Individual QI projects from single institutions

OPEN

Increasing Patient Portal Activation in a Pediatric Subspecialty Clinic

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Abstract

Background: Online patient portals are not widely used, despite their advantages for efficient communication, especially for patients with chronic conditions. A hospital-based group practice of Developmental-Behavioral Pediatricians initiated this quality improvement (QI) project with a goal to increase the percentage of patients with an active MyChart (Epic Systems Corporation's patient portal) account and ultimately improve efficiency of communication between families and clinical staff. **Methods:** Using QI methodology, we identified staff commitment, workflow issues, and family awareness as gaps and implemented progressive Plan, Do, Study, Act cycles aimed at developing standard processes for activating families on MyChart. We tracked our project measures with statistical process control methodology and sustained our progress with improving awareness and regular feedback. **Results:** Patient portal activations increased from 1.8% to 30% in a 6-month time period. Highly successful interventions included development and implementation of a standard process for activation, staff education to ensure comfort and commitment, having families opt out instead of opt in, and completed activation of accounts before families leaving clinic. **Conclusions:** Patient portal activation can be significantly increased through systematic application of QI methodology to address staff training and workflow in a busy subspecialty clinic. Engagement of operations staff and completion of the activation process while the family is still in clinic seemed to be effective in getting families activated in MyChart. It is possible to improve patient portal activation with minimal impact to workflow. *(Pediatr Qual Saf 2017;2:e049; doi: 10.1097/pq9.0000000000000049; Published online December 5, 2017.)*

INTRODUCTION

Patient calls for advice between medical visits typically involve multiple handoffs between nurses, families, and providers resulting in delayed resolution and potential miscommunication with opportunity for error. Online patient portals offer patients' families and providers more direct and efficient communication, with fewer handoffs and less potential for errors. However, even with financial incentives offered by the Federal Government to health care providers who meet specific criteria for "meaningful use" of such portals, portals are not widely used.[1]

The limited medical literature about portal usage in the pediatric population suggests that many parents are unaware their health care providers offer a patient portal. One national survey found that only 59% of those eligible enrolled in a portal.[2] Absence of perceived need, lack of time, and ignorance of availability are the reasons reported in this survey. Unfamiliarity with portal usage is also a common concern and sociodemographic disparities were reported in signing up and activation[3] of such patient portals. There are very little data about how portal usage correlates with patient outcomes.

Children with chronic conditions who have frequent contact with the health care system benefit from more efficient communication with providers. The Child Development Center at Nationwide Children's Hospital (NCH) provides interdisciplinary diagnostic assessments, psychological evaluation and treatment, and ongoing subspecialty medical care for children with autism and other developmental disabilities. Four Developmental-Behavioral Pediatricians follow more than 1,700 children annually. Nursing staff triage 20–30 patient calls daily for medication refills, questions, or concerns for this population with special health care needs. Previously, an in-house quality improvement (QI) project focused on decreasing the time for resolving telephone inquiries. Although a standard telephone-triage protocol improved the efficiency of handling calls for advice, clinical staff felt that more direct contact with families via use of a patient portal would further enhance both efficiency and patient care. Based on the assumption that a significant portion of our patient population would need to have

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active portal accounts before we could begin to work on effective and efficient utilization of this patient care tool, we chose to focus on portal activation initially. Therefore, the goal of this QI project was to increase completed activation of patient portal accounts to 25% by July 1, 2015, by focusing on increased family awareness and staff training and to sustain improvement for 6 months.

METHODS

Context

MyChart, an interactive patient portal within our electronic medical record (Epic Systems Corporation, Verona, Wisc.), affords the best option for this direct contact. MyChart provides patients and families access to a summary of their medical record and a secure way to communicate with their health care providers. At our organization, MyChart enrollment occurs during direct patient contact, such as an office visit. A staff member initiates a patient's MyChart account during an outpatient visit. Parents/legal guardians are set up as proxy users for children under 18 years. If patient's age is > 13 years at the time of visit, the child is required to sign a form approving the addition of the parent as proxy. The staff member then gives the family a letter with a code to complete the process once they log into their account (Fig. 1). Activation is completed once the parent enters the code and logs in. After that, the account is considered active.

Interventions

To increase the number of active MyChart accounts, we formed a QI team consisting of the center's medical director, nursing staff, a QI specialist, administrative support staff, and a parent of a child seen in the clinic. The team brainstormed reasons for the low number of active MyChart accounts and organized these rationales into an affinity diagram revealing 3 key drivers: staff commitment, workflow, and family awareness (Fig. 2). We developed interventions related to each driver, which included meetings with staff to discuss MyChart, training for nursing and registration staff, and patient/family education materials. Beginning February 2015, we serially introduced interventions using Plan, Do, Study, Act (PDSA) cycles (Table 1) to increase the number of activated patients/families in MyChart.

The team first addressed Behavioral Health Administration's concerns about what families could view in MyChart. Consultation with an Information Systems staff member clarified what the family could and could not view, how to mark diagnoses "do not share with patient," and that "tests" referred to laboratory results and some x-rays, not psychological tests (which are not made visible).

Next, the Information Systems specialist clarified with nurses, physicians, and registration staff what families could view in MyChart and trained them in how to initiate, respond to, and route messages. Registration staff also

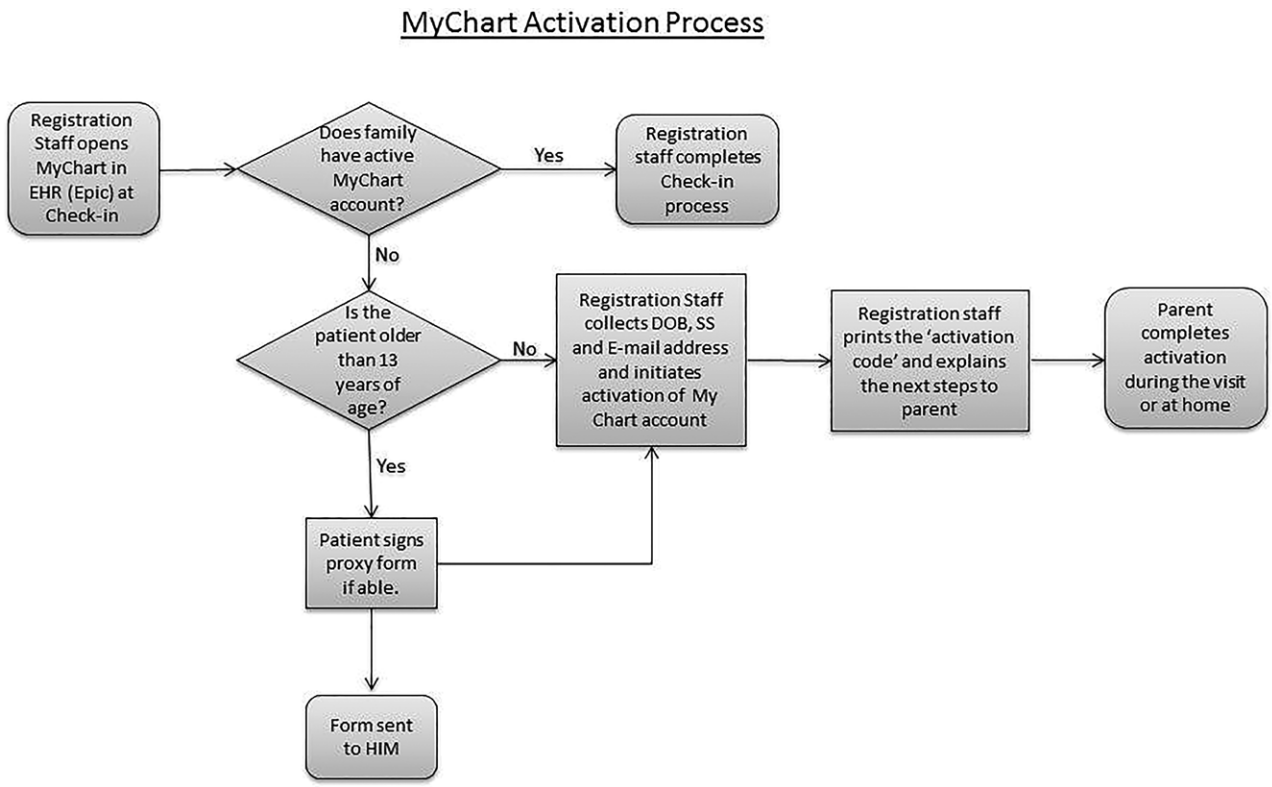

Fig. 1. Process map outlines the steps involved in MyChart (patient portal) activation process during an office visit in Child Development Center. The QI team used this process map to identify key drivers and interventions to reach the goal of this QI initiative. DOB, date of birth; EHR, electronic health record by Epic Systems Corporation; HIM, health information management; SS, social security number.

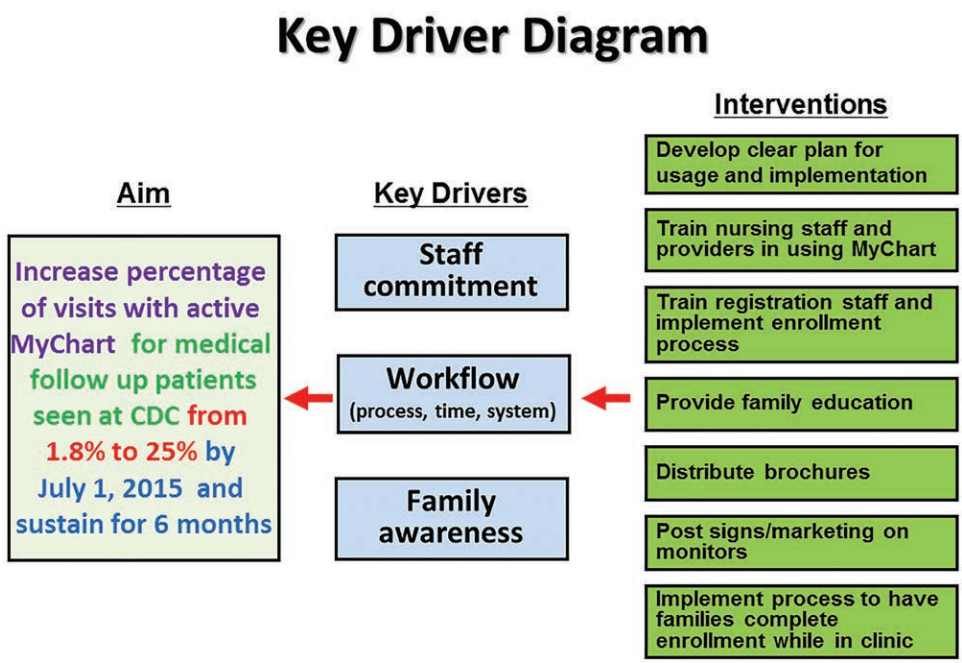

Fig. 2. Aim and key driver diagram developed by QI team.

Table 1. Interventions Implemented in Progressive PDSAs

Date Initiated	PDSAs
03-2015	MA activates 1 provider's patients
04-2015	MA activates all provider's patients
04-2015	Staff distributes brochures to families
04-2015	Staff post signs promoting MyChart use
10-2015	Registration staff activates patients 1 afternoon per week
10-2015	Registration staff activates all eligible patients
11-2015	Opt out process
07-2016	Nursing staff assisted activation during visit via iPad
07-2016	Red card reminder for activation during visit
08-2016	Digital signage in waiting room
01-2016	Peer comparison and staff incentives
04-2017	Magnet reminders on doors
04-2017	SmartPhrase of MyChart reminder in patient instructions

SmartPhrase: preformatted phrase for documentation in EHR (Epic systems corporation).
MA, medical assistant.

received training on how to activate MyChart accounts. To further familiarize themselves with the process, several team members and administrative staff also observed the MyChart activation process in other areas of the hospital and surveyed those staff members about time and effort involved. Staff could also access additional e-learning materials about MyChart on the hospital's intranet.

While resolving registration staff commitment and staffing issues, nursing staff began enrolling patients in MyChart during visits to address patients who generated most of the between-visit telephone contacts, we focused exclusively on those requiring follow-up or ongoing care by our clinicians. During our first PDSA cycle, our medical assistants offered MyChart activation to one provider's patients while patients were being placed in an examination room. During the next several weeks, medical assistants expanded the PDSA, offering MyChart activation to all families seen by all 4 providers.

After addressing staffing concerns and obtaining buy in, we trained all registration staff to include MyChart activation as part of patient registration. These staff members immediately implemented successive PDSA cycles (Table 2) and within 1 week, patients of all 4 providers were being solicited to sign up for MyChart. Families frequently declined when registration staff asked if they would like to enroll in MyChart (opt-in). This observation prompted our next PDSA, where registration staff presented MyChart as a routine step in the registration process (opt-out). Patients were then enrolled unless they specifically declined.

Simultaneously with staff training, operations staff distributed brochures explaining MyChart to families at the time of registration. We also placed signs in the waiting room and examination rooms.

Because the MyChart activation process (Fig. 1) could only be initiated during an office visit, we used percentage of eligible visits with active MyChart accounts as our outcome measure (Fig. 3). We derived baseline data from the patients seen monthly in 2014 with active MyChart accounts.

Measures

In January 2015, 1.8% of all ongoing care patients seen at the NCH Child Development Center had active MyChart accounts. Because MyChart activation coincided with a visit, we tracked the number of eligible patients with active MyChart accounts seen in clinic the prior month. We analyzed data using Statistical Control Process methods.[4,5] To track our outcome, we plotted the percentage

Table 2. Impact of Interventions of MyChart activation

Interventions	Key Drivers	Interventions
Positive	Staff commitment	Staff training of MyChart; education about information visible on MyChart; Smart phrase in patient instructions
	Staff commitment	Peer comparison and staff incentives
	Workflow	Nursing staff activating families in MyChart
	Workflow	Registration staff activating families during registration
	Workflow	Registration staff presenting enrollment as opt out
	Workflow	iPad activation during visit
	Family awareness	Red card reminders, magnet reminders on doors
Neutral	Family awareness	Staff distributes brochures to families
	Family awareness	Staff post signs promoting MyChart use
	Family awareness	Waiting room digital signage

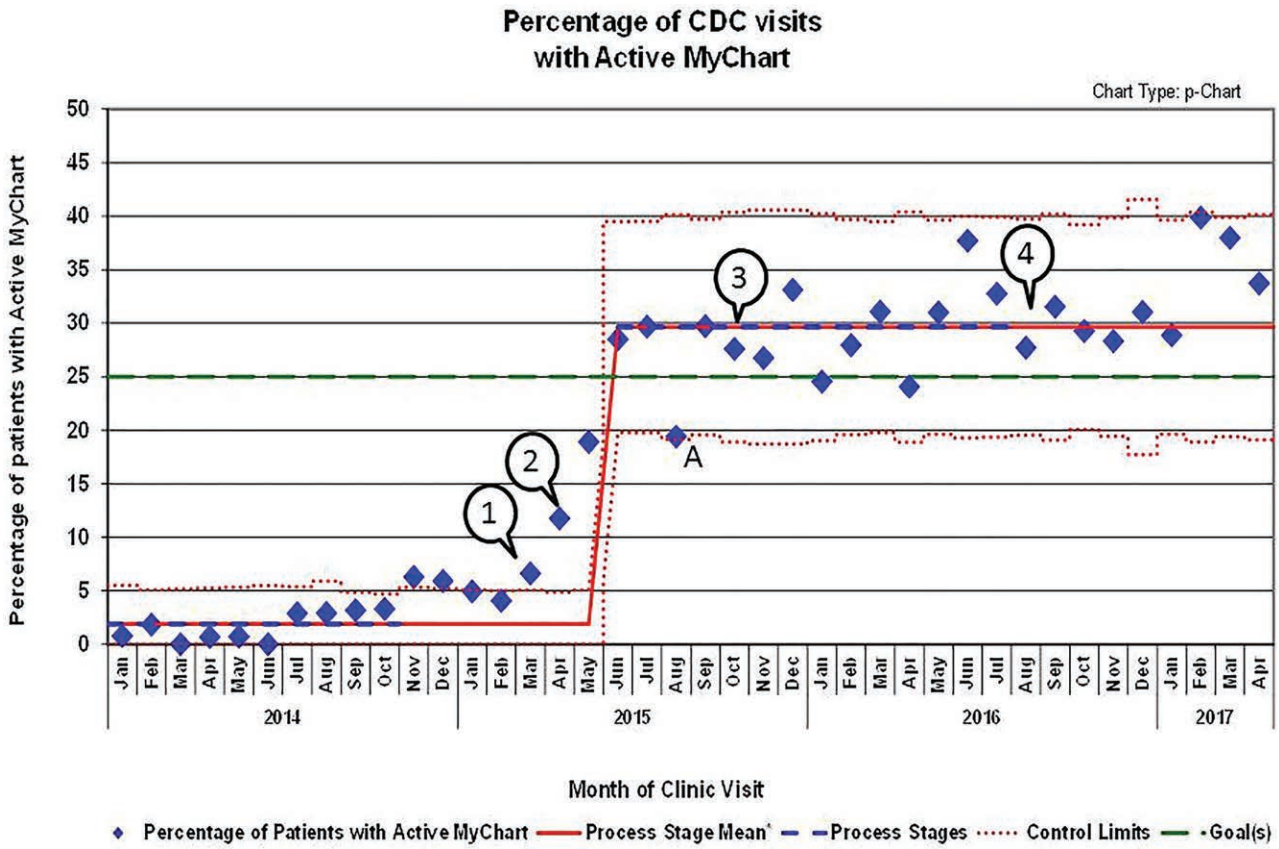

Fig. 3. Percentage of patient visits with active MyChart (patient portal) represented on a control chart (p-chart). Diamonds represent patient visits with active MyChart as a percentage of total visits for participating providers for a specific month. At point 1, MAs conducted PDSA cycle to sign up patients for 1 provider. At point 2, PDSA was extended to multiple providers. Point 3, PDSA with registration staff to sign up patients and at point 4, nursing staff conducted PDSA's to complete activation while the family is still in the clinic. Outlier A was a drop in activation due to missing a specific training component, which is corrected by registration staff activating MyChart portals (at time point 3). MA, medical assistant.

of patients' visits with active MyChart accounts (numerator) out of total number of eligible visits (denominator) on a Shewhart chart (p-chart) monthly. During weekly QI team meetings, we discussed unintended consequences (e.g., increased workload, longer registration times), provider and patient/family feedback, and missed activation opportunities.

Ethical Considerations

As a QI project, the institutional review board granted a waiver of review. Various disciplines (Developmental-Behavioral Pediatrics, Psychology, and Psychiatry) had competing viewpoints regarding types of information families could see. There were initial concerns regarding wording of sensitive information and diagnoses and family access to visit notes and psychological testing results that might be misconstrued. These were resolved via staff education.

RESULTS

We achieved our goal to increase patient portal activations for patients seen for ongoing care at the Child

Development Center at NCH from 1.8% to 30% between February and July 2015. After the statistical shift occurred, MyChart activations stayed within control limits for 16 months (Fig. 3).

Several interventions were associated with marked changes. Activation increased significantly when Nursing Staff began activating patients in March 2015. The percentage of patients with active accounts fell in August 2015, indicating a special-cause variation. This drop occurred when nursing staff stopped activating patients who were over 13 years old, as a result of missing a specific training component. This problem was resolved with training of the registration staff, who assumed the activation process from nursing staff in September (Fig. 3).

Registration time-flow was monitored informally (e.g., number of people waiting, any patient complaints, and registration Staff or management concerns). Despite initial concerns, registration Staff found that the MyChart activation process did not add significantly to either their work or patient/family waiting time. As a result, registration staff began enrolling all Child Development Center patients into MyChart by October 2015 expanding the eligible families. To increase family awareness of MyChart, we gave brochures during clinic visits and posted signs. Few families mentioned either material. To encourage families to complete MyChart activation once initiated, in July 2016, registration staff began giving families a large red card to give to the nursing staff rooming them. This signaled the nursing staff to attempt to complete the activation with the family via a specially configured iPad. We added digital signage in the waiting room to enhance family awareness of MyChart's features in August 2016. We have not assessed the impact of the signage on activation or utilization of MyChart.

DISCUSSION

Activation of MyChart accounts during clinic visits resulted in a significant increase in patient portal activation in this pediatric subspecialty clinic without detrimental impact on staff workflow or patient time in clinic. Active interventions (staff assistance with activating MyChart) appeared to be more positive than passive educational materials.

Staff training and buy-in was essential, both in the beginning when nursing staff added activation to their work flow and later when registration staff assumed that duty. The nursing staff's enthusiasm and willingness to adjust their own work flow helped secure registration staff buy-in. Successive PDSAs allowed staff to try new processes and have control to extend the scope as they saw fit. Staff concerns about the activation processes consuming extra time and causing additional work were not realized and staff is now very enthusiastic about the portal. Clinic's leadership offered staff incentives, which helped in increasing staff's engagement to the activation process. Next step is to have physicians encourage families to activate and use their MyChart account.

The decreased activation in August 2015, mainly associated with patients requiring proxy, highlights the importance of ensuring that the right staff members are doing the right work. The nursing staff's willingness to initiate MyChart activation was vital to getting the project started, but this step was most successful when done by registration staff.

Few parents commented on signs, asked questions, or appeared to read the materials while in the office, although we cannot account for what they did outside the office. The cost involved with these materials was minimal.

Although some studies have evaluated patient-related factors associated with portal activation,[6] our work focused on increasing activation using 2 additional key drivers and QI methods. Similar to Krist et al.[6], we noted significant improvement with activation while the patient and family were present in the clinic.

Assessing a subspecialty pediatric population and improving portal activation rates is our unique contribution to the literature since much of the existing literature focuses on adult patient portal activation or pediatric primary care environments.

Limitations

This project focused on children with developmental disabilities, the majority of whom have autism. Ketterer et al.[3] found higher portal activation in primary care pediatrics for patients with more chronic problems, including autism. Therefore, our findings might not be as generalizable to primary care or other subspecialty populations. Clinics with different proportions of minority populations may also face other challenges, since several studies have found lower activation for those groups.[1] Although this study focused on MyChart activation, that does not necessarily translate to usage.[7,8] We have an additional QI study underway to understand how improved MyChart activation affected call volume and family-provider communication.

CONCLUSIONS

Our goal was to increase patient portal (My Chart) activations among families visiting the Child Development Center at NCH. Between February and July 2015, patient portal activations increased from 1.8% to 30% using the Institute of Healthcare Improvement model for improvement, including PDSA cycles. The most helpful PDSA interventions in achieving this goal were initiating patient activation through staff solicitation and completing the activation of the portal while patients were at the clinic. Implementation of these interventions greatly increased patient portal activations, but required minimal training, cost, and effort with nominal impact on staff workflow or patient wait time during clinic. Making MyChart activation part of the standard training and workflow for

registration and nursing staff ensured continued sustainability. These were attributed to positively addressing the key drivers of staff commitment and workflow (Table 2). Center staff also expressed satisfaction with the results of increased activation and concomitant enthusiasm for QI methods based on their success with this project, ensuring future cooperation and sustainability.

Communication with families is a commonly encountered challenge at children's hospitals. Prior research demonstrated low usage of portals and focused on patient characteristics. Our work adds to the existing literature by demonstrating that portal activation (a prerequisite to usage) can be improved using QI methods. Our next step is to increase MyChart usage for this same group of patients at the Child Development Center. We also plan to apply these positive interventions to additional patient populations at the Child Development Center and other Behavioral Health clinics. We anticipate that reaching subpopulations (e.g., minorities) with lower rates of activation may require specialized efforts. The impacts of portal usage on changes in health care delivery, although not explored here, will also be investigated. Finally, examination of health outcomes as impacted by portal utilization, particularly in the pediatric population, is needed.

DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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