T1D Exchange

Data Science Committee Meeting

August 2025

Co-chairs: Ryan McDonough , Nirali Shah

Agenda

- Introductions- Ryan McDonough and Nirali Shah
- T1D Exchange Updates- Emma, T1D Exchange
- Q4 DSC meeting-last of the year -Emma, T1D Exchange
- Creating a T1DX-QI Data Mapping Guideline- James, T1D Exchange
- Improving care for T2D and nephropathy- Dr. Nirali Shah
- Screen time and PwT1D- Dr. Ryan McDonough

Type 1 Diabetes Mapping Updates

- **46** centers fully mapped
- **6** in validation phase

Type 2 Diabetes Mapping Updates

- **5** centers in production
- **3** center still in the mapping process

T1DX-QI Scorecards

- Currently in production and will be sent out by the end of September to mapped centers

- In the future we will be sharing these annually

DSC Q4 Meeting Time- Diabetes Tech Maturity Model Updates based on Previous Meeting

- New suggested time to fit in this meeting by end of year
  - **Thursday December 4th @ 2pm EST**

Creating a Data Mapping Guideline

"FINER Care"

Optimizing Care for Diabetic Nephropathy: A Quality Improvement Initiative with Finerenone

Nirali Shah, MD, MSc

David W. Lam, MD

Icahn School of Medicine at Mount Sinai

Background

- Despite approved interventions, people with type 2 diabetes (T2D) with chronic kidney disease (CKD) have an increased risk of kidney failure, cardiovascular (CV) morbidity and all-cause mortality.

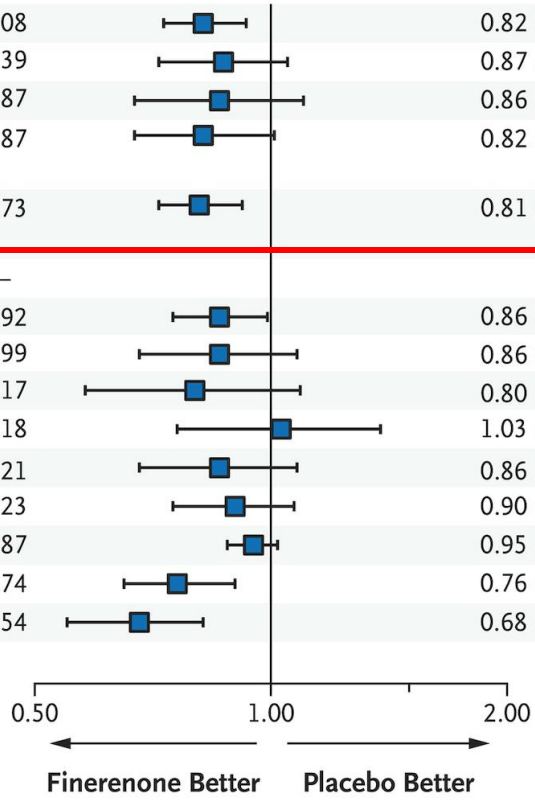
- A need exists to slow or attenuate the progression of CKD and reduce CV morbidity and mortality in people with T2D.

- Finerenone, a selective nonsteroidal mineralocorticoid receptor antagonist, and sodium–glucose cotransporter 2 inhibitors (SGLT2is) each reduce adverse kidney and cardiovascular outcomes in people with CKD and T2D.

Non Steroidal Selective Mineralocorticoid Receptor Antagonist (Finerenone) – FIDELIO-DKD - 2020

- Double Blind RCT
- 5700 patients T2D CKD
- UACr 30-300 eGFR 25-60 + retinopathy OR UACr 300-5000 eGFR 25-75
- Concomitant meds
  - All on max – dose tolerated RAS blockade
  - 64% on insulin (63/65)
  - 6.9% on GLP1RA (6.7/7.2)
  - 4.6% on SGLT2i (4.4/4.8)

Outcome	Finerenone (N=2833)	Placebo (N=2841)	Finerenone (N=2833)	Placebo (N=2841)	Hazard Ratio (95% CI)	P Value
	no. of patients with event (%)		*no. of patients with event per 100 patient-yr*			
Primary composite outcome	504 (17.8)	600 (21.1)	7.59	9.08	0.82 (0.73–0.93)	0.001
Kidney failure	208 (7.3)	235 (8.3)	2.99	3.39	0.87 (0.72–1.05)	—
End-stage kidney disease	119 (4.2)	139 (4.9)	1.60	1.87	0.86 (0.67–1.10)	—
Sustained decrease in eGFR to <15 ml/min/1.73 m^2	167 (5.9)	199 (7.0)	2.40	2.87	0.82 (0.67–1.01)	—
Sustained decrease of ≥40% in eGFR from baseline	479 (16.9)	577 (20.3)	7.21	8.73	0.81 (0.72–0.92)	—
Death from renal causes	2 (<0.1)	2 (<0.1)	—	—	—	—
Key secondary composite outcome	367 (13.0)	420 (14.8)	5.11	5.92	0.86 (0.75–0.99)	0.03
Death from cardiovascular causes	128 (4.5)	150 (5.3)	1.69	1.99	0.86 (0.68–1.08)	—
Nonfatal myocardial infarction	70 (2.5)	87 (3.1)	0.94	1.17	0.80 (0.58–1.09)	—
Nonfatal stroke	90 (3.2)	87 (3.1)	1.21	1.18	1.03 (0.76–1.38)	—
Hospitalization for heart failure	139 (4.9)	162 (5.7)	1.89	2.21	0.86 (0.68–1.08)	—
Death from any cause	219 (7.7)	244 (8.6)	2.90	3.23	0.90 (0.75–1.07)	—
Hospitalization for any cause	1263 (44.6)	1321 (46.5)	22.56	23.87	0.95 (0.88–1.02)	—
Secondary composite kidney outcome	252 (8.9)	326 (11.5)	3.64	4.74	0.76 (0.65–0.90)	—
Sustained decrease of ≥57% in eGFR from baseline	167 (5.9)	245 (8.6)	2.41	3.54	0.68 (0.55–0.82)	—

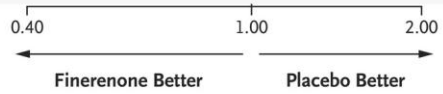


Bakris G, et al. NEJM 2020 Dec 3; 383(23):2219-2229

Nonsteroidal MRA – FIGARO-DKD - 2021

- Double Blind RCT
- 7400 patients T2D CKD
- UACR 30-300 with eGFR 25-90 (CKD Stage 2-4) OR UACR 300-5000 with eGFR< 60 (CKD Stage 1-2)
- Concomitant meds
  - ALL ON MAX – DOSE TOLERATED RAS BLOCKADE
  - 54% ON INSULIN (55/54)
  - 7.5% ON GLP1RA (8.4/6.6)
  - 8.4% ON SGLT2I (8.5/8.3)

Outcome	Finerenone (N=3686)	Placebo (N=3666)	Finerenone (N=3686)	Placebo (N=3666)	Hazard Ratio (95% CI)	P Value
	no. of patients with event (%)		*no. of patients with event per 100 patient-yr*			
Primary composite outcome	458 (12.4)	519 (14.2)	3.87	4.45	0.87 (0.76–0.98)	0.03
Death from cardiovascular causes	194 (5.3)	214 (5.8)	1.56	1.74	0.90 (0.74–1.09)	—
Nonfatal myocardial infarction	103 (2.8)	102 (2.8)	0.85	0.85	0.99 (0.76–1.31)	—
Nonfatal stroke	108 (2.9)	111 (3.0)	0.89	0.92	0.97 (0.74–1.26)	—
Hospitalization for heart failure	117 (3.2)	163 (4.4)	0.96	1.36	0.71 (0.56–0.90)	—
Kidney composite outcome with ≥40% decrease in eGFR	350 (9.5)	395 (10.8)	3.15	3.58	0.87 (0.76–1.01)	—
Kidney failure	46 (1.2)	62 (1.7)	0.40	0.54	0.72 (0.49–1.05)	—
End-stage kidney disease	32 (0.9)	49 (1.3)	0.26	0.40	0.64 (0.41–0.995)	—
Sustained decrease in eGFR of <15 ml/min/1.73 m^2	28 (0.8)	38 (1.0)	0.24	0.33	0.71 (0.43–1.16)	—
Sustained ≥40% decrease in eGFR from baseline	338 (9.2)	385 (10.5)	3.04	3.49	0.87 (0.75–1.00)	—
Death from renal causes	0	2 (0.1)	—	—	—	—
Hospitalization for any cause	1573 (42.7)	1605 (43.8)	16.9	17.5	0.97 (0.90–1.04)	—
Death from any cause	333 (9.0)	370 (10.1)	2.68	3.01	0.89 (0.77–1.04)	—
Kidney composite outcome with ≥57% decrease in eGFR	108 (2.9)	139 (3.8)	0.95	1.23	0.77 (0.60–0.99)	—
Sustained ≥57% decrease in eGFR from baseline	90 (2.4)	116 (3.2)	0.79	1.02	0.76 (0.58–1.00)	—



Gaps in Care

- Limited prescriber awareness
- Uncertainty about eligibility criteria
- Workflow complexity in clinic
- Concerns about monitoring labs and safety

Proposed Intervention: OPA

PILOT LOCATION: 5 E 98th street Endocrinology

INCLUSION CRITERIA:

- Patient with Type 2 Diabetes Mellitus
- Age≥ 18 years
- UMACr (within last 1 year) > 30 mg/g
- Active prescription within the last 1.5 years
  - ACEI OR ARB OR ALLERGY TO CLASS
  - GLP1RA OR ALLERGY TO CLASS
  - SGLT2I , SGLT1/2I (SOTAGLIFLOZIN) OR ALLERGY TO CLASS
  - NOT ON FINERENONE OR ALLERGY TO CLASS

EXCLUSION CRITERIA:

- Allergy to finerenone
- GFR<25
- Pregnancy
- h/o Congestive Heart Failure
- h/o Cirrhosis

OPA Prescriber View &Workflow

Education Guidance:

- Indications / data supporting for nsMRA
- eGFR dosing

Results Pull in:

- Last eGFR
- Last UMACr
- Last Potassium
- Last KidneyIntelX

Orders:

- Kerendia 20 mg once daily (eGFR>60)
- Kerendia 10 mg once daily (eGFR 25-60)
- Amb ref nephrology
- Option to discontinue OPA if prescriber feels appropriate

Implementation Plan / Next Steps

- Pilot at Mount Sinai Endocrinology (5 E 98th Street)
- Track uptake of OPA prescribing
- Monitor safety (labs, adverse events)
- Evaluate QI outcomes (CKD progression, CV events)
- Iterate via PDSA cycles

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Remote Monitoring Data

Ryan McDonough, DO

T1D Exchange

Background

CGM use is common in pediatric patients

Literature has shown mixed impact on wellness, anxiety, quality of life, and fear of hypoglycemia.

Missing from the current body of literature is an evaluation of the amount of time spent in these remote monitoring apps (“diabetes screen time”), and its impact on patient reported outcomes and glycemic control.

This study **aims to quantify the amount of time parents/patients spending observing their glucose data, and to evaluate if this non-stop availability poses possible negative impact to the patient/parent wellness or patient glycemic control**

quantitatively evaluate the impact of time spent in remote monitoring apps on parental wellness, patient self-efficacy, and glycemic outcomes in youth and adolescents with T1D

Problem?

How can we quantify the amount of time parents/patients spending observing their glucose data,

How can we evaluate if this non-stop availability poses possible negative impact to the patient/parent wellness or patient glycemic control

quantitatively evaluate the impact of time spent in remote monitoring apps on parental wellness, patient self-efficacy, and glycemic outcomes in youth and adolescents with T1D

Goal/Aim

Quantitatively evaluate the impact of time spent in remote monitoring apps on:

- Parental wellness
- Patient self-efficacy
- Glycemic outcomes

Suggested Data Points

Phone Metrics (past 7 days)	Parent	Patient
Total time on phone	X	X
Most used apps	X	X
# of Pick Ups	X	X
First app used after pick up	X	X
Frist pick up time	X	X
Daily notifications	X	X
Notifications by app	X	X

Suggested Data Points

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Challenges with Data Collection

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Self-report is not reliable
Clunky data collection (time consuming)
No current methodology to extract this data easily
What if we see use of an app that may not be ideal/appropriate?
What do we do with “excess” time? How do we define it?

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