

Improving Pump Referral in Medicaid-Insured Youth with Type 1 Diabetes



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BACKGROUND

- Despite insurance coverage, continuous insulin pump uptake remains suboptimal in youth with T1D.
- Barriers include the lack of a streamlined process to facilitate technology access, especially for publically insured patients.
- In 2022 at a pediatric hospital in Southern California caring for over **980** Medicaid-insured youth with T1D, only **21%** wear insulin pumps.

SPECIFIC AIMS

- By redesigning the pump referral process, we aimed to reduce the time between referral to pump treatment and initiation.
- Our secondary aim was to offer patients a structured process including a team-based approach with diabetes care and education specialists (DCES), advanced practice providers, endocrinologists, and a researcher.

METHODS

A team with 2 physicians, 1 nurse practitioner, and 4 registered nurses designed and implemented the new process following these steps:

- Literature Review: What are the current processes/approaches for team-based CIIS initiation? – evidence informed the new pump-referral design, including:
 - 60-minutes virtual class (Intro to Pump) with a 9-step roadmap for patients and families
 - 50-minutes pre-recorded video on insulin pump medical management (MM)
 - Knowledge checks: a. Intro to Pump; b. MM
- Process metrics: time between referral and full onboarding, knowledge check completion, # of group classes offered/month.

LITERATURE REVIEW FINDINGS

- 14 studies retrieved from PubMed, CINAHL, and manual search – read in full
- 4 studies described the insulin referral process in detail:

Cogen, Streisand & Sarin (Diabetes Spectrum, 2002)	Janci & Sameshin (AADE in Practice, 2013)	Puckett & Wong (Diabetes, 2018)	Haddadi et al (Canad J Diabetes, 2021)
<ul style="list-style-type: none"> Case Report Handout with elig. criteria CHO count, BG freq, insulin freq, pump readiness 	<ul style="list-style-type: none"> Pump Pipeline program Process roadmap CHO count, BG freq, insulin freq, pump class 	<ul style="list-style-type: none"> Qualitative study Pump readiness determined by cultural capital / provider decision-making 	<ul style="list-style-type: none"> Alberta's provincial eligibility Four component criteria, including patient preference Behavioral evaluation

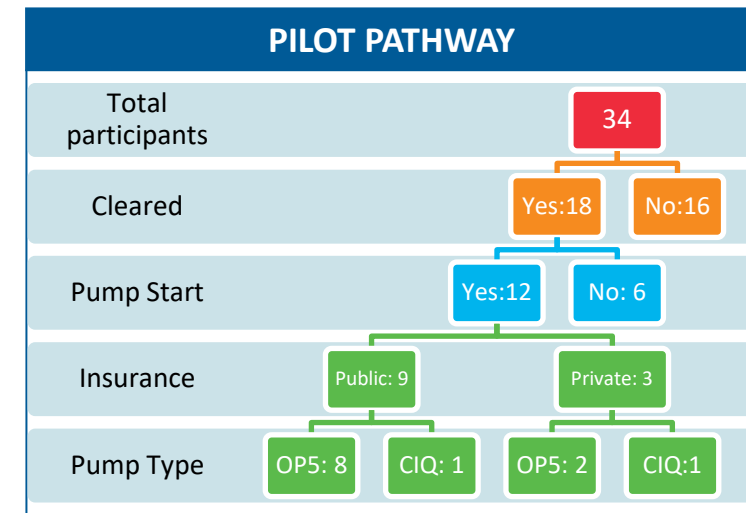
CHLA PUMP REFERRAL ROADMAP

- Attend Intro-to-Pump Class and Knowledge Check
- Call your nurse care manager with diabetes logs
- Order your pump (done by CHLA)
- After receiving your pump, send us the Diabetes Logs for the past 2 weeks
- Watch the Diabetes Medical Management Class video and complete Knowledge Check
- Meet doctor/NP to help determine insulin pump settings
- Schedule pump training
- Meet doctor/NP to discuss questions and adjust pump settings
- Begin check-ins with your nurse care manager

PILOT PRELIM RESULTS

From September 2022 to May 2023:

- Average time between referral to pump treatment to pump initiation reduced from **136** to **76** days.
- 6 referrals/month, 12 families completed full onboarding, 12±4.1 y, 53% male, 3±3.3 y T1D duration, 71% publicly insured
- Barriers: insurance authorization, team/patient communication, software support for recorded class



CONCLUSIONS

- Although early pump start is recommended by national guidelines, patient-centered workflows are necessary to meet patient and family needs, especially when working with a diverse patient population.
- Our team-based approach referral process improved insulin pump initiation in publicly insured patients.
- Sustainability of this model will depend on strategies for patient/family engagement, team make up, and freq. of intro to pump classes.

NEXT STEPS

- Expand the team teaching the classes
- Establish virtual pathway as the standard pathway – 2 classes/month
- Offer conventional pathway for families preferring in person pump training
- Offer virtual pathway for non-English speaking patients

