Educators: Go Mobile & Join the Digital Revolution!
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Introduction
Healthcare is being rapidly transformed and requires a business savvy, visionary, and adaptable educator to work in vastly different practice environments. As traditional reimbursement models disappear, diabetes educators must develop new strategies for helping patients and populations efficiently reach and maintain therapeutic targets, support self management behaviors, and improve outcomes in chronic care. This will involve leveraging technology tools to extend the capacity and capability of the health care team to provide ongoing, cost-effective self-management, as well as clinical treatment optimization.

Over 40,000 mobile health applications have been introduced in the past 5 years. Of those health related apps, over 1000 diabetes focused apps offer medical management, tracking and display of health information, education, friend reference databases, social forums, or clinician directed apps. While offering great potential to improve diabetes care and self-management, many challenges remain including the need for proving the effectiveness of these apps, integrating their use into healthcare practice, and providing consumers with systematic and reliable information about the safety and efficacy of mobile health applications (1). When apps are involved in the diagnosis, treatment, mitigation of disease they are regulated as mobile medical apps by the Food and Drug Administration (FDA) (2)

Mobile Prescription Therapy (MPT) is a new class of therapy that leverages digital technology, clinical and behavioral science, and validated evidence to provide patient-centered guidance for daily self-management and data for healthcare provider decision-making (3).

BlueStar®, first-in-class MPT, is an FDA-cleared Class II medical device indicated for healthcare providers and their adult type 2 diabetes patients to improve self-management and medication adherence (4)

BlueStar leverages mobile technology using proprietary clinical/behavioral algorithms to provide contextual, personalized, and tailored coaching based on ADA and AACE medical and educational guidelines and has demonstrated significant A1C reductions in clinical trials (5,6). BlueStar aligns with the National DSME/S Standard #4: “Ongoing Support”. BlueStar is secure, HIPAA compliant, and compatible with most Android™ Smartphones, iPhones, iPad tablets, and all computers.

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Methods
MPT, as a new category of therapy was introduced in the form of BlueStar to 550 primary care and endocrinology providers in the Mid-Atlantic region using a traditional face-to-face physician detailing model. BlueStar was prescribed by a physician, nurse practitioner or physician assistant, activated with a pharmacy dispensed code, and adjudicated as a pharmacy benefit.

Diabetes Educators coached the patients on:
• Downloading the BlueStar app from the app store and registering the patients on their device(s)
• Personalizing BlueStar based on patient’s current clinical profile, medications and diabetes care plan
• Developing a plan for integrating BlueStar into their daily self-management
• Determining when and how often patient sends a report to their health care team
• Ensuring patient updates their treatment plan and clinical profile after each healthcare visit

Results

• Of the targeted providers, 400 providers (75%) prescribed BlueStar for over 4000 type 2 diabetes patients.
• Prescribing providers included:
  • Endocrinologists - 18%
  • Primary care providers - 75%
  • NP/ PA - 7%

• Additional clinicians who interacted with BlueStar included diabetes educators, case managers, care coordinators, pharmacists and other clinical support personnel.

• BlueStar provided analysis between visit patient self-management and metabolic data that was sent to the health care team when requested to support timely treatment decisions and care plan modifications (SMART Visit Report™).

Patients:

<table>
<thead>
<tr>
<th>Patients</th>
<th>Age Distribution</th>
<th>User Demographics</th>
<th>BlueStar Usage</th>
<th>BlueStar User Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Age</td>
<td>54 years old</td>
<td>Gender: 44% Female, 56% Male</td>
<td>Total # Entries</td>
<td>Important to use</td>
</tr>
<tr>
<td>BGs</td>
<td>11,149</td>
<td>Medications: Glucose Only - 34%</td>
<td>Non-Inulin Insulin - 26%</td>
<td>Basal Insulin - 14%</td>
</tr>
<tr>
<td>Meds</td>
<td>28,977</td>
<td>User notes</td>
<td>3,710</td>
<td>Improved self management</td>
</tr>
<tr>
<td>Labs</td>
<td>1,521</td>
<td>Average Engagement</td>
<td>2.3 entries per day</td>
<td>Simple to use</td>
</tr>
</tbody>
</table>

Practice:

• Clinical Workflow: Endocrinology practices readily utilized the clinical decision support (SMART Visit Report™) in the context of the patient visit, and in some instances between visits, to inform the diabetes care plan. Primary care practices needed implementation support to optimize the integration and utilization of the clinical decision support.

Quote from CDE using BlueStar:
“I believe Mobile Prescription Therapy is a huge player in the changing world of healthcare. Just today, I had a patient who followed up with me and has been using the MPT program for the past month. He proudly showed me his BG trend graph and pointed out the one high BG that he related to “the day he forgot his dinner”. As a result, he problem-solved by making certain to take his med with him to work when his schedule involves eating dinner at his job. Perfect!”

Conclusions

• PMT enables cross-team communication, care management (care collaboration).
• PMT enhances patient-provider communication (shared decision making).
• PMT supports efficient interactions between patient and educator (virtual or face-to-face).
• PMT provides self-management support between face to face visits/classes and provider visits (DSME/S Ongoing Support Standard 8).
• PMT generated data provides the educator with the clinical decision support to negotiate and implement needed treatment changes with the healthcare team (address clinical inertia).
• PMT can be integrated into health system initiatives such as Meaningful Use, PCMHs, and ACOs to address care access, care quality and outcomes. (population health & value-based models of care).

References
2) http://www.regulatoryaffairstoday.com/RegulatoryAffairs/RegulatoryMedicalProceduresConnectedWithMobileMedicalApplications/2012/07/Analyzed-July-2012-
4) http://www.diabetes.org/living-with-diabetes/treatment-and-care/management/other-treatments/1

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