Racial Disparities in Rates of Continuous Glucose Monitor Initiation and Continued Use in Children with Type 1 Diabetes

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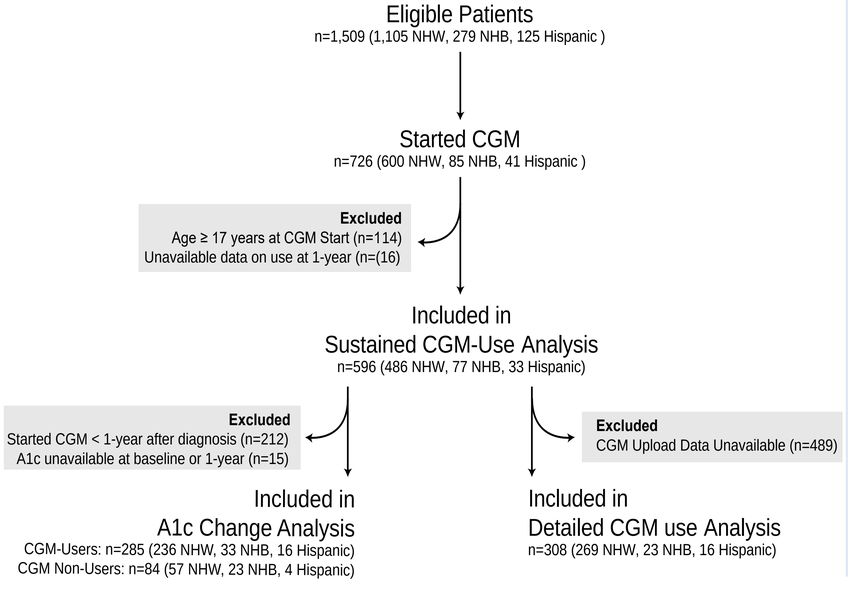
OBJECTIVES

- To determine if racial disparities exist in rates of continuous glucose monitor (CGM) initiation and continued use

METHODS

- Retrospective study of non-Hispanic White (NHW), non-Hispanic Black (NHB), and Hispanic children in Pennsylvania diagnosed with type 1 diabetes before September 30, 2018 and seen at the Children's Hospital of Philadelphia between January 1, 2015- December 31, 2019
- Exclusion criteria:
  - < 17 year old
  - Using continuous glucose monitor at start of study period
- Statistical analysis:
  - Kruskal- Wallis test and Mann-Whitney U with Bonferonni adjustment were used to compare continuous variables
  - Chi-squared test with Bonferonni adjustment was used for categorical variables
  - Two-sided p-values < 0.017 were considered statistically significant



CONCLUSIONS

Non-Hispanic White patients were **2.7 times** as likely as Non-Hispanic Black patients to **start using a continuous glucose monitor.**

Non-Hispanic White patients were **4.1 times** as likely as Non-Hispanic Black patients to **still be using a continuous glucose monitor at 1 year.**

RESULTS

Rates of Initiation and Continued Use of CGM

					p-value		
	NHW	NHB	Hispanic	Variance	NHW v NHB	NHW v Hispanic	NHB v Hispanic
Initiated CGM, n (%)	600/1105 (54.3%)	85/279 (30.5%)	41/125 (32.8%)	<0.001	<0.001	< 0.001	0.6
CGM users at 6 months, n (%)	417/489 (85.3%)	50/76 (65.8%)	28/33 (84.8%)	<0.001	<0.001	0.9	0.04
CGM users at 1 year, n (%)	420/486 (86.4%)	47/77 (61.0%)	28/33 (84.8%)	<0.001	<0.001	0.8	0.01

Odds Ratio of Likelihood of Initiation and Continued Use of CGM by Race and Insurance status

	NHW vs NHB		NHW vs Hispanic		NHB vs Hispanic	
All Insurance	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
CGM start (n=726)	2.7	2.0-3.6	2.4	1.63-3.6	0.9	0.6-1.4
CGM use at 1 year (n= 596)	4.1	2.4- 6.9	1.1	0.4- 3.0	0.3	0.1-0.8
	NHW vs NHB		**NHW vs Hispanic**		**NHB vs Hispanic**	
Commercial Insurance	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
CGM start (n=556)	2.3	1.5-3.5	1.9	1.0-3.5	0.8	0.4-1.7
CGM use at 1 year (n=448)	4.2	2.0- 9.0	1.1	0.2-5.2	0.3	0.05-1.4
	NHW vs NHB		**NHW vs Hispanic**		**NHB vs Hispanic**	
Government Insurance	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
CGM start (n=170)	2.0	1.3-3.1	1.9	1.1-3.3	0.9	0.5-1.7
CGM use at 1 year (n=148)	3.1	1.4- 7.1	0.9	0.2-3.4	0.3	0.1-1.1

SELECTED REFERENCES

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