INNOVATIONS IN PRIMARY CARE

Enhancing Patient-Centered Care Through Firsthand Experience With Continuous Glucose Monitoring in Rural Wyoming

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Ann Fam Med 2024;22:69. https://doi.org/10.1370/afm.3055

THE INNOVATION

At the University of Wyoming Family Medicine Residency (UWFMR), we recognized the pressing need to deepen our understanding of the daily challenges faced by patients with diabetes. To facilitate better learning and stronger patient relationships, we embarked on a unique initiative—to gain firsthand experience with continuous glucose monitoring (CGM) devices. This approach not only fostered empathy but also facilitated comprehensive training for our entire health care team, ultimately enhancing patient engagement.

WHO & WHERE

The innovation took place at UWFMR, involving all residents, nurses, and faculty members. Thirty-five members of our team decided to participate in this experience to enhance their knowledge of CGMs. Each participant wore the device for a duration of 10 days.

HOW

We obtained free CGM samples from a company, which allowed us to simulate the experience of wearing the devices. This involved calibration of the CGM devices and monitoring glucose levels using our own smartphone apps. To share and analyze data, we created a clinic portal account, mirroring the patient's experience. Participants were encouraged to log all types of food and drinks, similar to how we encourage our patients with diabetes to do so. Our clinical pharmacist played a pivotal role in presenting our intriguing CGM reports to demonstrate how to interpret the CGM results.

LEARNING

Our firsthand experience with CGM devices yielded valuable insights (**Supplemental Figure**). We discovered that applying the device was considerably less painful than traditional fingerstick methods, address-

Conflicts of interest: authors report none.

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Lavinia Salama University of Wyoming Family Medicine Residency Program at Cheyenne 821 East 18th Street Cheyenne, WY 82001 <u>Lsalama@uwyo.edu</u> ing a common concern shared by patients. Moreover, we identified the challenges associated with managing multiple software applications to access and share data, underscoring the importance of patient and clinician education in utilizing CGM technology effectively. Through experimenting with different foods and activities, we observed diverse individual responses to glucose levels.

One key learning was the substantial impact of CGM data on participants with prediabetes. This data, confirmed by an A_{1c} test, empowered them to take preventive measures based on personalized glucose trends. Our CGM experience cultivated a deeper appreciation for our patients' daily struggles. With this newfound understanding, we are now better prepared to educate our patients about CGMs and their benefits.

We advocate for increased utilization and insurance coverage of CGM devices, even for patients who are not on insulin, as they provide invaluable knowledge and empowerment. Preventive measures, guided by personalized lifestyle modifications, can be more impactful than relying solely on medications.

In rural Wyoming, where access to certified diabetes specialists and endocrinologists is limited, this initiative has been transformative. Primary care settings are the forefront of diabetes management in rural areas. Before this experience, we were not as confident in prescribing CGMs to patients. After gaining insights from wearing them, however, we now equip all eligible and interested patients with CGMs to empower them with the knowledge to self-manage their disease states.

We strongly encourage health care professionals, particularly those in resource-limited rural areas, to consider adopting similar initiatives to bridge the gap in access to technological resources and training. Understanding the benefits and challenges of CGM devices can significantly enhance the quality of care provided to patients with diabetes in various primary care settings.

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Key words: continuous glucose monitors (CGMs); diabetes; rural health education; resident training; empathy; patient-centered care

Submitted April 13, 2023; submitted, revised, September 5, 2023; accepted September 19, 2023.

Supplemental materials, including figure, acknowledgments, author contributions

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ANNALS OF FAMILY MEDICINE + WWW.ANNFAMMED.ORG + VOL. 22, NO. 1 + JANUARY/FEBRUARY 2024