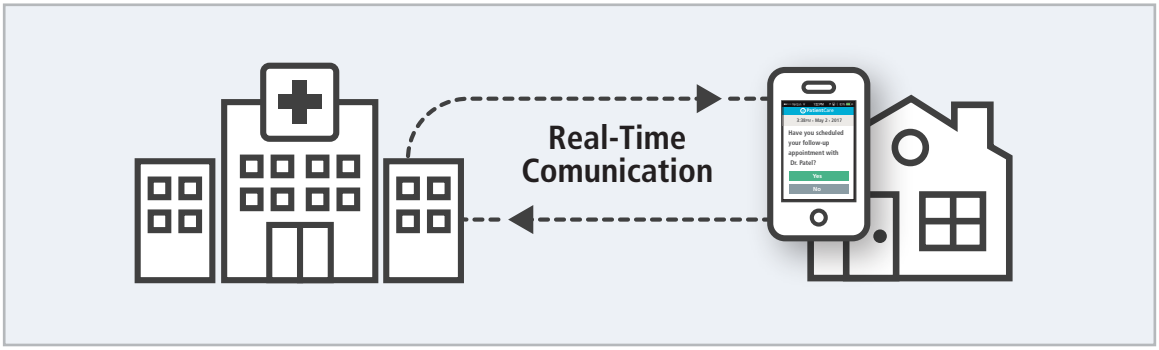
How Hospitals Can Help Discharged Patients Recover At Home

Reducing excess unplanned hospital readmissions to ensure better clinical outcomes



Palo Alto Research Center (PARC) and Midas+ are developing a post-discharge service that promotes adherence to often misunderstood or unheeded discharge instructions.

With a goal of reducing the number of 30-day readmissions, the smartphone-based service will give hospitals insight into the post-discharge recovery of their patients. This complement to regular doctor-patient communication will rapidly identify situations that could lead to unplanned readmissions.

Patients are asked via smartphone about key health factors, such as lack of appetite or physical activity and also sent reminders, to not miss follow-up visits to their doctor for example. How patients respond is tracked and analyzed over time, allowing caregivers to identify changes in health and, if necessary, contact patients directly for follow-up.

Hospital Responsibilities and Tasks as Part of Participation

Enroll

- Identify patients nearing discharge following Acute MI, CHF, PN, COPD, CABG or Total Joint Replacement.
- Approach and explain pilot to patients, distribute informational brochures and invite patients to participate in the pilot.
- Screen for patients or family members who have phones capable of running iPhone iOS or Android apps.
- There are no restrictions by payer type or age; patients must be 18 or older.
- Patients will need to give written consent prior to acceptance in the pilot. Consent documents will be written jointly with hospitals in order to include any requirements they may have.
- Load application onto patient's smartphones prior to discharge and walk patients through a few simple test questions (15mins).
- PARC/Midas+ will provide written instructions to facilitate the process. We ask to be on-site to work with hospitals and answer any questions.

Monitor

- Select notifications to send patients from a list of predetermined sets; creation, selection and delivery timing of questions will be done jointly with hospitals to ensure aligment with hospital case management workflow.
- At discharge, begin delivery of notifications; all information passed to and from a patient's smartphone is anonymized for security and privacy.
- Notifications will never dispense medical advice; although in some cases patients will be asked for specific details about their progress. For example, patients with CHF will be asked to enter in their weight.
- Analyze patient responses and track patient recovery trends.
- If system indicates atypical or concerning status, the case manager is notified so appropriate intervention (as determined by hospital) can be made; PARC/Midas+ will not provide recommendations to the care provider other than to report alerted events.

Follow-up

- Responses have a built in scoring system; responses that signal that a patient is trending in a negative direction will appear on a Midas+ "Worklist." The hospital can decide who receives worklist alerts using the existing Roles-based security infrastructure in Midas+. For example, patients that gain more than 3 lbs in a single day or more than 5 lbs in a week would trigger an alert back to the Worklist so that the care coordinator can either contact the patient directly, or notify the doctor's office.
- Responses more urgent in nature, such as a patient not taking their medications following discharge or patients reporting new onset or increased shortness of breath, could be escalated to a care manager's device, or however the hospital elects to manage urgent alerts (this will depend on current hospital case management model, workflow and resources). We will work with each pilot site to explore the best way to manage these types of patient-reported outcomes. Our preliminary research of the literature reveals that the frequency of these types of responses occur in less than 10% of patients who are being monitored post-discharge.
- Messages will then be sent back into a service bus and re-identified behind your firewall (and in Midas+). The responses to questions will be stored in a distributed Focus study, where the care managers can review responses.

Outcome

- Care coordinators will document each alert event and their follow-up activities through the Midas+ focus study –where alert responses are stored.
- Track which of the study patients, if any, are re-admitted to the hospital within thirty day study period.
- PARC/Midas+ will evaluate the success of the pilot following the testing of 100 patients. The evaluation will include a close inspection of 30-day readmission rates for patients in the study, including their utilization patterns of ED (treat and release), observation stays and inpatient days associated with any 30-day inpatient readmissions.
- We anticipate this pilot study to help in the screening and monitoring of higher risk patients in addition to highlighting the most impactful post-discharge interventions. Interviews with care management staff will help us to test this hypothesis.
- A derivative goal is the publication of study findings in peer-reviewed literature; PARC/Midas+ invite hospitals to be part of any publication process, contributing to any articles –with acknowledgement– and participating in their review before publication.