Improving Equitable Access to Advanced Diabetes Technology with Improved Show Rates to Clinic Appointments

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Background

This quality improvement project focused on reducing disparities in utilization of diabetes technologies, continuous glucose monitors (CGMs) and insulin pumps, at a pediatric diabetes center. We noticed lower adoption rates of these technologies among patients identifying as members of racial and ethnic minority groups. A comprehensive review to determine cause revealed that non-utilization of technology was highly attributed to missed diabetes appointments. We hypothesized that if we wanted to increase the use of technology, we would need to ensure patients are attending appointments.

Methods

We focused on 302 patients who were lost to follow up (LTFU), which is defined as not having a follow-up appointment scheduled. After reaching out to these families to schedule an appointment, we then determined if diabetes technology use would increase if patients had appointments. .

Results

After conducting targeted outreach to patients LTFU, we noted improved attendance of appointments and an increase in uptake of diabetes technology. We were able to reschedule 251 of the 302 patients. After attending the scheduled appointments, CGM uptake increased by 20.39% and pump uptake by 1.94% for patients identifying as members of racial and ethnic minority groups. For those identifying as white, CGM uptake increased by 6.09% and pump uptake by 2.74%. This closed the equity gap by 14.3% for CGM uptake and 0.8% for pump uptake.

Conclusion

Outreach to ensure patients have appointments scheduled showed a positive patient outcome decreasing the equity gap in diabetes technology utilization. Attending clinic appointments improved access to diabetes education and technology.

Racial and Ethnic Minority

BEFORE VISIT- HAS CGM		
CGM Status	Total	Percentage
Yes, And Using	36	34.95%
No	55	53.40%
N/A	6	5.83%
Yes-But Not Using	6	5.83%
Total	*103*	*100.00%*
AFTER VISIT- HAS CGM		
CGM Status	Total	Percentage
Yes, And Using	45	43.69%
No	21	20.39%
N/A	7	6.80%
Yes-But Not Using	9	8.74%
LTFU	11	10.68%
LTFU - Transitioned	1	0.97%
Rx Sent	9	8.74%
Total	*103*	*100.00%*
BEFORE VISIT- HAS PUMP		
Pump Status	Total	Percentage
Yes, And Using	26	25.24%
No	66	64.08%
N/A	9	8.74%
Yes-But Not Using	2	1.94%
Rx Process Started	0	0.00%
Total	*103*	*100.00%*
AFTER VISIT- HAS PUMP		
Pump Status	Total	Percentage
Yes, And Using	24	23.30%
No	45	43.69%
N/A	10	9.71%
Yes-But Not Using	4	3.88%
Rx Process Started	6	5.83%
Education provided	2	1.94%
LTFU - Transitioned	1	0.97%
LTFU	11	10.68%
Total	*103*	*100.00%*

White

BEFORE VISIT - HAS CGM		
CGM Status	Total	Percentage
Yes, And Using	116	78.38%
No	27	18.24%
N/A	2	1.35%
Yes-But Not Using	3	2.03%
Total	*148*	*100.00%*
AFTER VISIT- HAS CGM		
CGM Status	Total	Percentage
Yes, And Using	119	80.41%
No	9	6.08%
N/A	3	2.03%
Yes-But Not Using	8	5.41%
LTFU	7	4.73%
LTFU - Transitioned	1	0.68%
Rx Sent	1	0.68%
Total	*148*	*100.00%*
BEFORE VISIT-HAS PUMP		
Pump Status	Total	Percentage
Yes, And Using	89	60.14%
No	52	35.14%
N/A	4	2.70%
Yes-But Not Using	1	0.68%
Rx Process Started	2	1.35%
Total	*148*	*100.00%*
AFTER VISIT-HAS PUMP		
Pump Status	Total	Percentage
Yes, And Using	90	60.81%
No	39	26.35%
N/A	5	3.38%
Yes-But Not Using	5	3.38%
Rx Process Started	2	1.35%
Education provided	0	0.00%
LTFU - Transitioned	1	0.68%
LTFU	6	4.05%
Total	*148*	*100.00%*

Table 1: Percentage of patients using technology (insulin pump and/or CGM) before and after attending follow-up appointments, broken down based on race and ethnicity.