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Evaluation of the Effectiveness of Implementing Shared Decision-Making in the Department of Metabolism

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Objective

In the early stages of diabetes diagnosis or during periods of unstable blood glucose levels, it is crucial to perform more frequent monitoring using a blood glucose meter to understand glucose fluctuations, or to consider continuous glucose monitoring (CGM) for more comprehensive data collection. The care team observed that patients at this stage often feel uncertain about which self-monitoring method is most appropriate for their condition. In response to this need, the team developed a decision aid titled “I am a person with diabetes and my blood glucose is currently unstable—Which self-monitoring method should I choose?” and evaluated its effectiveness in clinical practice.

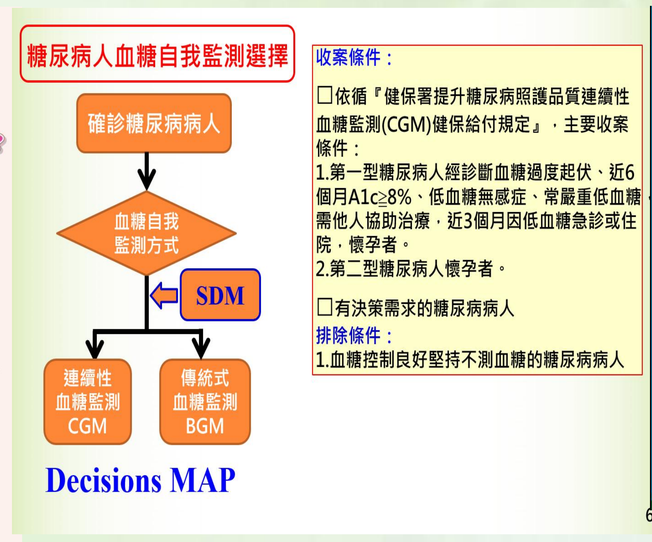
Methods

Establish a team consensus on project operations, including the purpose and significance of the initiative, definition of the topic’s applicable scope, and clinical planning for shared decision-making (SDM). Develop an implementation process outlining the target population, number of participants, execution methods, and tool utilization. Design a review mechanism and application process for the patient decision aids (PDAs), specifying their applicable stages and implementation settings. Incorporate human factors principles into the PDA design to enhance usability and differentiate the approach from conventional practices, serving as a model for peer learning and sharing. Conduct evaluations and continuous improvement of SDM implementation, and assess the clinical effectiveness and user benefits for both healthcare professionals and patients, followed by refinement plans based on implementation outcomes.

Decision Aids

Decision Aids

Decision Map



Comparison Table

Results

This study utilized the SDM Implementation Survey Questionnaire developed by the Joint Commission of Taiwan to evaluate the appropriateness of healthcare team participation. In October 2025, 14 valid responses were collected—8 (57.1%) healthcare professionals, 4 (28.6%) nurses, and 2 (14.3%) medical personnel—all from the Department of Metabolism. The mean score on a 5-point Likert scale was 4.4. A total of 35 outpatients and family members participated in the shared decision-making (SDM) process using the tool “I am a diabetes patient, and my blood glucose is currently unstable—Which self-monitoring method should I choose?” The decision aid received a mean impact score of 4.1. Mean HbA1c decreased from 8.5% to 8.3% after implementation ($\Delta = -0.2\%$), showing statistical significance (paired t-test, $P = 0.037$).Sixteen team members (physicians, educators, dietitians) obtained CGM certification. Since 2019, 92 patients have received CGM support, and the utilization rate among type 1 diabetes patients increased from 23.5% in 2024 to 28.4% in 2025 (+4.9%). Since January 2025, diabetes educators have provided free glucose meters and test strips to patients with suboptimal glycemic control (n=152), resulting in an 80% regular follow-up rate.

Conclusion

Patients and their families reported positive experiences and perceptions regarding the healthcare team’s application of shared decision-making (SDM) in medical decision-making, which also helped reduce patient anxiety. Healthcare professionals indicated that providing patient decision aids (PDAs) had a positive impact on the implementation of SDM. Comparisons of HbA1c levels before and after participation showed a decrease in the mean value, accompanied by an increased installation rate of continuous glucose monitoring (CGM) devices and a higher regular follow-up rate among patients using traditional glucose monitoring. The key strengths of this initiative included high accessibility, strong feasibility, and broad availability.

Keywords:Department of Metabolism, Shared Decision-Making, Effectiveness Evaluation