

# Implementation of a Wellness Program for People with Diabetes with HbA1c >9%



Jeniece Ilkowitz, RN, MA, CDCES, Vanessa Wissing, RD, CDCES, Chris Lally, RN, CDCES, Mary Pat Gallagher, MD  
The Hassenfeld Children's Hospital, Pediatric Diabetes Center at NYU Langone  
New York, NY, USA

Pediatrics  
Diabetes

## INTRODUCTION

People with diabetes who have an elevated HbA1c level are at higher risk for diabetes related complications. Therefore youth at the HCH Pediatric Diabetes Center (PDC) at NYU with an HbA1c >9% are considered high-risk. However there was no policy or protocol in place to identify and support this group. Baseline data showed technology use only partially explains (61%) HbA1c disparities. Through a quality improvement (QI) initiative, the PDC created the Wellness Program (WP), to provide additional support and tailored interventions to youth. The aim of this QI project was to identify high-risk patients and decrease HbA1c levels to <9% for >=20% of participants within 6 months. To gather baseline information, patients seen at the PDC from 2020-2021 were reviewed to better understand the demographics of those with HbA1c >9% versus those with HbA1c ≤9%.

## METHOD

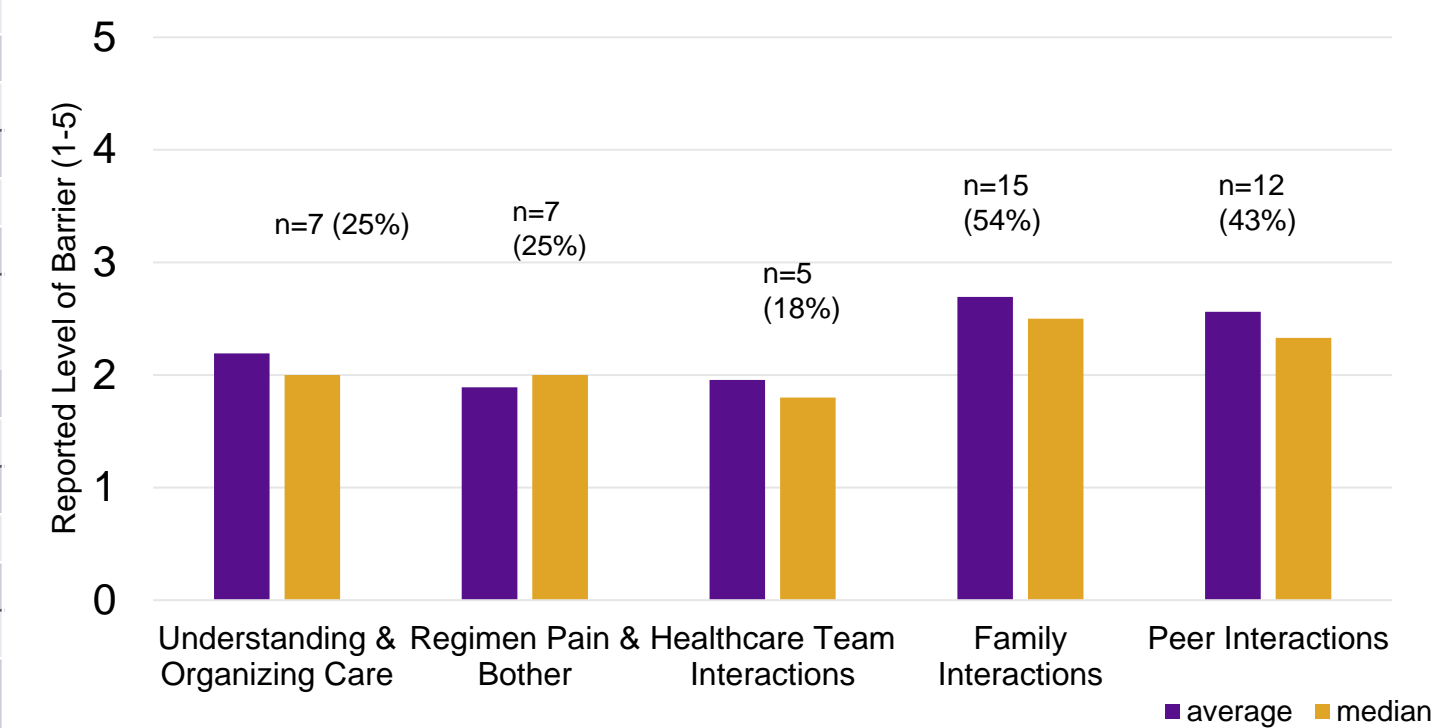
This QI initiative began in August 2021. Multiple Plan-Do-Study-Act (PDSA) cycles were completed as the WP was created. PDSAs included:

- Identify and schedule follow-up appts for all youth with HbA1c >9%, confirm appts by phone the day before the visit, schedule follow-up at check-in, walk youth out to desk after visit to schedule follow-up if not done at check-in, provide education regarding importance of follow up
  - Enroll one person, educate about risks of elevated HbA1c, benefits of lowering HbA1c, introduce WP, identify interventions best suited for the person, obtain a WP cell phone for bidirectional communication with youth via texting
  - Enroll additional patients, offer weekly check-in for 6 weeks followed by a 6-week in-person appointment, provide individualized interventions such as diabetes technology support, start of hybrid closed loop, behavioral health/psychosocial supports, increased frequency of contact, additional diabetes education
  - Identify tool to be used to screen for barriers: PRISM tool chosen, review barriers with youth and families, have SW meet with youth and families to further address barriers identified
- Outcomes reviewed at 6 months.

## Baseline data

	Total N (percent)	HbA1c ≤9% N (percent)	HbA1c >9% N (percent)	p-value
Overall	409	338 (82.6)	71 (17.4)	n/a
CGM Use				
No	83 (20.3)	47 (56.6)	36 (43.4)	<.001
Yes	326 (79.7)	291 (89.3)	35 (10.7)	
Pump Use				
No	146 (35.7)	108 (74.0)	38 (26.0)	<.001
Yes	263 (64.3)	230 (87.5)	33 (12.5)	
Age, years (mean, SD)	14.0 (5.0)	14.1 (5.1)	13.7 (4.8)	0.56
<14	171 (41.8)	141 (82.5)	30 (17.5)	0.93
≥14	238 (58.2)	197 (82.8)	41 (17.2)	
Sex				
Female	204 (49.9)	167 (81.9)	37 (18.1)	0.68
Male	205 (50.1)	171 (83.4)	34 (16.6)	
Race/Ethnicity				
Not non-Hispanic white	132 (41.5)	93 (70.5)	39 (29.5)	<.001
Non-Hispanic white	186 (58.5)	171 (91.9)	15 (8.1)	
Preferred Language				
Not English	44 (10.8)	33 (75.0)	11 (25.0)	0.16
English	364 (89.2)	304 (83.5)	60 (16.5)	
Minority Race or Language				
Yes	145 (35.5)	104 (71.7)	41 (28.3)	<.001
No	263 (64.5)	233 (88.6)	30 (11.4)	
Insurance Type				
Public	155 (37.9)	117 (75.5)	38 (24.5)	0.003
Private/self-pay (COI)	254 (62.1)	221 (87.0)	33 (13.0)	
Nationally-normed Score (mean, SD)	51.7 (31.6)	54.5 (31.0)	38.5 (31.3)	<.001

## PRISM: Adolescent Version Reported Barriers (n=28) ≥ 2.5 = barrier



## CONCLUSIONS

The WP QI effort decreased the HbA1c of 39% of those enrolled to <9% within six months. The goal was met there is still much work to do. Ongoing initiatives include further investigation into observed disparities, interviews at WP exit, increased SW support in addressing barriers identified via the PRISM, messaging youth lost to follow up, additional scheduling initiatives for follow-up, identifying a barrier identification tool for ages <8 and >17 years, and monthly PDC team review of WP participants.

## RESULTS

464 charts reviewed for WP eligibility; 82 (17.6%) enrolled in WP (HbA1c >9%)  
 WP HbA1c levels: mean=10.6+/-1.5%, median=10.1% [9.2-16] (total population, mean=7.8+/-1.7%)  
 WP Median age = 14 years (total population = 14 years)  
 WP population: 70.2% self-identified as non-White (total population = 31.4% self-identified as non-White)  
 At 6 months: 32 (39%) WP participants had an HbA1c <9% (graduated)  
 Mean post-program HbA1c level of graduates = 8.2+/-0.6% (median=8.4% [6.5-8.9])  
 Interventions used by WP graduates included:

- initiation of Control-IQ (n=6)
- increased diabetes education/management (n=5)
- behavioral health intervention/additional psychosocial care in place (n=4)
- increased frequency of communication (n=6)
- other/unknown (n=6)