**, **data extraction** and **synthesis** were performed by one independent reviewer.

Table 2: Study description

Author	Year	Country	Design	Sample Size	Population	Horizon	HbA1c	TIR	Hypo	Hyper	DKA
Faradji-Hazan et al.	2021	Mexico	Retrospective	965	T1D, 18+	4 years	✓	n/a	n/a	n/a	n/a
Emral et al.	2017	Colombia	Retrospective	7,289	DM, 18+	7 months	✓	n/a	✓	n/a	n/a
Jain et al.	2016	Colombia	Prospective	7,289	DM	1 month	n/a	n/a	✓	n/a	n/a
Morros-Gonzalez et al.	2021	Colombia	Retrospective	36	T1D, 60+	10 years	✓	n/a	✓	n/a	n/a
Berlanda et al.	2021	Brazil	Retrospective	516	T1D, 18+	20 months	n/a	n/a	✓	n/a	n/a
Fenalti Salla et a.	2021	Brazil	Prospective	109	T1D, 18+	12 months	✓	n/a	✓	n/a	n/a
Koelle et al.	2020	Brazil	Prospective	66	T1D, 18+	12 months	✓	n/a	✓	n/a	✓
Chacra et al.	2019	Brazil	Retrospective	2,296	DM, 18+	6 months	✓	n/a	✓	n/a	n/a
Vieira et al.	2018	Brazil	Retrospective	184	T1D, 18+	2 years	n/a	n/a	n/a	n/a	n/a
Petenuci et al.	2018	Brazil	Retrospective	50	T1D, 18+	12 months	✓	n/a	n/a	n/a	n/a
Lamounier et al.	2018	Brazil	Retro/Prospective	679	DM, 18+	7 months	n/a	n/a	✓	n/a	n/a
Leite et al.	2010	Brazil	Prospective	779	T1D,, 18+	3 months	n/a	n/a	n/a	✓	n/a

Table 1. PRISMA Flowchart



Results

- **N = 12** studies were identified and included in the analysis.
- **8** studies were conducted in **Brazil**, **3** in **Colombia**, **1** in **Mexico**.
- **Sample size** ranged from 36 to 7,289 (median 398) subjects and **time horizon** from 1 month to 10 years. Study designs varied significantly.
- No study reported **TIR** and only 58.3% reported **HbA1c**. Hypoglycemic events ranged from 18.1% to 97.4% in 7 months (6.86 events per patient per month). 1 study reported hyperglycemic events and DKA.

Conclusion

The scarcity of data on GC in T1D adults in Latin America and the inconsistency in the outcomes observed prevents from identifying solid baseline paraments for conducting localized economic evaluations.