Engaging Family Medicine Residents in a Structured Patient Panel Reassignment Process

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BACKGROUND AND OBJECTIVES: The patient panels of graduating residents must be reassigned by the end of residency. This process affects over 1 million patients annually within the specialty of family medicine. The purpose of this project was to implement a structured, year-end reassignment system in a family medicine residency program.

METHODS: Our structured reassignment process took place from December 2017 through June 2020. Panel lists of current, active patients were generated and residents were responsible for reassigning their own panels during a panel reassignment night. We created a tip sheet that addressed patient complexity and continuity, a risk stratification algorithm based on patients' medical and social complexity, and a tool that tracked the number of patients assigned to each future provider. Outcome measures included a resident satisfaction survey administered in 2018-2020 and patient-provider continuity measured with a run chart from December 2016 through August 2020.

RESULTS: The resident survey response rate was 75%. Seventy-three percent felt the panel reassignment night was very helpful; 87% thought the reassignment timeline was extremely reasonable, and 87% indicated that they had the necessary information to reassign their patients. Residents also felt confident that their patients were reassigned appropriately (33% extremely confident, 67% somewhat confident). Patient continuity improved with a 13-point run above the median, indicating nonrandom variation. Patient continuity remained above the median until the impact of COVID-19 in April 2020.

CONCLUSION: Our structured reassignment process was received positively by residents and resulted in improved patient continuity.

Patient empanelment can be defined as "linking each patient to a primary care provider and ideally, to a stable team."[1] It is a foundational building block of high-functioning practices[2] and plays an important role in patient continuity,[3] patient access, and residency education.[4,5]

At the end of residency, the patient panels of graduating residents must be reassigned but there is little consensus regarding best practices and, in one study, only 46% of Med/Peds programs had a structured reassignment process.[6] Based on 2017 family medicine Match data,[7] approximately 1 million patients will experience a transfer of care within the specialty of family medicine. This can be a particularly challenging and risky time to both patients[8-10] and remaining residents.[11] Creating a structured year-end sign-out process improves patient follow-up[12] and positively affects both patient continuity and quality of care.[13]

Prior to implementing this quality improvement (QI) project, our residency program's year-end reassignment process was not standardized, there was limited understanding of patient panels, there was no process to ensure that the new provider was noted in the patient's record, and the process for residents was cumbersome and last minute. The purpose of this QI project was to establish and implement a structured, year-end reassignment system in a family medicine residency program.

Methods

Program

The family medicine residency program matches eight residents per year and is a 3-year program in a suburban setting. Continuity data were collected in reference to the department's primary residency continuity teaching site.

Panel Reassignment Process

From December 2016 to June 2017, we collected baseline continuity data

from our primary teaching practice. We generated panel reports for patient reassignment from the electronic medical record (EPIC) that included patient name, medical record number, age, risk score, date of last office visit in our department, date of last office visit with current primary care provider (PCP), and future scheduled visit provider name, if applicable. From 2017 to 2020, we followed the timeline outlined in Table 1 on an annual basis.

Patients who had not completed an office visit in the last 3 years were excluded from the reassignment process and designated as inactive. Within the list of active patients, residents were only asked to reassign patients they had personally seen.

We created a tip sheet to help residents reassign patients based on complexity and continuity while prioritizing assignment to resident providers on their care team (Figure 1). If the patient was most recently seen by a different resident provider, we attempted to maintain functional continuity with that resident provider. The tip sheet also included a risk stratification algorithm to assign a score to each patient based on their medical and social complexity (Figure 2). This algorithm was developed by EPIC's clinical team using evidence-based research and has an Area Under the Curve score ranging from 0.63 to 0.67. It compares to other models (eg, LACE and MELD) and indicates the patient's risk of experiencing an adverse health event in the next year. In addition, we created a tracking tool in Microsoft Excel that was prepopulated with each resident's patient list and reassignment guideline. As the resident documented each patient's new PCP, the tool tracked the number of patients assigned to each future PCP and the number of patients each future PCP could still accept. While all residents were able to receive patients from graduating residents, higher-risk patients were assigned to rising PGY2s to enhance continuity. Upon entry, incoming interns were assigned lower-risk patients as part of their assigned patient panels. Patients were rarely reassigned to faculty. Our institutional review board determined that the project did not require full review.

Outcome Measures

Resident Satisfaction. In June of 2018, 2019, and 2020, after the panel reassignment process, the graduating PGY3s who were leaving the health system were surveyed via an online survey utilizing Qualtrics software. Questions were predominantly closed ended and addressed the reassignment timeline, availability of needed information, and level of confidence that their patients were appropriately reassigned. Residents were also able to provide additional comments.

Patient-Provider Continuity. We tracked patient-perspective continuity data with a run chart reflecting the percentage of patients seen by their designated PCP.[14] Baseline data are reflected from December 2016 to June 2017.

Table 1: Panel Reassignment Process

Month	Panel Reassignment Activities
December	• Data analyst generates patient panel list for each resident to include patient name, medical record number, patient age, sex, risk score, refugee status and notation of patients on controlled substance contract. Sort by last appointment date with resident, from most recent to least recent. • Schedule panel reassignment night and send invitation to the residents
January	• Update panel reassignment guideline and tracking tool for each PGY3 based on care teams and panel size goals for each resident (60 patients PGY1; 200 patients PGY2; 350 patients PGY3) • Prepare patient lists for graduating PGY-3 residents • Host panel reassignment night where PGY-3 residents reassign their own patients. Residents were instructed to consider the following factors: maintaining team continuity, guidance from the tip sheet, in-time tracking data from the reassignment tracking tool, futures scheduled visits, patient complexity, and patient specific requests (eg, female-only provider).
February - March	• Reassignments due • Clinical administrative staff document next PCP in EMR for reference • Close PGY-3 panel to new "establish care" visits
April	• Conduct second panel report review to verify that all patients have a designated PCP • Final reassignments of any patients establishing care with a PGY3 between January and March • Notify patients who are seen in clinic
May - June	• All reassigned patients to receive written letter that identifies new PCP • PGY3 notifies new PCP about transferred high risk patients on their own time (eg, notification re: patients on controlled substance contracts are done in-person; other high risk patient notifications may be either in-person or in writing) • All reassigned patients noted within EMR • Final panel report review to verify that no patients have been missed

Abbreviations: PCP, primary care provider; EMR, electronic medical record.

Figure 1: Tip Sheet

2020 UVA Family Medicine Panel Reassignment Tip Sheet

Instructions:
- Designate new PCP using the provider's last name or "Intern."
- Please do not assign refugees to incoming interns.
- We included a PCP recommendation if that patient has an upcoming appointment scheduled with that provider.
  - If you believe a different provider is more appropriate, that's no problem! Please make a note!

For patients you know:
- Reassign more complex patients who need frequent follow-up to *rising* PGY-2 residents so the patient can have 2 years of continuity.
- Interns aren't in clinic frequently. Please keep this in mind when assigning patients to them.
- If patient belongs to a refugee family, attempt to keep the family unit with the same PCP.

If you aren't very familiar with a patient on your panel:
- Check Epic to see who the patient has seen most frequently or most recently
  - If it is one of your classmates, ask him/her for guidance.
  - If the usual provider is a resident who will be here next year, reassign to that resident.
  - If the patient has not experienced any continuity, pick a resident on your team.

Special Populations and Notes:
- Controlled Substance Agreements: If patient is on a controlled substance contract, but not marked as such, please make a note. Patients on controlled substances can be reassigned to rising PGY2s or PGY3s and require a warm hand-off.
- Refugees: Remember not to assign refugees to incoming interns.
- Moved? Indicates that the patient's current address is not in Virginia. If your patient has moved or transferred care, please write "Remove."

Tips and Reminders:
- ❖ Your list is organized by most recent visit date with you! Therefore, you should be familiar with the patients at the beginning, and you might be less familiar with those at the end.
- ❖ You are responsible for the patients on your panels until they are officially changed in EPIC in late June. Please do not instruct the front desk staff to make changes to the new PCP.
- ❖ Do not reassign patients to faculty without their approval.

- ❖ If you aren't sure what to do, just ask!
- ❖ Prepare your patient for the transition when you see them in clinic! Click your name on the left column in EPIC to open the Patient Care Team. The patient's new PCP will be documented there with a start date of 7/1/2020.

What Happens Next?
- Please return this completed list of patient reassignments by March 6, 2020. You will continue to have initial visits until March 1.
- You will receive a much shorter list of patients for reassignment in April.
- Your patients will receive letters informing them of their new PCPs in mid-May.

Results

Resident Panels

The average panel size per PGY-3 residents was 320. The average number of patients each PGY-3 resident was asked to reassign (patients seen) was 188. The average number of patients per PGY-3 resident who required in-person handoffs due to controlled substance agreements was three.

Resident Survey. The survey response rate across the study period was 75% (15/20; four residents remained for fellowship during the study period and were not surveyed). Results are shown in Table 2.

Continuity Data

The patient continuity run chart is shown in Figure 3. The number of runs about the median is 13, which is below the expected lower limit of 17, reflecting nonrandom variation. The longest run about the median is 11, which is present twice, initially below the median and secondarily above the median. In addition, there are three shifts as well as one clear outlier in April 2020, at the outset of our clinics shutting down due to COVID-19.

Discussion

The published literature includes a number of recommendations to improve the reassignment process, including identifying patient complexity, identifying the necessary clinical information to be transferred, utilizing a structured system, and communicating effectively with patients.[10,15] Through this QI project, we moved from a tedious, unstandardized reassignment to an organized and well-received process that reflected an improvement in patient continuity. Our structured process, with designated time for the residents to complete their panel reassignment, enabled residents to receive in-person education and guidance from the QI director and data analyst. The risk stratification

Figure 2: EMR-Based Risk Stratification Algorithm

Risk Score Criteria	# Points Assigned
Age ≥ 85 Years	2
Age 65-84 Years	1
Age 18-64 Years	0
≥ 3 Admissions Last Year	3
2 Admissions Last Year	2
1 Admission Last Year	1
0 Admissions Last Year	0
≥ 3 ED Visits Last Year	3
2 ED Visits Last Year	2
1 ED Visit Last Year	1
0 ED Visits Last Year	0
COPD	1
Diabetes	1
CHF	1
Liver Disease	1
Depression	1
Primary Coverage of Medicaid	1
No documented PCP	1

Risk Score Category	Risk Score
Low Risk	0-3
Medium Risk	4-5
High Risk	6-10

Abbreviations: EMR, electronic medical record; ED, emergency department; COPD, chronic obstructive pulmonary disease; CHF, congestive heart failure; PCP, primary care physician.

algorithm prompted residents to consider patient complexity and to more effectively distribute high-acuity patients among the successive residents. This acuity-based score also helped bring attention to patients who would benefit from an in-depth hand off to ensure attention to active or outstanding issues. By acknowledging the crucial role our residents play in the reassignment process, we were able to take advantage of resident knowledge of their patients and create a system that promotes resident ownership of their patient panels.

A variety of project limitations should be noted. This project took place in one residency program and may have limited generalizability to other health systems. Primary care providers in the EPIC electronic medical record were reassigned manually when PGY-3 residents graduated in June. This was time consuming and a likely explanation

Table 2: Resident Survey Results

Item	% (#) Responses N=15
How helpful was it to have dedicated time at the January panel night for you to work on your patient reassignments?	73.3 (11) Very helpful 20 (3) Somewhat helpful 6.7 (1) Neither helpful or unhelpful 0 Not particularly helpful 0 Not at all helpful
How do you feel about the timeline for reassigning your patients?	86.6 (13) Extremely reasonable 0 (0) Somewhat reasonable 6.7 (1) Neither reasonable or unreasonable 6.7 (1) Somewhat unreasonable 0 Extremely unreasonable
Did you have all of the information you needed to appropriately reassign your patients?	86.6 (13) Yes 6.7 (1) No 6.7 (1) Not sure
How confident do you feel about appropriately handing off your patients?	33.3 (5) Extremely confident 66.7 (10) Somewhat confident 0 (0) Neither confident or unsure 0 (0) Somewhat unsure 0 (0) Extremely unsure
Comments: Two residents noted that beginning the process in January might be too early and perhaps, if it could be simplified, it could take place in the spring. Residents identified the following information needs beyond the information provided: • Identify family units • Identify the most frequently seen non-PCP provider • Last resident who saw the patient	

Abbreviation: PCP, primary care provider.

Figure 3: Patient-Provider Continuity Run Chart
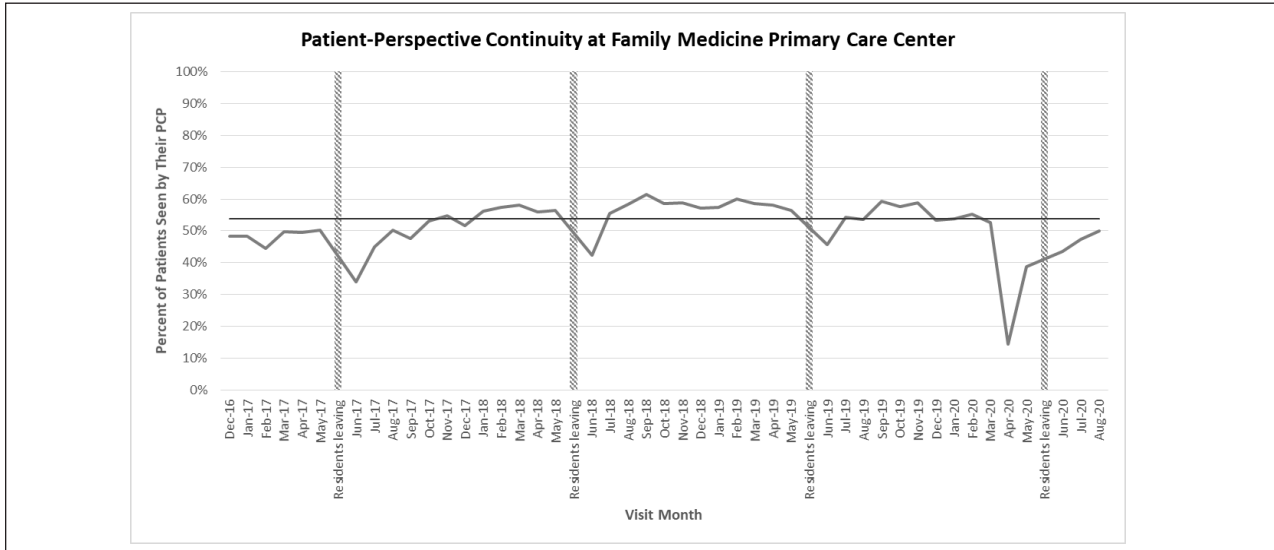
for the annual June dip observed in continuity, as patients' documented PCPs may have been inaccurate at the time of their visit. A number of providers were away from the department for various periods of time during the study period, negatively affecting patient continuity. Finally, the COVID-19 pandemic profoundly impacted access to care, most significantly in April 2020. However, continuity data has steadily improved as we have reopened our clinics and enhanced our telemedicine access.

Future Directions

We have identified two primary areas that will require additional work: (1) linking patients to their family groups in an effort to maintain continuity of family-based care, and (2) expanding, optimizing, and structuring our warm hand-off process for high-acuity patients. We are encouraged by our results and plan to utilize continuous quality improvement to further enhance our year-end reassignment process.

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