Family Medicine Clerkship Student Projects   Larner College of Medicine

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Using design thinking to help practitioners and front desk staff schedule follow up appointments

Jhaimy Fernandez

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Newtown Family Medicine, Newtown CT

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Dr. Eurica Chang

Problem Identification

The Patient Protection and Affordable Care Act (ACA) makes hospitals responsible for post discharge outcomes. Thus, hospitals have financial incentives to coordinate care efficiently. (1) Due to an increase of calls at the front desk, Western Connecticut Health Network has systemized scheduling through call centers. In Newtown Family Medicine, clinical staff become responsible for helping patients navigate between 2 call centers in order to:

1. To make a doctor appointment:

    Patient calls office > phone answered by Formative, a call center in Florida > Formative gathers patient reason for visit, insurance and schedules a 15 or 30 minute appointment based on a list of "Hot words"> if Formative is not sure about the severity of the patient's condition, they triage the call to nurses at the clinic.

    Problem: **Without personal clinical experience with patients from the clinic, Formative is unaware of the patients' unique needs when deciding to schedule a 15 or 30 minute visit. Thus, patients whom the front desk would normally schedule for a 30 minute visit (ie. elderly, non-English speakers, patients with multiple chronic conditions) are scheduled into acute 15 minute appointments. This does not allow practitioners enough time to address their needs resulting in falling behind schedule and lower patient satisfaction.**

2. To refer a patient to a specialist:

    Practitioners puts in a referral in the EMR > order goes to the Central Referral Office, a processing center that confirms patients' insurance coverage > Central Referral calls patient to schedule appointment with specialist.

    Problem: **Practitioners must leave the patient room to obtain the phone number to central referral office, write it on a post it note and give it to the patient. They also explain to patients that if they don't receive a call in 7 days, they should call central referral to schedule the appointment. After the visit, often times patients do not answer phone calls or lose the phone number resulting in delayed scheduling.**

Public Health Cost and Unique Cost considerations

- More than 100 million subspecialist referrals are requested each year in ambulatory settings across the country, but only half of those referrals are completed. (3) 20-30% are caused by breakdowns in the referral process (3,4) resulting in delayed diagnosis and delayed treatments costing an estimate of 12 million diagnostic errors per year in the US (5).

- More than 10.000 adults turn 65 each day, by 2060, 98.2 million Americans, nearly a quarter of the population will more 65 or older. Compared to 10 other wealthy countries, more elderly Americans report having three or more chronic conditions or needing help with basic tasks such as managing medications. (11)

- 1 in 15 people living in the US have Low-English Proficiency (LEP). This number will increase to 67 million by 2050. Title IV of the Civil Right Act of 1964, states federally funded health institutions must provide interpreter services for LEP patients. Inadequate communication makes LEP patients less likely to return for a follow-up visit leading to poorer health outcomes. (10)

- In a typical day, PCP's spend 27% of their time on clinical activities and 49% on admirative activities. (5) Doctors spending more time on administration had lower career satisfaction. (6) With the increasing prevalence of financial risk sharing there has been an increase the administrative work and decrease career satisfaction.(7)

- Design thinking is a valuable process centered around empathizing with the user. Compared to traditional interventions, in some healthcare settings, design thinking has showed greater satisfaction, usability and effectiveness (8). It consists of the Steps: Empathy, Define, Ideate, Prototype and Test.

4. Empathy Interviews

How staff feels when elderly, non-English speakers, patients with multiple chronic conditions are scheduled for a 15 minute instead of a 30 minute visit:

"When patients are late for a 15-minute visit, especially for elderly, by the time they get out of the car, check in at the front desk, 10 minutes of their appointment is done. Don't have a lot of room for error." –Front Desk Staff

"Before a 15 min visit, I try hard to set the expectation that we have limited time at the start of the visit. Some patients have co-pays. Its hard for me to tell them to come back 10 times and pay. If I don't get to all their concerns, I try calling them after the visit." –Physician

"Doctors address 20% of patient's health. 80% is behavioral. We try to address the behavioral. Part of our role is to be available in case patients or provider asks us to enter the room with them. 15 minute is not enough time for me to come in." –Behavioral Health Social worker
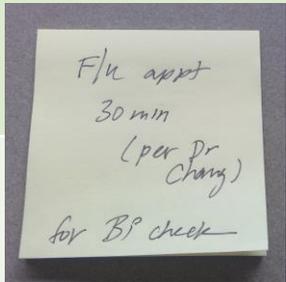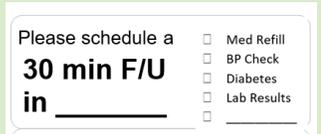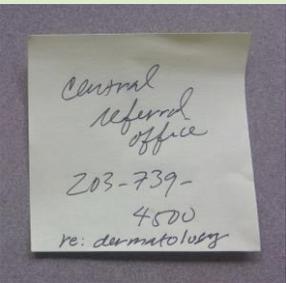
"At first I didn't really think about. Then I realized, by the time I bring patients in and take vitals it takes at least 7 minutes and ½ the time is gone. So I don't chat with patients as much anymore. If I had more time, I'd chat with patients if they were sad. Getting to know patients is my favorite part of the job." –Medical Assistant

How staff feels about Central Referral:

"I know I should just remember the phone number, but I haven't with all the clinical information I have to remember. So every time I refer a patient to a specialist, I have to leave the room to get the phone number. I always remind patients to keep a look out for the number of their phone because some patients don't recognize the number and just don't answer it." -Physician

Ideate and Prototype

From my interviews and observations, I learned that practitioners attempt to prevent inappropriately scheduled visits by writing a note on a post-it, for their patients to give to the front desk requesting their follow up appointment be scheduled for 30 minute. I expand upon the idea by creating pre-printed sticky notes and placing them in the exam rooms. I observed the process from the time the practitioners used the sticky, followed the patient to the front desk and made the appointment. I received feedback from clinical staff throughout the design process.

Before	Prototype 1	Final product
	"The sticker was helpful to show us how long to book their follow up appointment. Without it, I would automatically book 15min visits. It would be helpful to know in how many weeks to schedule the appointment." –Front desk staff	"We can pre place them on their to do list. I usually use scratch paper to write a couple of to do's for the patient." -Physician
	"What number do I have to call if they don't call me? Oh! I can see the number if I squint!" -78 year old patient	"I never got a call to schedule my cardiologist appointment last time. Now I'll know what number to look out for." -68 year old patient

Results/Response

Since my preceptor was used writing notes on a scratch paper for patients before they left the room this was easy to adopt. I experimented by pre-placing the sticker on the paper or in the pencil dispenser for easier access.
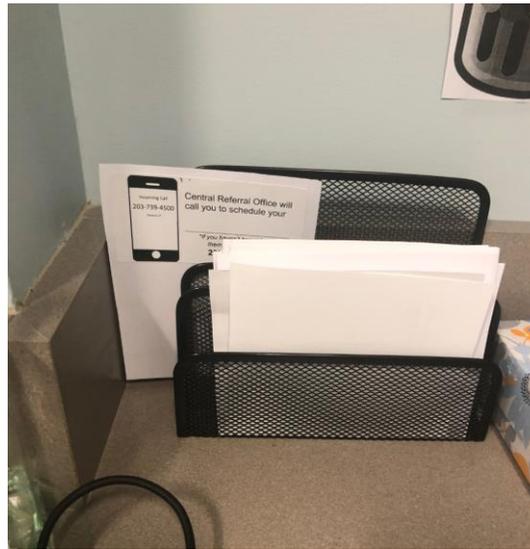
"It was fast and easy! I could just grab a sticker. No interruption of coming in and out of the office. Saved me 2-3min. Having both in the exam room was useful too." –Physician

"An elderly patient came to the front desk to schedule an appointment and the sticker really helped her. She forgot what the doctor told her, but I saw the sticker! So I knew exactly when to schedule the follow up appointment and for how long." –Front Desk Staff

Evaluation of Effectiveness and Limitations

▶ I recommend keeping track of what kind of patients the stickers tend to be given to. It would be great if there was a way for the patients to be flagged in the EMR system for Formative to see for future appointments. Formative currently does not have access to patient charts.

▶ I noticed some patients whom receive a 30 min follow up appointment sticker often leave the office without scheduling their next appointment at the front desk. Unfortunately, they will not be able to make a 30 minute appointment over the phone because they will be forwarded to Formative.

▶ Due to these limitations, I printed a large quantity of stickers and placed them in the exam room cabinets. I also forwarded the file to the front desk for future printing. If the doctors prefer to have them on the paper instead of on a sticker, the template may be pre-printed to paper instead. This can save time, material and expenses.

Recommendations for future Interventions/projects

- Since Formative was implemented, the consensus among staff has been that nurses are now receiving an increase number of triage calls. Front staff receives less calls, allowing them to refocusing their attention on attending to patients at in person. However, it would be helpful for benefits of the intervention to be shared with the entire clinical staff. Without communication of positive effects, it is easy to see systemic changes aimed at promoting health and align with clinical staff's mission of patient care, as a barrier to care.

- Clinical staff have expressed interest in spending time shadowing other positions in the clinic. Clinic staff have a desire to learn why systems run the way they do. This is a valuable exercise that can promote communication, teamwork and empathy. Most importantly, input from clinical staff can play a valuable part of the design process of future systemic interventions.

- Forums of feedback should be convenient for the people we seek to learn from. Giving feedback can be a hurdle when it requires staff to come into work earlier, take time from their lunch or do on their own time. For instance, as a medical student, I had the advantage of witnessing how physicians utilized my stickers in the clinic room. I observed how placing the stickers in the draw required an extra step than on the desk next to the pens. These are small changes, yet valuable taking her workflow into consideration show that I value her feedback and perception. Feedback from the staff who are using the process increase adoption and successful implementation.

- Changes in workflow should be prototyped with cheap inexpensive materials. This encourages continuous trail and error and a better product in the end.

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