Background

- Native Americans have the highest prevalence rate of diabetes.  
- Impact on overall function and healthcare resources.  
- Evidence supports continuous glucose monitoring (CGM).  
- Registered Nurses (RN) desire to use CGM but barriers exist  
- Training opportunities enhance RNs ability to work to full scope of education and licensure.

Purpose & Aims

- Purpose: To implement an evidence-based toolkit (TK) for CGM use among Native American adults with Type 2 Diabetes Mellitus (T2DM).
- Aim: To increase RN knowledge and competency for CGM use, in order to establish a CGM systematic implementation protocol for nursing practice.

Methods

- Design: Pre-post test intervention.
- Setting: Native American primary care clinic
- Sample: RNs and diabetes educator providing T2DM care.
- Intervention: TK with CGM best-practices and intervention schedule categorized into six phases.
- Measures: Technology Acceptance Model Likert questionnaire.

Intervention

Table 1: Participant Demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>Non-Native American</td>
<td>1</td>
<td>33.3</td>
</tr>
</tbody>
</table>

Table 2: Results of RN Knowledge Scale (N=3)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-test Mean (SD)</th>
<th>Post-test Mean (SD)</th>
<th>Mean difference</th>
<th>p-value</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence and competence</td>
<td>23 (9.54)</td>
<td>37.67 (1.53)</td>
<td>14.67</td>
<td>.11</td>
<td>2.2</td>
</tr>
<tr>
<td>Improving clinical practice</td>
<td>35.33 (4.16)</td>
<td>37.33 (4.62)</td>
<td>2</td>
<td>.66</td>
<td>.5</td>
</tr>
<tr>
<td>Preparation (intensity and training)</td>
<td>20.67 (1.53)</td>
<td>19.0 (0)</td>
<td>-1.67</td>
<td>.18</td>
<td>.5</td>
</tr>
<tr>
<td>Ease of use</td>
<td>14.33 (2.52)</td>
<td>17.67 (2.08)</td>
<td>3.34</td>
<td>.29</td>
<td>1.5</td>
</tr>
<tr>
<td>Subjective norms</td>
<td>10.33 (1.53)</td>
<td>10.33 (1.53)</td>
<td>0</td>
<td>1.0</td>
<td>0</td>
</tr>
</tbody>
</table>

Discussion

- Cohen’s d: medium to very large effect size 4 out of 5 sub-scales.
- Highest score and largest effect in confidence and competence.
- Improved average of 14.67 points and effect size of 2.2.
- Ease of use and clinical practice.
- Preparation decreased average -1.67 points and effect size of 0.5.
- Subjective-norms sub-scale: no change.
- Findings consistent with similar studies.
- Additional findings:
  - Working through overall process, stakeholder support, forming a team, establishing inventory.
  - Challenges various insurance programs and billing process.

Strengths

- RE-AIM framework relevant in knowledge translation.
- Strong administrative support.
- Highly motivated and engaged team.
- Model of practice for small/remote Native American clinics.

Limitations

- Lack of published literature on Native Americans.
- Limited access to local clinical data.
- Small sample size of participants.
- COVID-19 pandemic hindered staff perception.
- Timing of post-survey could have resulted in limited qualitative responses or true reflection of experiences.

Conclusion

- CGM is an effective approach to improving T2DM outcomes.
- Integrating CGM into nursing practice could help reduce the number of people with uncontrolled T2DM.
- Significant outcomes support a standard evidence-based CGM TK as practical method for training and implementing.
- Next steps: Funding and administrative processes.

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- Organizational Mentor: Rhonda Beaver, Muscogee (Creek) Nation.
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