The Benefits of Remote Monitoring of Real Time Blood Glucose Data Using iGlucose System in Managing Patients with Diabetes

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Introduction
The purpose of this pilot study was to evaluate the diabetes management benefits of the iGlucose® Cellular Diabetes Care Solution by Smart Meter. The impact in improving health outcomes, quality of care and office workflow was measured for patients and healthcare teams gaining remote access of real-time blood glucose (BG) data.

Method
The pilot study was with participants selected from 3 different practice settings in the Washington DC Metropolitan area. Sixty (60) participants were selected based on the recommendation of their healthcare provider and participant’s willingness to try a new cellular system with interactive features for ninety (90) days. Each participant provided baseline information such as recent BG results and HbA1c. Each participant and healthcare provider completed a pre and post study survey. Participants’ BG data was monitored remotely for ninety (90) days using iGlucose’s Population Management secure web portal.

Data Collected
BG readings were reviewed daily and the following information was recorded as part of each participant’s care program:
- Testing frequencies
- BG readings above recommendations
- BG readings below recommendations
- Changes in average blood glucose readings over a 90 day period
The surveys were focused on evaluating the following:
- Ease of use of the iGlucose System
- Modifications in participant health behavior
- Quality of office visit interactions with care team
- Impact to office workflow

Results
After 3 months, improvements were observed in the categories shown below

<table>
<thead>
<tr>
<th>Participants (n=60)</th>
<th>Diagnosis</th>
<th>HbA1c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-64yrs</td>
<td>41</td>
<td>14</td>
</tr>
<tr>
<td>≥ 65yrs</td>
<td>19</td>
<td>27</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>18</td>
<td>5-7</td>
</tr>
<tr>
<td>Female</td>
<td>42</td>
<td>7</td>
</tr>
</tbody>
</table>

Testing frequency improved by 44%

Conclusion
The iGlucose System showed significant benefits to participants and the healthcare teams over existing system for BG collection, analysis and personalized care planning.
Participants were more engaged and confident they could manage their diabetes. iGlucose’s ease of use combined with its seamless transmission of data was instrumental in meaningful dialogue between participants and their healthcare teams. The healthcare teams’ access to complete and reliable data through a seamless process improved quality of care provided.

The iGlucose Solution demonstrated significant added value and patient/clinician benefits to justify incorporating remote monitoring in the care of patients with diabetes.

Acknowledgement
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Smart Meter Announces AADE 2018 Poster Presentation on How iGlucose® System Impacts Remote Monitoring of Patients with Diabetes

Study Shows Improvements in Frequency of Testing, Quality of Office Visits and Personalized Care Planning Using the iGlucose® Cellular Diabetes Care Solution

**Patient Benefits**
- 89% of participants reported testing was less of a hassle with iGlucose.
- Frequency of participant testing compliance improved 44%.
- Overall participants reported to be more engaged and confident they could manage their diabetes.
- 67% reported they felt less isolated and alone using the iGlucose program.
- 92% of participants said they had more valuable in-office clinician visits when reviewing the iGlucose data.

**At Risk Patients Identified**
- 100% of participants were sharing results for first time

**Overall Patient Population Assessment**
- 70% of patients were identified as trending out of range or not testing as prescribed.
- Therapeutic intervention or additional patient education was provided prior to next scheduled visit.

**Patients Requiring Intervention**
- 26% of patients were identified at risk and received immediate intervention due to harmful below range trends.
- 65% of patients trended consistently above range and received additional education and follow up calls.

**Clinician Benefits**
- iGlucose System showed significant benefits to participants and the healthcare teams over existing systems for BG collection, analysis and personalized care planning.
- 100% Clinicians felt seamless remote monitoring solution helpful with treatment decisions between visits.
- 60% Clinicians reported iGlucose system improved office productivity.