T1D Exchange

T1DX-QI BPA-TECH (Best Practice Advisories for Tech Equity) March 19, 2025, Meeting

Agenda

- Welcome
- Project Timeline and Updates- T1DX-QI Team
- PwT1D and Caregiver Focus Group Findings- T1DX-QI Team
- Authorship Opportunities
- BPA Update- JHU Team
- Next Steps
- Questions

Project Aims

- Aim 1: To develop and implement an EHR-based BPA using stakeholder feedback to standardize the approach for prescribing and documenting advanced diabetes technologies (ADT) (CGM, insulin pump, AID) among adult and pediatric PwT1D.
- Aim 2: To determine the effectiveness of an EMR-based BPA in reducing racial inequities in ADT.
- Aim 3: To explore the reasons identified for why providers decide to not prescribe ADT and whether they were PwT1D or provider led, and the association between the reason provided and the PwT1D's race/ethnicity.

Study Timeline

Milestones	Apr-24	Jul-24	Oct-24	Jan-25	Apr-25	Jul-25	Oct-25	Jan-26	Apr-26	Jul-26	Oct-26	Jan-27
Start-up	x											
Aim 1												
Qualitative Study		x	x									
BPA develop/impl.			x	x	x							
Publication				x								
Aim 2												
BPA deployed					x	x	x	x	x			
Publications					X	X	X					
Data collection						x	x	x	x	x		
Data analysis								x	x	x	x	
Aim 3												
Data analysis										x	x	x
Publications										X	x	x

BPA Special Project Statement of Work

- All participating centers are eligible to invoice us for Deliverable 3 (IT Department develops and implements an EMR based BPA). The deliverable ends on April 1, 2025. Please invoice us prior to that date.
- We ask that everyone invoices us no later than 5/1/2025 for Deliverable 2 ending in June 2025.
- Please include deliverable number and date.
- All payments will be made through electronic funds transfer(EFT). Please include your banking information on invoice.
    1. Bank account name & address
    2. Bank account number
    3. Bank account routing number

PwT1D and Caregiver Focus Group Findings

Overall Summary

Metric	Total	Patients	Caregivers
Number of participants	18	9	9
Number of focus groups/ interviews	16	9	9.
Mean length of interviews (in minutes)		40	47
Mean (Range)		35	(19-66)

Right Information

Types of information needed

Themes	Caregivers	PwT1D
Need for Comprehensive Information	Desire for thorough and proactive communication about ADTs; feel uninformed.	Seek knowledge to empower self-management; want to understand device functionalities.
Proactive Communication	Often feel they must initiate discussions about new technologies with clinicians.	Expect clear communication but may also express readiness to explore new technologies autonomously.
Importance of Options	Need full range of ADT options to make informed choices for those they care for.	Emphasize the importance of having customizable options that fit their lifestyle.
Tailored Communication	Some want personalized communication based on individual readiness to adopt technologies.	Assess comfort and readiness to adopt new technologies; may seek tailored support.
Inclusive Communication	Advocate for collaborative communication involving clinicians, caregivers, and patients.	Desire for autonomy in choices but appreciate ongoing support from healthcare providers.
Financial Considerations	Not typically emphasized; focus is more on health information.	Stress financial implications, including costs and insurance coverage for ADTs.
Self-Management and Empowerment	Focus more on supporting others in using ADTs.	Prioritize personal empowerment and independence in managing diabetes.
Ongoing Support	Seek guidance for the individuals they care for, emphasizing the need for follow-up.	Look for continuous support and guidance throughout their diabetes management journey.

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ADT Benefits

Themes	Caregivers	PwT1D
Integration of Devices	Value the seamless communication between CGMs and pumps.	Appreciate the automation and improved blood sugar control.
Accuracy and Reliability	Emphasize the need for reliable readings from devices.	Relate to the importance of consistent data for management.
Automatic Alerts	Find alerts essential for timely interventions in care.	Recognize alerts as vital for preventing dangerous situations.
Trial Opportunities	Advocate for trying devices before adoption.	Support the idea of hands-on experience with technology.
Ongoing Education and Support	Highlight continuous learning about device use.	Stress the need for education to maximize technology benefits.

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ADT Concerns

Themes	Caregivers	PwT1D
User Experience Challenges	Steep learning curve not addressed by healthcare providers	Confusing software updates (e.g., issues with using devices on phones and updates)
Physical Usability Issues	Discomfort due to device placement (itches, adhesives)	Difficulty finding suitable placement for devices to prevent dislodging
Functionality Limitations	Challenges with app functionality and access to new features	Frustration with slow response of automatic features (e.g., control IQ)
Insulin Waste and Cost	Financial stress due to high costs of pumps and potential scarcity of supplies	Concerns over insulin waste associated with cartridge changes
Signal Reliability and Connectivity	Concerns about reliable access to devices for effective management	Issues with Bluetooth signal strength and connectivity interruptions
Confusing Updates and Alerts	Alert fatigue due to overwhelming notifications	Confusing updates regarding device compatibility and usage

Features that didn’t meet needs

Themes	Caregivers	PwT1D
Accuracy and Reliability	Significant concerns about inaccuracies in device readings. Caregivers report that inaccuracies can lead to severe health risks.	PwT1D also face issues with device accuracy, affecting their treatment decisions.
Usability and Functionality	Mixed feelings: some caregivers express satisfaction, while others note complexity (e.g., initial calibration pain points).	PwT1Dmay struggle with the usability of devices, particularly during initial setup.
Remote Monitoring	Need for better remote monitoring features and follow apps, such as for the Omnipod.	PwT1D highlight the importance of being monitored remotely for better management.
Insulin Adjustment Features	Frustration with lack of automatic insulin adjustment in response to high blood sugar levels.	PwT1D desire more responsive systems that automatically manage insulin delivery.
Regulatory Limitations	Concerns that current regulations hinder access to newer technologies that could improve management.	PwT1D may feel the impact of these limitations, affecting their options for treatment.
Support and Communication	Some caregivers rely heavily on customer support due to device inaccuracies.	PwT1D may seek more clear communication and support for device operation.
Satisfaction with Current Devices	Variations exist; some caregivers report not having unmet needs with devices.	Overall PwT1D satisfaction may also vary, influenced by specific experiences with devices
Confusing Updates and Alerts	Alert fatigue due to overwhelming notifications	Confusing updates regarding device compatibility and usage
		Disruptiveness of alert notifications leading to user frustration

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Ease and practicality in daily life

Theme	Caregivers	PwT1D
Positive Technology Integration	Caregivers note improved responsiveness and streamlined management with devices.	PwT1D recognize easier management through seamless operation of devices.
Device Usability	Caregivers mention user-friendly interfaces that guide through processes.	PwT1D express satisfaction with intuitive designs, reducing management burden.
Comfort and Usability Issues	Caregivers highlight issues like slow responsiveness and discomfort during use.	PwT1D experience pain from device usage and issues with adhesives.
Connectivity Challenges	Caregivers report frustration with connectivity issues impacting usability.	PwT1D experience disruptions in readings due to signal loss alerts.
Overall Satisfaction	Caregivers' express relief and ease in daily management due to technology.	PwT1D feel that recent advancements have greatly improved their experience.

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Right Person

Who would benefit from alerts

Theme	Caregivers	PwT1D
Benefit of BPA Alerts	Alerts can serve as useful reminders for clinicians.	Alerts provide essential information for self-management and understanding of diabetes technology.
Concern about Overload	Worried about alert fatigue and overwhelm for clinicians.	May feel overwhelmed by excessive alerts, but value crucial information.
Communication	Recognize the need for effective communication between clinician and patient.	Benefit from enhanced communication, aligning understanding and decision-making.
Directing Alerts	Some argue alerts should primarily target clinicians for efficiency.	Believe alerts should primarily benefit them, as they may lack information.
Collaboration	Support collaborative care, highlighting the clinician's role.	Emphasize the importance of collaboration in their care management.
Current Knowledge	Clinicians are often already aware of the technology.	Patients may not be informed about all advancements and require alerts.
Value of Alerts in Care	Alerts can improve care focus but risk being ignored if routine.	Value alerts for their direct impact on diabetes management strategies.

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Additional information needed

Theme	Caregivers	PwT1D
Comprehensive Information	Need detailed insights into device features, usability, and options available to support their loved ones.	Desire information that helps them understand their own management needs and choices related to their diabetes.
Comparative Insights	Seek guidance comparing different devices to make informed decisions for the patients they support.	Want to learn how various devices differ and how they can best serve their personal health management goals.
Personalization & Training	Express the need for personalized training that accommodates their varying levels of experience with diabetes management.	Interested in training that focuses on how to use the devices effectively and integrate them into their everyday lives.
Practical Guidance	Look for hands-on support to enhance their confidence in assisting with diabetes management.	Require practical advice on using devices in daily routines to ensure proper diabetes control.
Communication Strategies	Prefer tailored communication from clinicians that addresses their specific concerns and questions.	Benefit from clear and direct communication about their treatment options and device functionalities.

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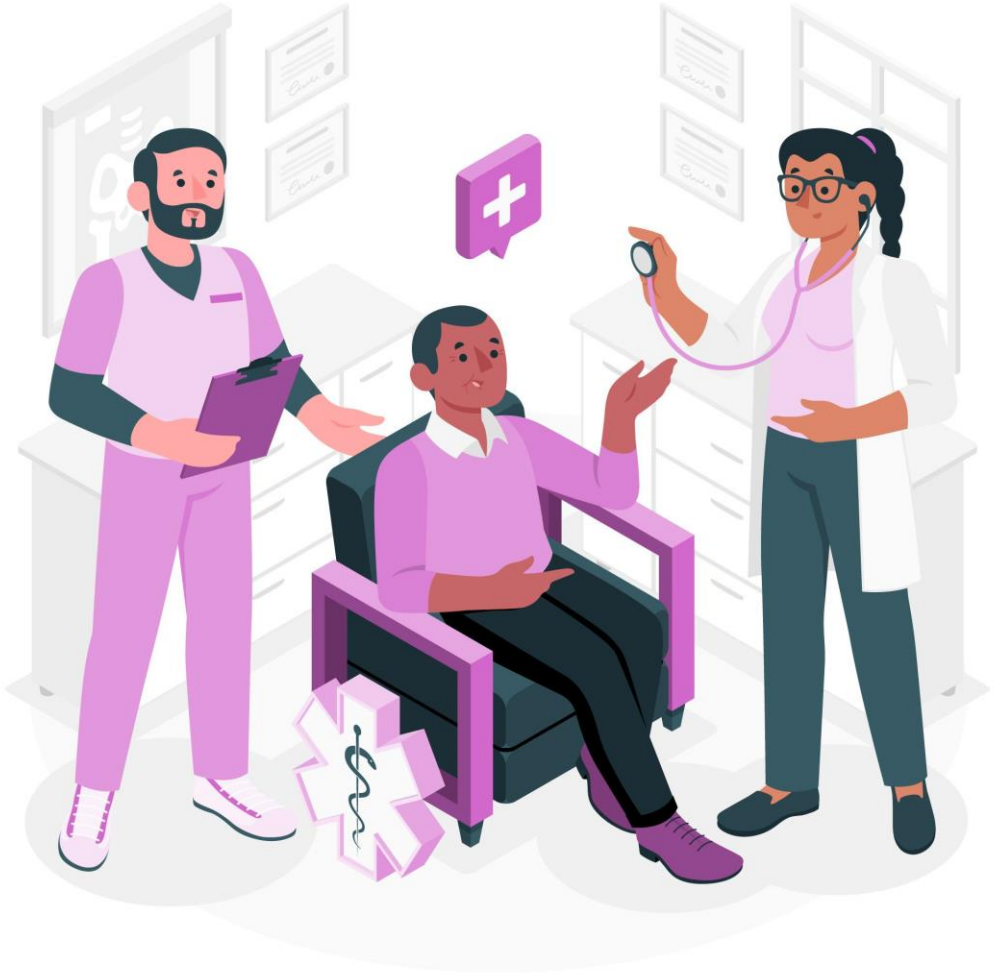
Right Intervention Notification



Alert Design

Themes	Caregivers	PwT1D
Timeliness and Clarity of Information	Emphasize the need for timely and clear information to manage diabetes effectively; desire for concise alerts to avoid being overwhelmed.	Highlighted the importance of receiving clear and timely alerts that are actionable and relevant to daily management.
Engagement and Communication	Alerts should promote communication with clinicians, encouraging discussions about diabetes management strategies.	Expect alerts to foster communication with caregivers and healthcare providers, ensuring they are informed and engaged.
Customization and Personalization	Desire for customizable alerts tailored to individual needs and diabetes management stages; preference for opt-in notification settings.	Stress the importance of personalized alerts that reflect specific health situations and management stages for effective engagement.
Actionable Steps and Proactive Management	Seek alerts that prompt specific actions related to blood sugar management and regular check-ins with healthcare professionals.	Value alerts that encourage proactive management, guiding them on monitoring their condition and making informed decisions.
Resources and Support Integration	Consensus on the need for direct links or pathways to resources, appointments, or support in alerts to simplify care management.	Recognize the utility of having easy access to resources and support through alerts, while also being cautious of information overload.
Design and User Experience	Request for user-friendly and visually appealing alert designs that are easy to understand and actionable.	Appreciate alerts that are designed intuitively and clearly present information, making it easier to manage diabetes.
Frequency Management	Highlight the necessity to manage alert frequency to prevent overwhelm, preferring quality information at a manageable pace.	Emphasize the need to balance the frequency of alerts, focusing on receiving essential information without excessive notifications.

Right Channel

Design & deployment of alerts

Theme	Caregiver	PwT1D
Dual Communication Approach	Emphasis on the need for a dual alert system that communicates with both patients and clinicians.	Acknowledgment of the benefits of receiving alerts and information simultaneously from both parties.
Proactive and Timely Notifications	Calls for alerts to notify clinicians of concerning patient data trends for timely intervention.	Desire for timely notifications about personal health data and necessary actions to be taken.
Educational Content and Resources	Importance of integrating educational content in alerts to help patients understand diabetes technologies.	Interest in receiving information that educates about available technologies and their benefits.
Personalization of Alerts	Advocacy for tailoring alerts based on the patient's stage in their diabetes journey.	Recognition of the need for personalized messages that address individual needs and concerns.
Integration of Community Support	Suggestions for creating support networks among patients and caregivers through MyChart messages.	Desire for community engagement and sharing of experiences with other patients.
Balance and Clarity in Communication	Concern about notification overload; emphasis on clarity and balance in alert frequency.	Preference for clear, concise messages without overwhelming amounts of information.
Encouraging Clinician-Patient Interactions	Alerts should prompt meaningful discussions between clinicians and patients about diabetes management.	Interest in receiving prompts to initiate conversations with healthcare providers about care options.

Right Timing

Timing of Alerts

Theme	Caregivers	PwT1D
Need for Tailored Frequency	Advocates for flexible alert schedules based on individual needs; acknowledges diverse patient circumstances.	Preferences vary from monthly to quarterly alerts; emphasize adjustments during critical phases.
Event-Driven Alerts vs. Routine Updates	Supports selective notifications for significant changes; prefers not to overwhelm with routine updates.	Suggests alerts should focus on important issues rather than routine information.
Patient Engagement and Control	Emphasizes the importance of keeping patients engaged; supports patient autonomy in notification preferences.	Values control over notification frequency; prefers alerts that are relevant and not overwhelming.
Initial Education Period	Advocates for more frequent notifications during the early stages; recognizes learning needs post-diagnosis.	Supports regular updates during the initial months; seeks assistance and guidance in managing new technologies.
Adaptable Notification Strategies	Suggests that notification strategies should evolve as patients progress in diabetes management.	Shares the need for communications to adapt; prefers a system that adjusts as they become more adept at managing their condition.

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Racial & Cultural Factors

Race & Cultural Factors

Theme	Caregivers	PwT1D
Impact of Racial and Cultural Background on Trust	Feel a strong trust in providers when sharing cultural and socioeconomic backgrounds. Conversely, they may feel the need to be more assertive in care advocacy.	Patients from similar racial backgrounds may experience comfort and mutual understanding, while others express mistrust towards providers of different races.
Experiences of Bias and Systemic Barriers	Identify systemic biases as affecting technology recommendations, often based on weight, lifestyle, or socioeconomic status, leading to inequitable treatment.	Perceive provider assumptions about their backgrounds affecting care options, highlighting frustrations with limited access to diabetes technologies.
Role of Positive Interactions	Some report equitable, positive interactions with their healthcare teams that foster a sense of support and normalcy in care.	Share instances where they felt respected and understood, indicating that positive engagement is possible despite broader systemic issues.
Trust Dynamics Related to Provider Background	Recognize that shared racial or cultural backgrounds can enhance trust with providers, leading to better communication and care outcomes.	Feel stronger trust towards providers who share their racial background, indicating that diversity among healthcare staff could improve relations.
Need for Cultural Competence and Personalized Care	Emphasize the importance of cultural sensitivity and personalized care that respects individual values and preferences to improve outcomes.	Call for healthcare providers to consider their unique cultural needs and avoid generalizations that overlook individual circumstances.
Advocacy and Empowerment	See advocacy as essential in navigating biases, often requiring a proactive approach to ensure their healthcare needs are recognized and respected.	Express the importance of being empowered to voice their concerns and needs within the healthcare system, advocating for themselves to receive appropriate care and resources.

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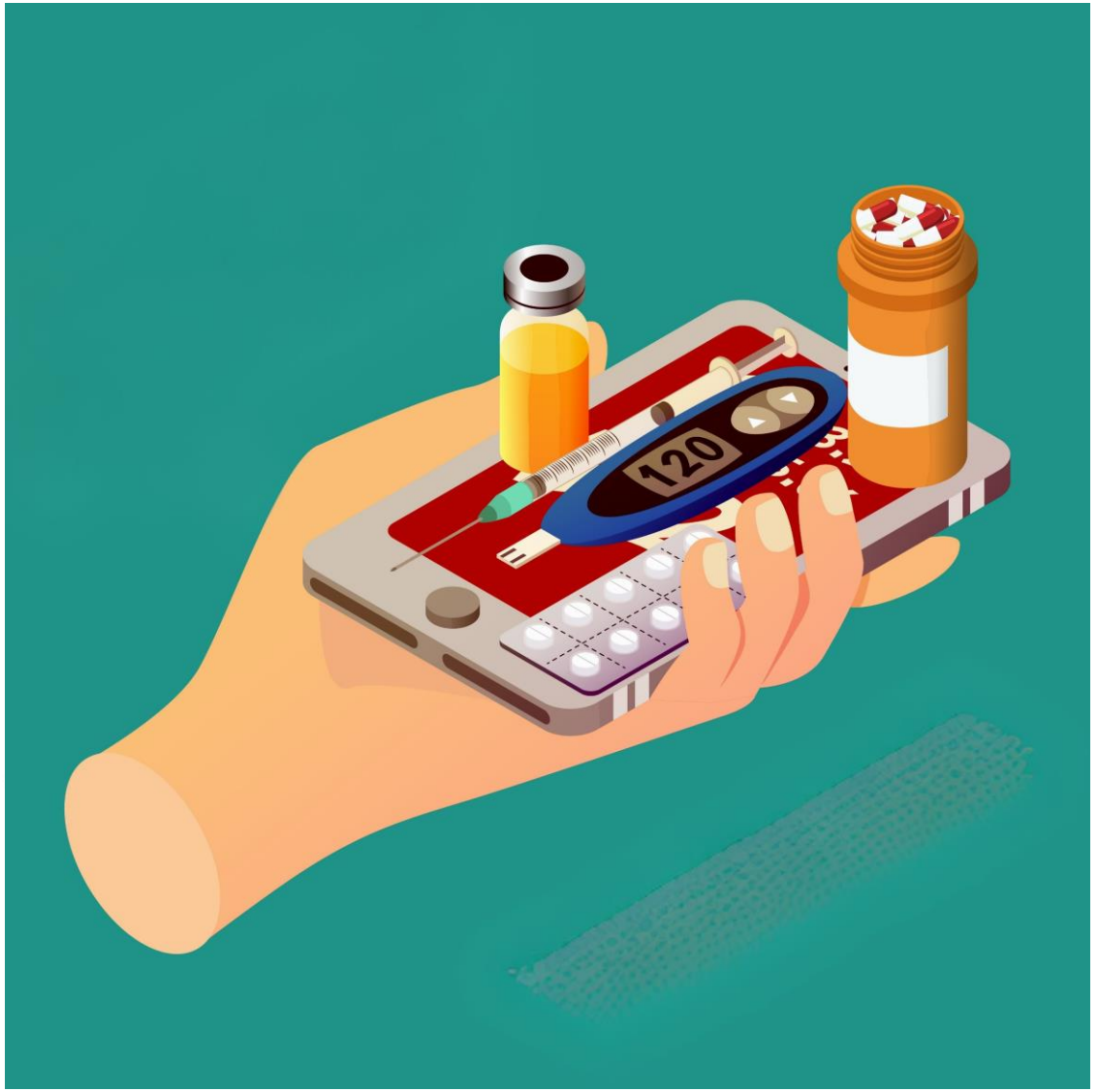
Access to Technology



Equal Access to Devices

Theme	Caregivers	PwT1D
Improved Communication	Need for streamlined communication with insurance providers and clinicians	Desire for effective communication about available technologies
Standardization and Transparency	Call for standardized information regarding diabetes technologies	Emphasis on transparent costs and options for informed decisions
Personalized Approaches	Request for customizable communication strategies and alerts	Need for alerts to consider individual backgrounds and financial circumstances
Education and Empowerment	Importance of comprehensive education and training for managing technologies	Desire for information and support to effectively use diabetes technologies
Systematic Support	Advocacy for proactive support from healthcare providers	Recognition of the critical role providers play in facilitating access
Addressing Alert Fatigue	Concerns regarding potential for alert overload among clinicians	Awareness that too many alerts can lead to desensitization and decreased responsiveness
Integration of Community Resources	Interest in using community resources and platforms for support	Acknowledgment of the potential for community-based solutions to enhance access

Authorship Opportunities: BPA-TECH Project Publications

- **Published / Submitted Manuscripts:**
  - Title: Implementation and Evaluation of Best Practice Advisories to Reduce Inequities in Technology Use for People with Type 1 Diabetes: Protocol for a Mixed Methods and Non-Randomized Controlled Trial.
  - Journal: JMIR (Submitted)

- **Upcoming Abstract Submission**

ISPAD 2025

- *Abstract Focus:* Survey Results
- *Submission Deadline:* **April 22, 2025**

Authorship Opportunities: BPA-TECH Project Publications

1. BPA Development, Integration, and Optimization within EHR Systems

Timeline: Draft over Summer 2025 | Submission in Fall 2025

First Draft Goal: August 1, 2025

First Group Review: September 14, 2025

Second Group Review: October 1, 2025

Action: Keep track of your site's implementation progress

Authorship Opportunities: Interested 1st and 2nd authors?

Authorship Opportunities: BPA-TECH Project Publications

2. Focus Group

Timeline: Spring/Summer 2025

Manuscript: Clinician and PwD/Caregiver Focus Groups

First Draft Goal: July 1, 2025

First Group Review: July 20, 2025

Second Group Review: August 15, 2025

Authorship Opportunities: Interested 1st and 2nd authors?

Authorship Opportunities: BPA-TECH Project Publications

3. Survey results

Timeline: Spring/Summer

Abstract for ISPAD due April 22nd- focus on survey results

Manuscript - Survey Results from annual survey and BPA survey;

First draft goal: July 1

First group review : August 11th,

2nd group review: August 25th

Authorship Opportunities: Interested 1st and 2nd authors?

4. Impact of BPA Implementation on Health Equity in T1D Technology Use

Projected Timeline: Mid to Late 2026

- Focus: Evaluating how BPA interventions influence equitable access and outcomes in T1D technology use

BPA Update- JHU Team