

Improving Continuous Glucose Monitoring Use in Adolescents and Young Adults

Faisal S. Malik, MD, MSHS^{1,2}; Samantha G. Perez, BS²; Sarah Lowry, PhD²; Kathryn W. Weaver, MD³; Alissa J. Roberts, MD^{1,2}

¹Department of Pediatrics, University of Washington, Seattle, WA; ²Seattle Children's Research Institute, Seattle, WA; ³Department of Medicine, University of Washington, Seattle, WA

BACKGROUND

- A significant percentage of adolescents and young adults (AYA) with type 1 diabetes do not use continuous glucose monitor (CGM) systems to support diabetes management
- The Seattle Children's Hospital (SCH) and University of Washington (UW) AYA Diabetes Program is a partnership between SCH and UW Medicine to meet diabetes management, mental health, and health care transition needs of AYA with diabetes

OBJECTIVE

- To examine the impact of the SCH-UW AYA Diabetes Program on CGM use among AYA with type 1 diabetes and assess whether this varied by health insurance and race/ethnicity

METHODS

- Study included AYA with type 1 diabetes who received diabetes care within the AYA Diabetes Program for ≥6 months from 2018-2022
- Proportions and 95% confidence intervals were calculated using generalized linear models with a log link and robust variance estimator to cluster on individual to account for repeated measures.
- Assessed for effect modification by health insurance and race/ethnicity

RESULTS

- Sample included 526 AYA (77% non-Hispanic White, 27% public insurance)
- CGM use at baseline AYA Diabetes Program visit was 64% (95% CI: 60-69%) and increased over time (Figure 1)
 - CGM use increased to 82% approximately 12 months after program enrollment (95% CI: 76-87%)
 - CGM use increased to 88% approximately 24 months after program enrollment (95% CI: 82-94%)
- There was evidence of effect modification by health insurance type for CGM use ($p < 0.01$; Figure 2) but not by race/ethnicity
 - Baseline CGM use was significantly lower among public vs private insurance participants (50%, 95% CI: 41-59%; vs. 69%, 95% CI: 64-74%) but not after 6-months of program participation (77%, 95% CI: 65-89% vs. 80%, 95% CI: 74-86%)

The Seattle Children's Hospital & University of Washington Medicine Adolescent and Young Adult Diabetes Program proved successful in increasing CGM use and mitigating health insurance disparities in adolescents and young adults with type 1 diabetes.

AYA Diabetes Program Change Ideas

SMART Aim

Increase CGM use in adolescents and young adults with type 1 diabetes by 10% after 12 months of AYA Diabetes Program enrollment by July 2022

Key Drivers

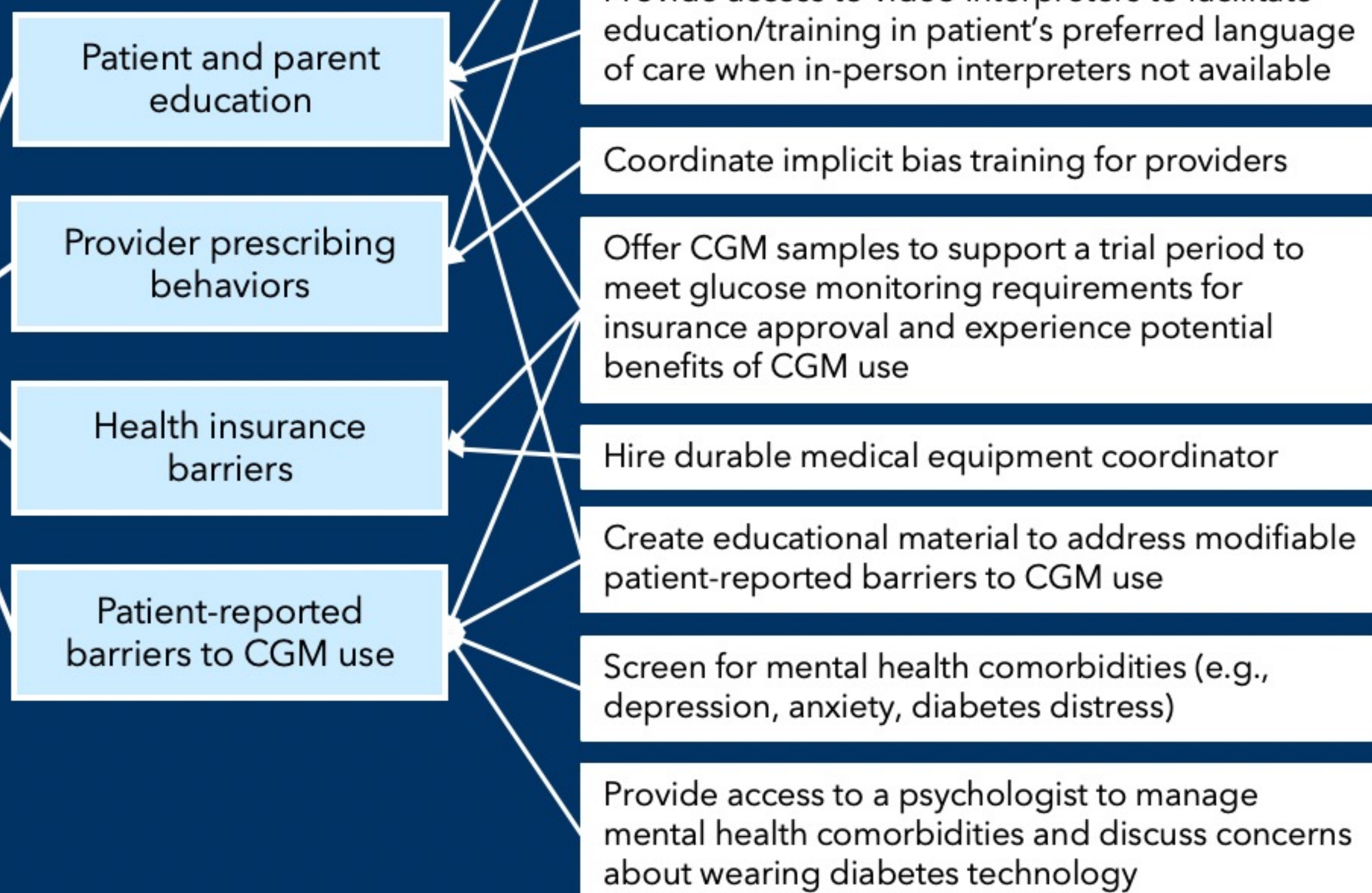


FIGURE 1: CGM Use Over Time

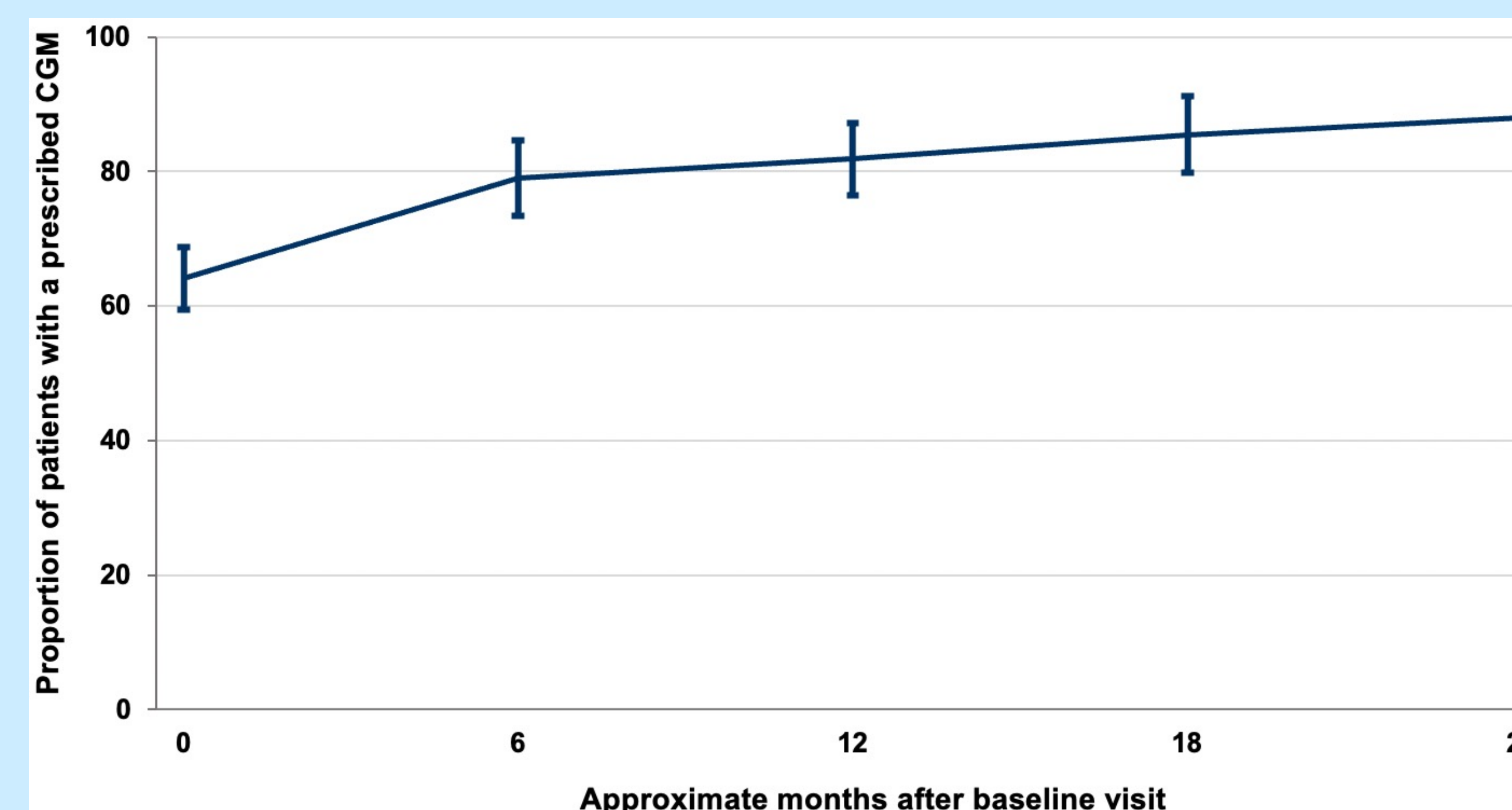


Figure 2: CGM Use Over Time by Health Insurance

