Perspectives on postpartum diabetes screening among patients with gestational diabetes in an integrated healthcare system

OBJECTIVE: Gestational diabetes mellitus (GDM) affects 7% of pregnancies in the United States (US), raises the risk of type 2 diabetes (T2D) by nearly 10-fold, and impacts racial and ethnic minority groups disproportionately.[1] Guidelines recommend an oral glucose tolerance test (OGTT) to screen for T2D by 12 weeks postpartum. However, only 7% of US patients complete this, potentially delaying T2D prevention and early treatment.[2] We examined the patient perceptions of postpartum screening to identify modifiable barriers in a setting where postpartum screening via OGTT is standard care and is actively promoted.

STUDY DESIGN: In 2019, we surveyed patients in an integrated health system with existing strategies to promote screening as standard care (eg, centralized ordering of OGTTs in electronic health records and mailed patient reminders)[3] and a screening rate of 48%.[4] The inclusion criteria were diagnosis of GDM, age ≥18 years, and being pregnant and at ≤38 weeks' gestation or 12−52 weeks postpartum if an OGTT had not been completed. The eligible patients (n=608) received a single recruitment email (97.9%) or letter (2.1%) and a $25 gift card after completing an online survey. Across 36 survey items derived from previous research, we assessed the descriptive norms[5] (perceived frequency of screening among others with GDM); perceived barriers and benefits of screening[6−8]; recall of clinician advice[9]; perceived risk for T2D—dichotomized as low vs high—using an item from the Risk Perception Survey for Developing Diabetes[10]; the estimated cost of screening (open-ended survey item); and demographic characteristics. We identified the common perceptions, ie, those endorsed by ≥30% of participants. Descriptive analyses were conducted using SAS 9.4 (SAS Institute, Cary, NC, USA). The Kaiser Permanente Northern California institutional review board approved the study (protocol number 1426728).

RESULTS: Overall 162 patients participated (67 pregnant, 95 postpartum); the response rate was 26.6% after the single recruitment contact. The Supplemental Table provides the characteristics of the participants. Of the postpartum participants, none of whom had completed their screening, 91% had attended the postpartum visit. Perceptions about screening were organized into 4 themes (Table). The themes include risk perception, with women endorsing both low perceived risk and the belief that screening rates are low. Competing priorities emerged, including awareness of and a desire to follow clinicians' advice out of concern for one's own health. Yet, newborn care presented an obstacle to this. Psychological barriers highlighted fear of results or complications of diabetes. The fourth theme highlighted logistical or practical barriers. Cost also emerged as a barrier. Although 48.0% believed that screening would have no out-of-pocket cost, 27% estimated the cost as up to $50; 19.1% estimated it as >$50. Of the latter, 21.1% estimated it as >$100.

CONCLUSION: Previous studies identified a lack of reminders as a barrier to postpartum screening,[8] but in a setting where screening is standard care and is promoted, barriers persist. This is despite most of the participants having attended a postpartum visit and recalling advice about screening. Although factors such as cost or practice variabilities are minimized in such a setting, over 50% of the participants assumed a cost for the OGTT. Individual barriers such as low risk perception, fear of negative results, and time constraints remain. Results thus suggest that improvements at the health system level may be insufficient unless patient motivations are also addressed. Previous work indicates the potential impact of a clinician's personalized messages, so this may be a strategy.[11] Other strategies could include emphasizing individual T2D risk, reinforcing the desire to care for oneself, and improving knowledge that screening is a covered healthcare benefit. Future research may investigate patients' experiences with GDM and screening in previous pregnancies, which was not done here. The patient-level factors identified here, which reinforce recent qualitative findings,[12] may inform novel interventions to address risk perception, fear, competing priorities, and logistical barriers. ■

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TABLE
Perceptions of patients with gestational diabetes regarding postpartum diabetes screening in an integrated health system setting (N = 162)

Theme	n (%)
Risk perception	
Perceived risk of T2D is low	94 (58.0)
Believe most women do not get screened	84 (51.9)
Competing priorities	
Clinician-recommended screening	140 (86.4)
To take care of myself or my own health (*benefit*)	138 (85.9)
I would be more focused on my baby's health (*barrier*)	69 (42.6)
Psychological barriers or ambivalence	
I would be afraid of getting negative [abnormal] results (*barrier*)	51 (31.5)
To find out if I have diabetes or prediabetes (*benefit*)	112 (69.1)
To prevent diabetes or complications from diabetes (*benefit*)	109 (67.3)
Logistical barriers	
Time constraints	84 (51.9)
It would be hard to find childcare	61 (37.7)
It would be hard to fast	55 (34.0)

GDM, gestational diabetes mellitus; *T2D*, type 2 diabetes.

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Perioperative opioid-prescribing practices of resident trainees compared with staff surgeons

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OBJECTIVE: Little is known about the opioid-prescribing practices of surgical trainees. Our objective was to evaluate the opioid prescriptions of resident trainees compared with academic and community staff surgeons following elective hysterectomy.

STUDY DESIGN: We performed a population-based cohort study using linked administrative data in Ontario, Canada, where all dispensed prescription opioids are recorded, regardless of insurance status.[1] We included opioid-naïve women (age ≥18 years) who underwent elective hysterectomy between January 1, 2013 and March 31, 2019 and filled at least 1 opioid prescription in the perioperative period (day of hysterectomy to 7 days after). We excluded emergency surgeries, patients with malignancy, history of opioid toxicity, those who received opioids in the previous

TABLE
Main outcomes in weighted sample

	High-dosage opioid prescription		Total perioperative OME (mg)		OME value Recommended OME[2]
Prescriber	Event rate (%)	Risk ratio (95% CI)	Mean±SD	Mean difference (95% CI)	
All hysterectomies (N=20,352)					
Trainee[a]	6.0	Ref	144.59±74.56	Ref	
All staff	11.3	1.35 (0.93–2.00)	164.59±79.70	16.11 (7.53–24.95)	
Academic surgeon	7.4	1.22 (0.79–1.93)	157.60±70.64	13.01 (1.85–25.77)	
Community surgeon	11.8	1.36 (0.91–2.02)	165.53±80.80	16.75 (6.99–26.21)	
Minimally invasive hysterectomy (N=12,188)					
Trainee[a]	5.5	Ref	142.21±72.47	Ref	<113 mg
All staff	10.0	1.25 (0.77–2.03)	160.81±80.04	15.85 (5.43–25.84)	
Academic surgeon	6.7	1.22 (0.67–2.06)	158.91±71.65	16.70 (3.93–28.94)	
Community surgeon	10.5	1.26 (0.78–2.04)	160.91±81.59	15.66 (4.73–27.08)	
Open hysterectomy (N=8,164)					
Trainee[a]	7.1	Ref	149.49±78.59	ref	<150 mg
All staff	13.2	1.46 (0.96–2.29)	170.29±78.91	15.21 (2.73–26.98)	
Academic surgeon	8.9	1.25 (0.75–2.00)	154.65±68.82	5.16 (−8.85 to 20.44)	
Community surgeon	13.7	1.48 (0.94–2.38)	172.35±79.29	17.17 (5.01–29.17)	

CI, confidence interval; *mg*, milligrams; *OME*, oral morphine equivalent; *ref*, reference interval; *SD*, standard deviation.

[a] The trainee referent group weights differ for the 2 pairwise comparisons. The data presented above are from the weighted comparison of the trainees vs academic staff.

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SUPPLEMENTAL TABLE

Demographic characteristics of 162 study participants with current or recent gestational diabetes mellitus

Characteristics	n (%) or mean±standard deviation
Age (y)	33±4.9
Race or ethnicity	
Black/African American	14 (8.6)
Asian/Pacific Islander	51 (31.5)
Latina	31 (19.1)
Multiracial or multiethnic	20 (12.3)
White	45 (27.8)
Other	1 (0.6)
Education	
High school or less	23 (14.2)
At least some college	139 (85.8)
Reproductive status	
Pregnant	67 (41.4)
Postpartum	95 (58.6)
Parity	
0	26 (16.0)
1	52 (32.1)
2	59 (36.4)
3 or more	25 (15.4)

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