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ACCEDE
Access to CGMs for Equity in Diabetes Management

ACCESS TO CGMS FOR EQUITY IN DIABETES MANAGEMENT

The ACCEDE Usability Study Kenya



Illustrated by Miss Diabetes

THE ACCEDE USABILITY STUDY, KENYA

40 people took part

Kenyatta National Hospital Nairobi, Kenya

3 month CGM program

Why was this study done?

Continuous Glucose Monitors (CGMs) are sensors worn on the body that measure glucose (sugar) levels day and night without finger-pricking.



Very little research has been done on how CGMs work in public healthcare settings in East Africa.

Who participated?

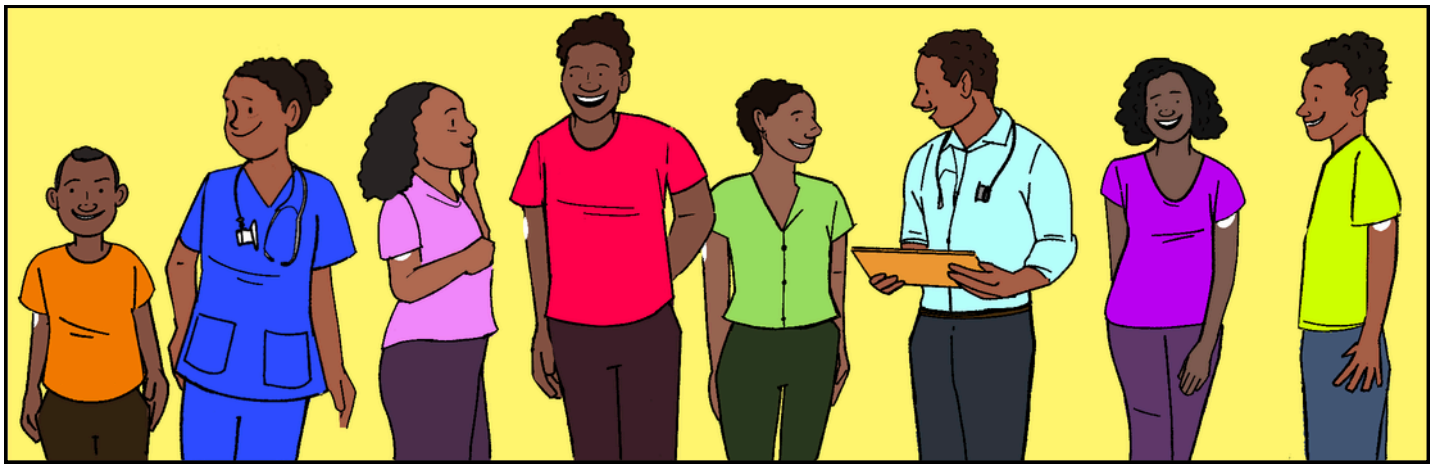


Average HbA1c 10.8%

The study included people aged 4-25 years living with type 1 diabetes who had been diagnosed for at least six months and attended the diabetes clinic at Kenyatta National Hospital in Nairobi. Parents or caregivers were included for participants younger than 18 years.

How was the study done?

40 participants took part.
Each used a CGM for three months between clinic visits and received diabetes education sessions.



What did the study involve?

Surveys were completed at the start (baseline) and at three months (endline), the CGM data was reviewed together, and focus group discussions and interviews captured participants' experiences.



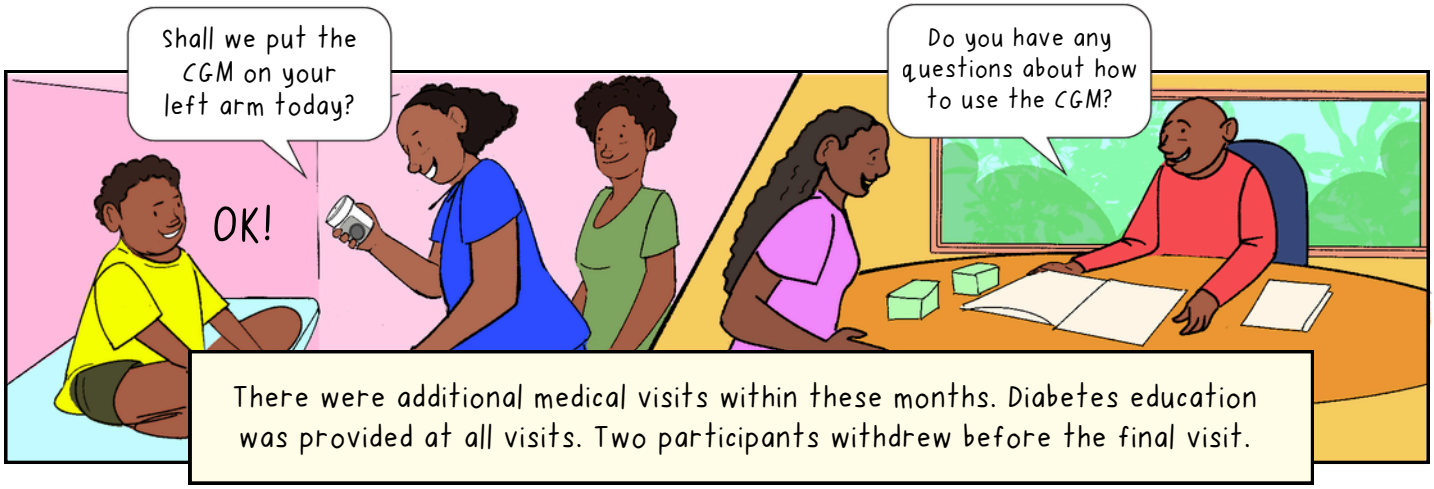
Each participant wore a CGM for three months between clinic visits



Everyone received diabetes education sessions and ongoing clinical support



Experiences captured via questionnaires, focus group discussions and interviews



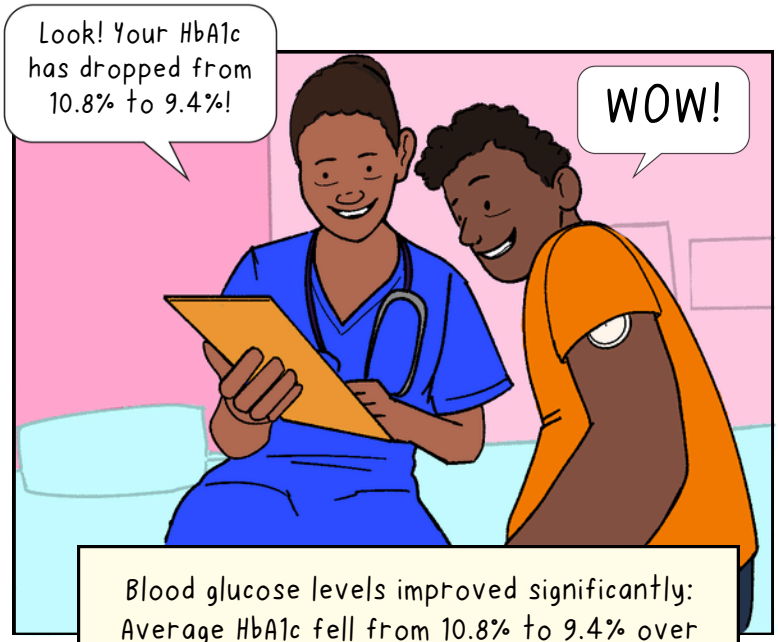
There were additional medical visits within these months. Diabetes education was provided at all visits. Two participants withdrew before the final visit.

What did the ACCEDE study find?

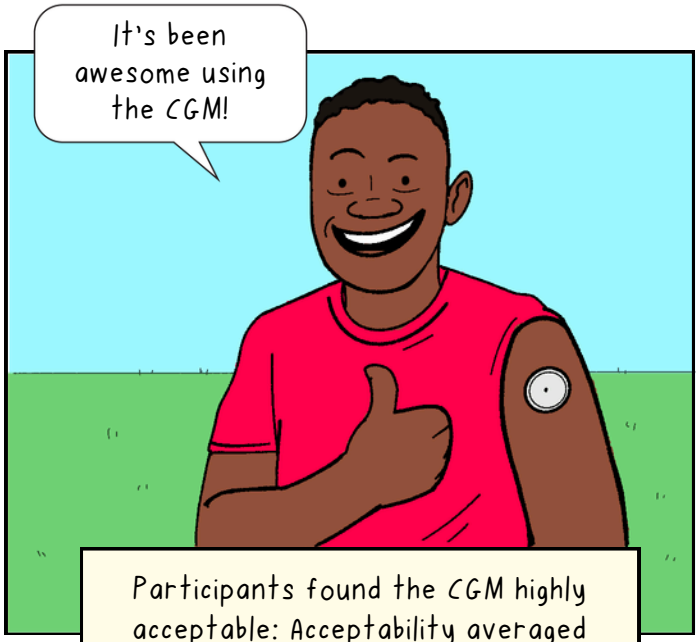
Usability was the study's primary outcome, measured with the System Usability Scale (SUS). Scores were very high, around 96 out of 100, and almost all participants rated the CGM "excellent."



SUS = System Usability Scale; higher scores indicate better usability. All participants = those completing the endline assessment; Fully complied = attended all visits with ⩾70% CGM wear time



Blood glucose levels improved significantly: Average HbA1c fell from 10.8% to 9.4% over three months - an adjusted reduction of about 1.4 percentage points ($p<0.001$), a change considered clinically meaningful.



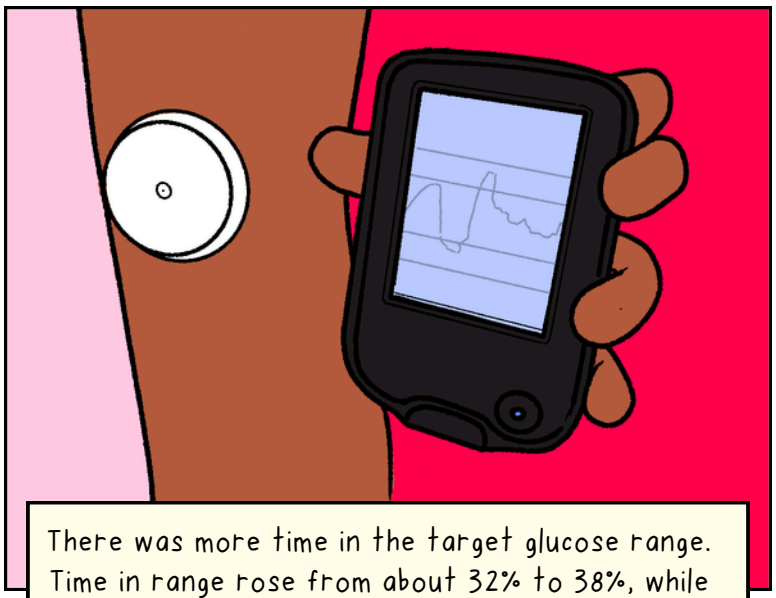
Participants found the CGM highly acceptable: Acceptability averaged 39.4 out of 40, and 97% rated the device "completely acceptable."



Most people wore the CGM consistently: Average active wear time was 81% (84% excluding withdrawals); 80% met the ⩾70% wear-time mark.



There was far less finger-pricking; by month 3, 87% of participants reported no fingerstick testing on a typical day.



There was more time in the target glucose range. Time in range rose from about 32% to 38%, while time above range fell from 63% to 57%.



There were 7 hospitalizations 3 months prior to the study. During the study there was only one hospitalization.

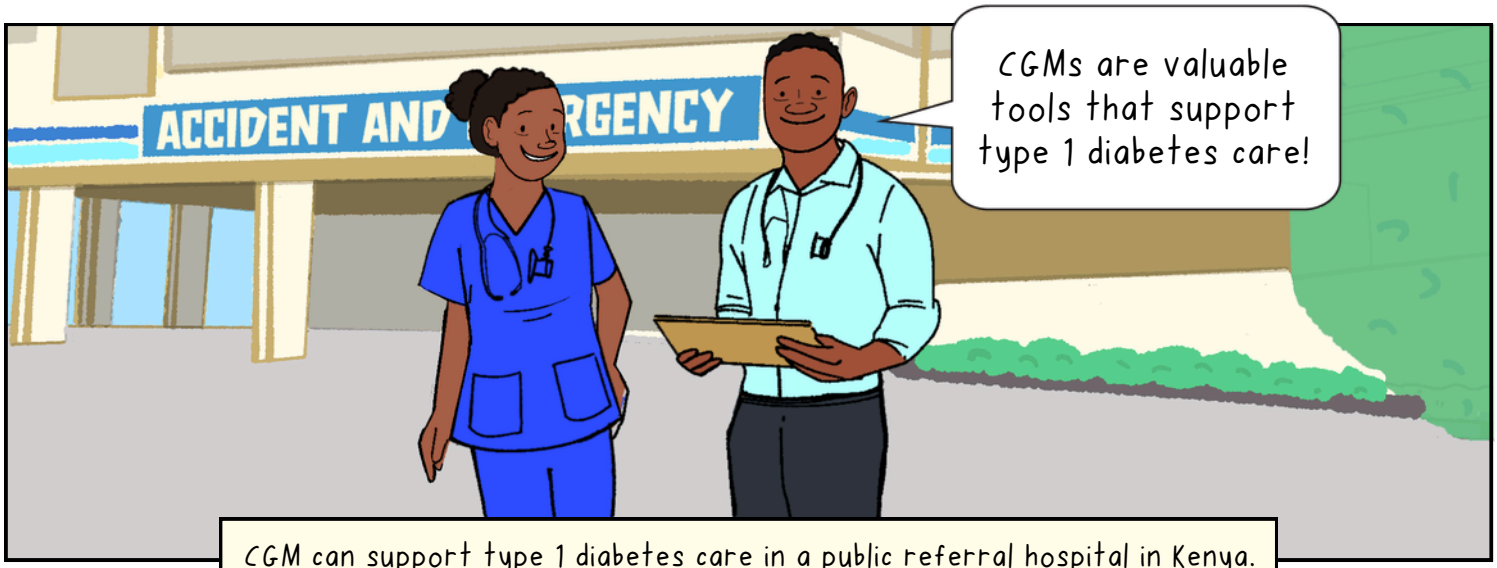


There was better wellbeing all round! Diabetes-related distress fell for both young people (aged 15+) and caregivers, while high satisfaction with glucose monitoring rose from 38% to 80%.

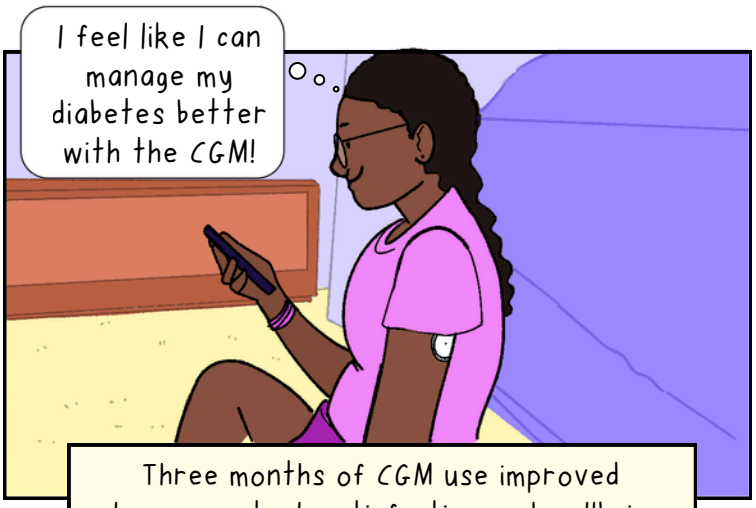


The CGM was found to be easy to use and well tolerated; 84% found the CGM very easy to apply and 92% had no skin reactions.

What does this mean?



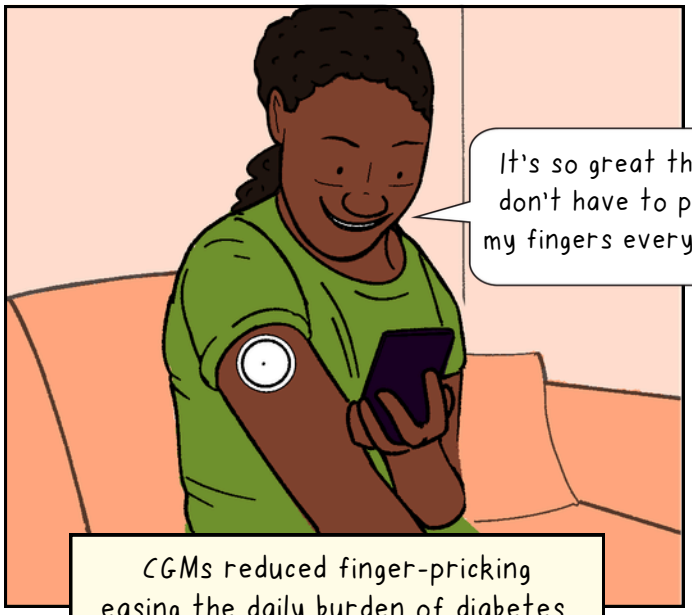
CGM can support type 1 diabetes care in a public referral hospital in Kenya.



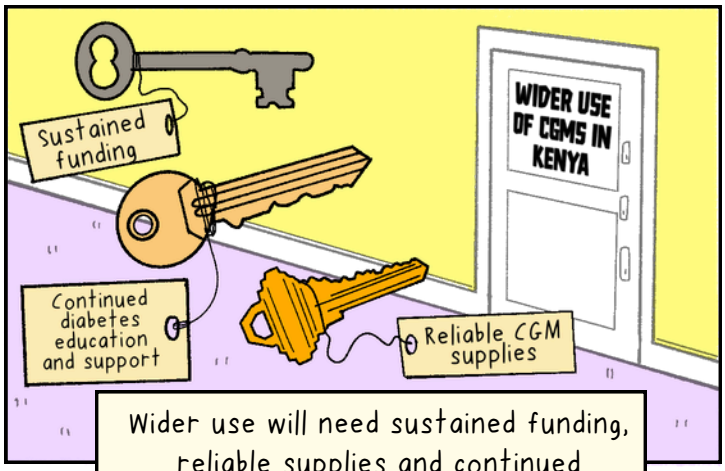
Three months of CGM use improved glucose control, satisfaction and wellbeing for children, adolescents and young adults.



CGMs are both feasible and acceptable in Kenya's public healthcare context.



CGMs reduced finger-pricking easing the daily burden of diabetes.



Wider use will need sustained funding, reliable supplies and continued diabetes education and support.



CGMs could reduce hospital admission for children, adolescents and young adults living with type 1 diabetes.

Illustrated by Miss Diabetes

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