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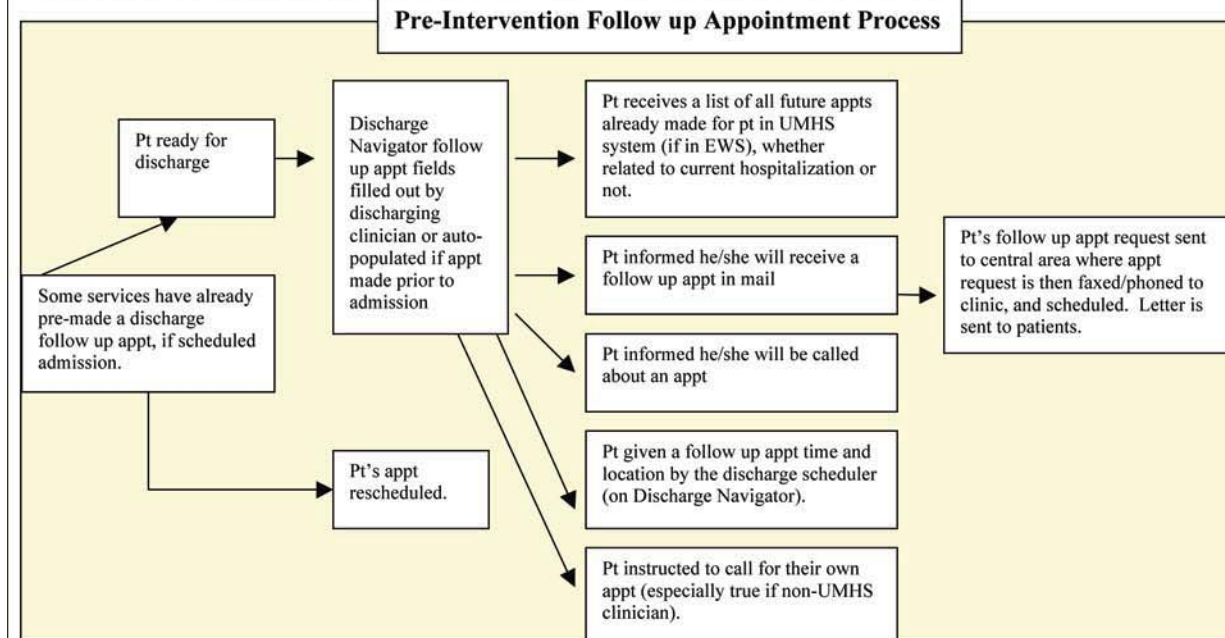
Improving Patient Flow by Reducing Hospital Readmissions through Patient Involvement

Name of Project or Theme: LEAN Discharge Follow up Appointment Process

Where Are We in the Project Cycle? Full rollout to MFH Service - October 2007

Brief History

Each year, the University of Michigan Health System (UMHS) treats more than one million outpatients, provides at least 36,000 hospital visits, conducts hundreds of scientific research projects and educates the next generation of medical professionals. UMHS has experienced high occupancy for the past 12 months with an average occupancy of 93%. In an effort to improve patient flow and increase capacity a lean project was commissioned to study the inpatient discharge process on a pilot unit. The time after discharge is considered high risk for patient care, often marked in our patients by re-admissions and/or repeat ER visits. The follow-up appointment from discharge is hypothesized to be the cornerstone of continuity of care to prevent re-admits/ER visits. In 2006, prior to an intervention, 48,954 discharge follow-up appointments were scheduled primarily after the patient was discharged. Approximately 60% of patients arrived to their appointment, 15% were no-shows and 25% cancelled. A 1st intervention on the Medical Faculty Hospitalist Service (MFH) was piloted, scheduling appointments prior to discharge. Due to process issues, this change did not significantly affect the rate of no-shows and cancellations. A separate ER pilot had been implemented to improve follow-up appointments from ER discharges. For the 2nd intervention, this process was adapted to include the patient in scheduling discharge appointments and online appointment request tool was developed and piloted.



Future State Goals: Ensure that patients have a communicated follow up appointment(s) at the time of the discharge from the hospital, to promote a smooth transition of care to the outpatient setting. A specific goal for the discharging physician is to focus on determining which follow up appointments are important as related to this hospitalization. An anticipated outcome was that emergency room visits and/or readmissions would decrease.

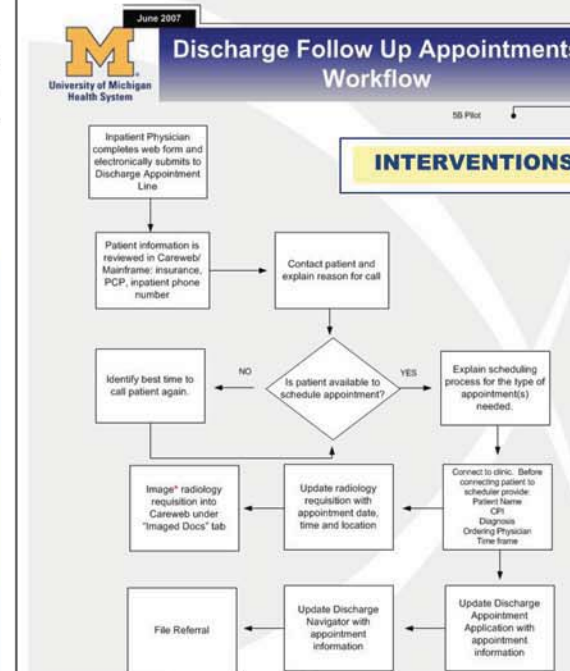
- Appointment made prior to patient leaving, at least 24 hrs prior to discharge
- Appointment made with patient/family involvement
- U of M Attending Physician is notified that appointment is made
- Nursing includes follow up appointment information during discharge instructions

Who Is Involved? (Major stakeholders and players)

Lean Process Owners: Robert Chang, MD and Donna McClish, RN **Lean Coaches:** Kate Bombach and Christopher Kim, MD, **Public Relations and Marketing Communications:** Josie Aguirre and Laura Rowland **Outpatient clinics staff, Patients and Families**

Countermeasure Implemented to Date:

- A web site was developed to allow physicians to place requests for discharge follow-up appointments for patients on the 5B inpatient unit. (See attachment 1)
- The workflow process for discharge follow-up appointments was standardized. (See attachment 2)
 - U-M physician completes Web form to request a discharge follow-up appointment with either the patient's PCP or a specialist.
 - A discharge appointment coordinator receives the request in a work queue. The coordinator contacts the patient directly, while still in the hospital, and reviews the discharge instructions for a recommended follow-up appointment. (See attachment 3)
 - The discharge appointment coordinator connects the patient to either the PCP's office or specialty clinic by telephone to schedule a follow-up appointment within the suggested time frame.
- The process allowed the nurse to review the online discharge appointments in Discharge Navigator.
 - As part of the discharge process, the unit nurse reviews any necessary patient education information and future scheduled appointments.
- An easy online process for tracking the appointment outcome was developed for the U-M physician
 - The discharge appointment coordinator documents the appointment outcome in the Discharge Follow-Up Appointment Web application, for the U-M physician to track.



Discharge Follow Up Appointment Request

From: Submitter's name: Robert Chang M.D. Page number: 13095

UMHS Registration Number: []

Name: First [] Last [] Anticipated Discharge: Today Tomorrow Other

Referral to PCP: Schedule Appointment with PCP

Diagnosis & Follow Up Issues for PCP: [] In 1 week Next Available Within 2 weeks Other

Specialty Clinic Referral #1: Referral to Department: [] Physician Name: []

Diagnosis & Reason for Consult #1: [] In 1 week Next Available Within 2 weeks Other

Specialty Clinic Referral #2: Referral to Department: [] Physician Name: []

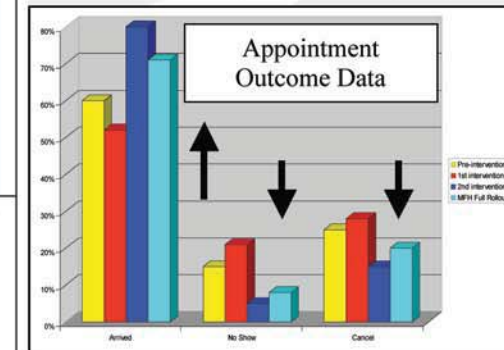
Diagnosis & Reason for Consult #2: [] In 1 week Next Available Within 2 weeks Other

Referral to Diagnostic Services: Diagnostic Services Requisition

Diagnosis & Follow Up Issues for DSR: [] In 1 week Next Available Within 2 weeks Other

Special Needs: []

Submit Your Request



Appointment Outcome

Pre-intervention (12/1/2004-11/30/2005)

Scheduled Appts.	398
Arrived	237 (60%)
No Show	61 (15%)
Cancelled	100 (25%)

MFH Full Rollout (9/6/2007 - 11/9/2007)

Scheduled Appts.	249
Arrived	178 (72%)
No Show	20 (8%)
Cancelled	51 (20%)

Readmission Rate < 14 days

Pre-intervention	11.81%
MFH Full Rollout	7.90%

Return to ED < 3 days

Pre-intervention	3.96%
MFH Full Rollout	0.75%

Lessons Learned:

- Multidisciplinary team consisting of physicians, nurses, discharge planning, information technology, public relations designed an application that was very user friendly.
- The Michigan Quality System and the lean Healthcare Method was an effective methodology. Small scale testing led to rapid improvements in the Web forms.
- Understanding physician workflow and tools can improve work flow.
- Take advantage of pre-existing technology and expand on it. The inclusion of individuals from Information Technology is essential.
- Frequent, focused and succinct communication was key. This included soliciting feedback from the faculty and staff.
- Involvement of patients and families was essential.
- Standardized training for the physicians is essential. In order to be effective, the training needs to be focused and hands on.
- Multiple rounds of testing helped to flush out problems and user interface design.

Next Steps:

- Patient satisfaction data collection
- Firming up takt time: number of calls the scheduler can handle per day and how long each call takes
- Discussion of expansion after stress test is over and above steps completed
- Hospital-wide – will look at other services (i.e. surgery often schedules their f/u appointment in clinic prior to admission)