



Using Patient Generated Health Data To Improve Patient Care Part B -- Laying the Ground Work

This is the third article in a series that is looking at using patient generated health data (PGHD) to improve patient value across a wide range of care. The first article introduced how PGHD can play an important role in helping care teams gather patient data between office visits and use this information to identify issues that if known sooner could have averted an ER visit or readmission. The second article looked at the first half of the guiding principles required for helping care teams proactively identify patients in need. (See VoiceOfThePatient.us/Vision/ for both articles). This article continues this discussion by covering additional principles needed to truly leverage PGHD to enhance patient care.

Principles for Increasing Patient Value using PGHD	Clinical Usefulness	Patient Experience	Outcomes & Cost
The data collection process is easy for patients		√	
The data gathered is specific to the conditions being monitored	√		
One system can be used for all conditions	√	√	
The system tracks changes in a patient's condition	√	√	
The system enhances patient and provider communications	√	√	
Management of patient activities improves through the use of reminders	√	√	
Care teams are alerted when a significant change occurs	√	√	
Care teams can see current snapshots of a patient's condition	√	√	
The system increases a care team's efficiency and ability to intervene at the right time			√

These principles drive three general categories related to 1) Clinical Usefulness: making it easier for clinicians to manage patient care, 2) Patient Experience: improving a patient's experience for the care they receive and 3) Outcomes and Cost: reducing the overall cost of care through improved outcomes.

The system enhances patient and provider communication

Many of the EMR systems currently in use by health systems allow for sending email messages

between patients and their care team. The PGHD system will go beyond this by enabling a robust communication system that is customized for each patient. Patients send information about their daily condition using a mobile app designed for their specific medical condition, e.g., how are they feeling, what are their symptoms, what is their pain level. This data is sent to a system the care team has access to which summarizes the patient's condition and identifies when a patient's trajectory is heading the wrong way. The nurse or assistants can then reach out to patients proactively to determine what actions are needed to improve their condition.

Care teams are alerted when a significant change occurs

The PGHD system will enhance the care team's efficiency by helping them identify patients that need attention now. Data sent by patients is summarized for the care team and alerts are generated when a patient's condition requires intervention. Nurses and their assistants can receive alert notifications by their preferred workflow methods, e.g., daily reports, high priority notification lists, text or pager messages. Once an alert is received the care team member can check the EMR system (if integrated) or log into the PGHD system to view the details related to the patient's changing condition. The care team can then reach out to a patient real time via phone, text or email if immediate attention is required.

The alert system will also allow for customization so the care teams can adjust when and how alerts are generated. Care teams can provide updates to the care plans, revise medications, send specific instructions and view secure photos via the mobile app.

Management of patient activities improves through the use of reminders

"In a recent poll of U.S. individuals 65 years old and older who use medications, researchers found that 51% take at least five different prescription drugs regularly, and one in four take between 10 and 19 pills each day. 57% of those polled admit that they forget to take their medications. Among those using five or more medications, 63% say they forget doses, compared to 51% among those who take fewer medicines."¹

Helping patients remember to take their medications is key for improving outcomes. Prior to PGHD systems, assuring medications are taken regularly, especially in elderly patients, was difficult without assistance from a caregiver. With PGHD systems, daily reminders can be setup on the mobile app that prompts the user on a periodic basis to take their medications and logs whether or not that was done today. These logs can then be viewed by family members and care teams to determine when medications are being missed.

Care teams can see current snapshots of a patient's condition

The PGHD data will be summarized in a way that enables the clinician to track a patient's overall condition at a glance, understand any changes in their trajectory, review medication compliance, symptom logs, changes in vital signs and other information. This complete picture of what has happened since the patient's last visit is extremely helpful when a doctor is determining if care plan changes are needed.

Up Next -- *Reducing Costs and Improving Outcomes*

Article 4 in the PGDH Series will look at how early identification allows care teams to determine the interventions needed to help reverse the patient's negative trajectory, reduce the frequency of trips to the ER, reduce readmissions and improve the overall patient experience..

¹ Med Ad News February 2010