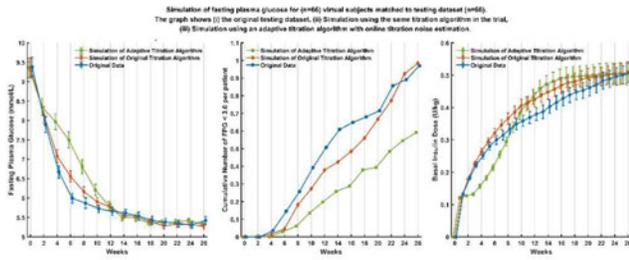


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titration noise for each avatar enables an adaptive basal titration algorithm that lowers the hypoglycemia exposure two-fold (0.98 [0.0–21.0] vs. 0.59 [0.0–5]) (Mean [Min–Max]) while achieving the same glycemic control (Figure).

Conclusions: This FPG simulator predicts the performance of FPG-driven insulin basal titration rules for T2D. Titration rule matching subject-specific titration noise may improve glycemic outcomes in T2D patients.

EP101 / #762

Topic: AS04-Clinical Decision Support Systems/Advisors

CARDIOVASCULAR RISK ASSESSMENT IN PEOPLE LIVING WITH TYPE 1 DIABETES FROM THE RENACED-DT1 MEXICAN REGISTRY

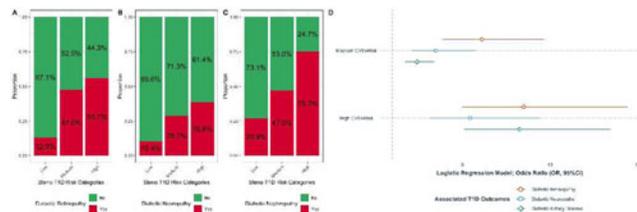
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Background and Aims: Cardiovascular (CV) disease is the main cause of morbidity and mortality in individuals living with type 1 diabetes (T1D). CV risk assessment in this population is often limited. Our objective was to classify Mexican individuals registered in the RENACED-DT1 national registry according to their CV risk using the Steno-T1D Score and to associate microvascular complications

Parameter	Total Population (n=1718)	Low-Risk (n=1476)	Middle-Risk (n=148)	High-Risk (n=94)	P-value
Age (years)	25 (18-36.3)	22 (17-30)	48 (41-55)	54 (45-64.5)	<0.001
Male sex (%)	692 (38.5)	601 (40.7)	51 (34.2)	40 (42.5)	<0.001
BMI (kg/m ²)	22.9 (20.3-25.8)	22.5 (19.7-22.4)	24.7 (22.9-29.4)	24.2 (22.2-28.2)	<0.001
Diabetes duration (years)	11.7 (6.8-18.9)	10.2 (6.5-16.4)	20.5 (12.9-29.4)	30.7 (22.4-40.6)	<0.001
Insulin dose (mg/kg/day)	0.63 (0.39-0.89)	0.66 (0.40-0.91)	0.54 (0.41-0.78)	0.50 (0.33-0.73)	<0.001
HbA1c (%)	8.3 (7.2-10.1)	8.3 (7.1-10.1)	8.4 (7.2-9.9)	8.4 (7.5-9.9)	0.4269
Albumin-to-Creatinine Ratio (mg/g)	6.51 (3.6-47.0)	5.57 (3.5-22.8)	18 (3.7-97.3)	144 (28-432)	<0.001
Microalbuminuria (%)	365 (21.2)	302 (20.4)	41 (27.5)	27 (23.4)	<0.001
Macroalbuminuria (%)	104 (6.1)	34 (2.3)	29 (17.4)	44 (46.8)	<0.001
eGFR (ml/min ^{1.73 m²})	113.3 (31.6)	120.8 (25.4)	86.7 (26.1)	56.9 (12.8)	<0.001
Systolic blood pressure (mmHg)	110 (100-120)	110 (100-118)	120 (110-130)	120 (115-140)	<0.001
Diastolic blood pressure (mmHg)	70 (60-76)	69 (60-75)	70 (64.5-80)	70 (65.5-80)	<0.001
Total Cholesterol (mg/dL)	173 (149-199)	170 (147-197)	176 (157-202)	187 (180-216)	<0.001
HDL-C (mg/dL)	49 (40-59)	48 (40-58)	53 (40-65)	54 (44-62)	<0.001
LDL-C (mg/dL)	99 (80-120)	98.8 (80-120)	98 (83-119)	102 (82-127)	<0.001
Hemoglobinization (%)	173 (10.1)	148 (10.2)	16 (10.7)	9 (9.4)	0.5785
Mild or Moderate Hypoglycemia (%)	151 (8.8)	123 (8.3)	20 (13.4)	8 (8.5)	0.7223
Severe-Hypoglycemia (%)	120 (6.9)	84 (5.7)	16 (10.7)	20 (21.3)	<0.001

Table 1: Descriptive characteristics of the RENACED-DT1 stratified by the Steno T1 Risk Categories.



Methods: We included subjects with T1D. Patients who had prior CVD events were excluded. The Steno-T1D Score was estimated using the online calculator (<https://steno.shinyapps.io/T1RiskEngine/>). Risk categorization was based on NICE guidelines in low, middle and high risk. Association of Steno-T1D Score with microvascular complications was assessed using logistic regression models.

Results: We estimated the Steno-T1D score in 1718 patients living with T1D registered by 49 physicians across the country. 85.9% were classified as low-risk, 8.7% as middle-risk and 5.5% as high-risk. Descriptive characteristics are presented in table 1. Most of the clinical, biochemical and chronic diabetic complications showed an adverse profile as the CV risk increased. Patients with high-risk CV had the highest probability for diabetic retinopathy (OR 8.49, 95% CI 5.00-14.42), neuropathy (OR 5.43, 95% CI 3.14-9.41) and chronic kidney disease (OR 8.27, 95% CI 5.09-13.43) (Figure 1).

Conclusions: The Steno T1D Risk Engine cardiovascular risk categories are associated with metabolic and microvascular complications in Mexicans living with T1D. Routine CV risk assessment and treatment of risk factors for developing macrovascular disease in individuals with T1D is essential in order to decrease the burden caused due to these complications.

EP102 / #788

Topic: AS04-Clinical Decision Support Systems/Advisors

HYPOGLYCEMIA (TIME BELOW RANGE) IN PERSONS WITH RELATIVELY WELL CONTROLLED DIABETES (7% TO 8% HBA1C) ON SULPHONYLUREA THERAPY BY AMBULATORY GLUCOSE PROFILE

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Background and Aims: SU is conventionally used as a powerful glucose lowering agent and is notoriously known to increase the risk of hypoglycaemia. Introducing continuous

Background and Aims: The Hospital of Southern Jutland has three diabetes mellitus (DM) outpatient clinics located in three of the four municipalities in the catchment area. However, all adult insulin pump patients attend the Department of Endocrinology in Sønderborg resulting in longer traveling times and more inconvenience for some patients. Hence, the hospital aims to conduct more outpatient clinic video consultations.

The aim of this study was to explore healthcare professionals' perspectives on video consultations for type 1 diabetes patients treated with insulin pumps in the outpatient clinic.

Methods: A qualitative design using semi-structured interviews was employed. Healthcare professionals involved in the treatment of type 1 diabetes patients with insulin pumps were included. Data were analyzed using inductive thematic analysis.

Results: Three doctors, three nurses and three clinical dietitians were interviewed. Preliminary results are grouped into three themes. 1) Flexibility with responsibility includes; less transportation time, flexible consultation plans and patients playing an active role in their treatment. 2) Pros and cons of video includes; benefits and limitations of video, video vs. phone and when to meet in person. 3) Variations in professionals' perspectives includes; varying degrees of interest in performing video consultations reflected in professional roles, tasks and thereto-perceived possibilities for conducting consultations by video.

Conclusions: Healthcare professionals were generally positive about using video and its benefits. Doctors were more sceptical than nurses and dietitians. It is uncertain as to why one group of professionals displayed differences in their perspectives on the use of video consultations. Studies are ongoing.

EP197 / #744

Topic: *AS06-Informatics in the Service of Medicine; Telemedicine, Software and other Technologies*

NOCTURNAL GLUCOSE FLUCTUATIONS IN PATIENTS WITH TYPE 1 DIABETES: WHICH PATTERNS ARE ASSOCIATED WITH HYPOGLYCEMIA?

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Background and Aims: Nocturnal hypoglycaemia (NH) is a potentially harmful and underestimated complication of insulin therapy. In this study, we aimed to determine which patterns of nocturnal glucose dynamics are associated with NH in patients with type 1 diabetes (T1D).

Methods: We used a dataset of continuous glucose monitoring records obtained from 405 adult subjects with T1D. The NH was defined as an episode of interstitial glucose <3.9 mmol/L for at least 15 min between 0-6 a.m. The clustering was performed using a hierarchical clustering algorithm. The Ward distance was chosen as the metric responsible for the distance between classes. After excluding records with missing data (>10%), 2797 intervals, including 316 with NH, were analyzed.

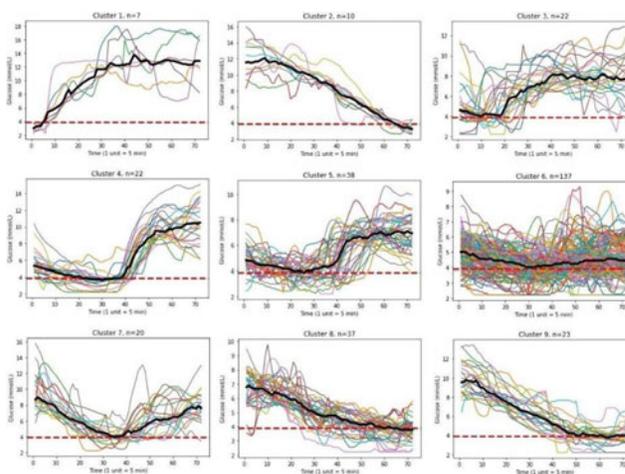


Fig. Clusters of nocturnal glucose with hypoglycemia

Results: Fourteen clusters without hypoglycemia and nine clusters with NH were identified (Figure). In 7 cases only, NH was observed at the beginning of the nocturnal interval (0-1 a.m., cluster 1). Mostly, it was observed at 2-4 a.m. in clusters with initially normal glucose and downtrend (clusters 3-6, n=219). If glucose was initially elevated, NH was recorded more frequently at 4-6 a.m. (clusters 2, 8, 9, n=70). The rate and amplitude of the rise in glucose levels after hypoglycemia varied significantly between clusters, affecting glucose levels at the end of the night.

Conclusions: The results demonstrate that clustering of nocturnal glucose dynamics could be a promising approach for identification of T1D subjects at high risk of NH. **Grant support:** The study was supported by RSF (grant #20-15-00057).

EP198 / #747

Topic: *AS06-Informatics in the Service of Medicine; Telemedicine, Software and other Technologies*

LAUNCHING OF THE RENACED-DT1 PERSONAL PLATFORM FOR PATIENTS LIVING WITH TYPE 1 DIABETES

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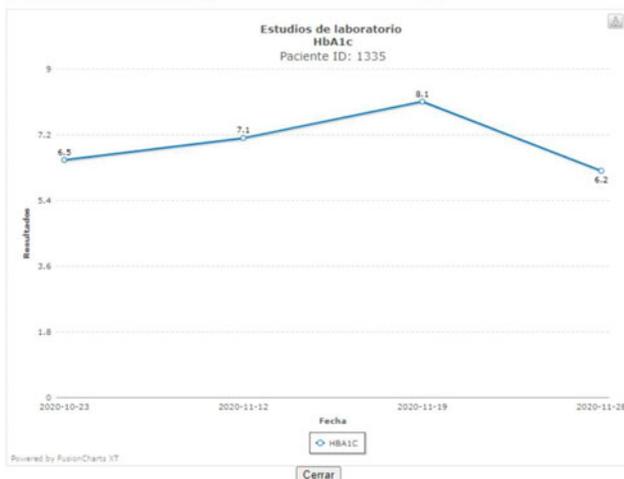
Background and Aims: There is little information regarding the real prevalence of type 1 diabetes (T1D) in Mexico. In an effort to have longitudinal data regarding clinical and metabolic variables, treatment practices and complications in patients with T1D, we created RENACED-DT1, a T1D national registry. Since its launch in 2014, 49 physicians have joined the registry and 1718 patients have been registered. We hypothesize that creating a platform for patients to self register, might be of help in knowing the real prevalence of T1D In Mexico.

Methods: We built a secure and robust platform, using the national identification number to avoid duplicates. There are 11 sections (Fig.1): personal data, diagnosis, associated diseases, lifestyle, education, glucose monitoring, laboratory results (an A1c graph can be obtained-Fig2), treatment, acute events, chronic complications, and complementary evaluations. Also a one page summary can be printed with the answers to all the sections.

Results: We tried the platform with influencers living with T1D and implemented most changes suggested for easier reading and understanding, and faster use. We launched the platform in November 2021 via a FaceBook live conference and round table, with experts in the field and leading members of the T1D community. Ten days after launching, 970 persons watched the video. RENACED-DT1 physicians are encouraging other T1D community members to join the registry.

Conclusions: We expect that this platform will allow active patient participation and enrich the information from RENACED-DT1 registry. The involvement and education of individuals living with T1D will help have reliable information and to achieve better outcomes.

FICHA DE IDENTIFICACI3N	DIAGNOSTICO	ENFERMEDADES ASOCIADAS
ESTILO DE VIDA	EDUCACI3N	MONITOREO
ESTUDIOS DE LABORATORIO	TRATAMIENTO	EVENTOS
COMPLICACIONES CR3NICAS	EVALUACIONES COMPLEMENTARIAS	MI RESUMEN



EP199 / #767

Topic: AS06-*Informatics in the Service of Medicine; Telemedicine, Software and other Technologies*

AN EVALUATION OF VIRTUAL CARE FOR GESTATIONAL DIABETES USING THE QUADRUPLE AIM FRAMEWORK: ASSESSMENT OF PATIENT AND PROVIDER EXPERIENCE, COST AND CLINICAL OUTCOMES

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Background and Aims: The objective of this study was to evaluate the impact of virtual care for gestational diabetes (GDM) in the context of the COVID-19 pandemic.

Methods: This mixed methods program evaluation used the quadruple aim framework. The impact on patient and provider satisfaction and costs was assessed with surveys and interviews. Chi-square tests of independence compared clinical outcomes before (April 2019-Feb 2020) to after (May 2020-March 2021) the shift to virtual care.

Results: 82 women completed a patient experience questionnaire. The majority rated their virtual care experience as good or excellent (93%) with a preference to continue visits in the future (84%). Most respondents felt virtual care saved them money (90%) and time (98%). Providers all felt the switch to virtual care was positive but there was concern about the loss of non-verbal cues and personal connections. Physicians noted increased efficiency however more difficulty with assessing glucose trends. Nurses noted an increased work load, concerns about adequacy of patient education and delays in insulin initiation. When comparing outcomes for women who received in-person and virtual care there were no significant difference in rates of insulin initiation, C-sections, macrosomia or NICU admissions. There was a decreased rate of missed appointments after the switch to virtual care (6.1% vs 1.1%, p-value < .01).

Conclusions: There has been high patient and provider satisfaction for virtual GDM care with no difference in clinical outcomes and less missed appointments. Virtual GDM care should remain an option in the future.

EP200 / #780

Topic: AS06-*Informatics in the Service of Medicine; Telemedicine, Software and other Technologies*

CURATION OF LAB BIOMARKER UNITS IN EMR DATA FOR PREDICTIVE MODEL BUILDING

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Background and Aims: Developing predictive models using data from Electronic Medical Records (EMRs) presents many challenges such as lab values that are in different or incorrect units. We selected Serum Albumin assay in the IBM Explorys