RE: 2017 Healthcare Quality Institute Vanguard Award

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Title: SPECIALTY CARE ACCESS IMPROVEMENT AT A LARGE SAFETY NET HOSPITAL

Area(s) of focus:
Patient safety
Patient experience
EXECUTIVE SUMMARY

Like many safety net hospitals, Santa Clara Valley Medical Center has had a longstanding problem with timely access to specialty care. In 2014, some specialties had median wait times in excess of 90 days, with up to 2/3 of referred patients being left unscheduled. We undertook a compressive re-design of specialty referral, scheduling, and intake. Our program incorporated elements of electronic consultation, virtual co-management, open access procedures, daily triage, and proactive scheduling. We involved front-line staff in designing the workflow, and developed customized reports that were openly shared at monthly meetings with physicians, nurses, and schedulers. Referring clinics were also involved at each step. The program was piloted in 3 clinics, and has now grown to encompass 18 adult specialties. As of March 2017, more than 3,000 referrals are processed under the new system monthly. Approximately 90% of patients needing an appointment are scheduled, with a median wait time of 22 days for routine referrals and 1.6 days for urgent referrals. The 3 pilot specialties have been using the new system for over 1 year, with sustained improvement in all scheduling metrics. We plan to roll out the program to all specialties in our hospital within the next 12 months.

BACKGROUND AND RELAVENCE

Poor access to outpatient specialty care has been a longstanding problem among many California safety net hospitals. This has been exacerbated in recent years by increasing numbers of patients seeking healthcare services under Covered California and Medi-Cal expansion. Resource limitations have made it difficult to scale up services to accommodate this increased demand.

An imbalance between supply and demand for specialty care creates several problems. Most obviously, waiting several months for an appointment results in a poor patient experience. Referring providers are often frustrated by having to manage patients without any specialty input while awaiting an appointment. Even if patients are able to seek care elsewhere (which is not always possible given the small number of community specialists accepting Medi-Cal), the care may get fragmented due to poor communication between clinics. Fragmentation of care has been identified by the Institute of Medicine as one root cause of healthcare disparities for minorities and other vulnerable populations.

Poor access to specialty care also creates potential safety issues. Even when urgent referrals are prioritized, it is possible for patients to fall through the cracks. Poor clinic access is often accompanied by prolonged phone hold times, leading some patients to give up trying to make an appointment. Realizing that routine patients may have to wait months for an appointment, referring providers may “upgrade” all referrals to urgent, in hopes of quicker access. However this practice makes it even harder for specialty clinics to select and accommodate the truly urgent patients. Furthermore, the urgency of a referral may not be apparent at the initial visit, with patients getting sicker while waiting for a specialty appointment.

At Santa Clara Valley Medical the magnitude of this problem was unclear. In 2014, we undertook a review of all specialty referrals received over a 6 month period. We found that the median wait time for many clinics was 2-3 months, with almost 50% of referred patients not getting an appointment at all.
Clearly, the system was not working well for our patients. We therefore embarked on a comprehensive re-design effort of the specialty referral process, from beginning to end.

DESCRIPTION

Our specialty re-design had several components, each developed with input from a variety of stakeholders to address a specific problem in the referral process.

1. Referral guidelines
   • Problem: We found that the “referral rate” (percent of clinic visits resulting in a specialty referral) among our primary care providers was twice the national average. There were many reasons for this, including a sicker patient population; many patients having no prior medical care; and conserving limited primary care visit slots for only the sickest patients. However, there also may have also been a lack of clarity as to which patients required a specialty referral versus primary care management.
   • Solution: Each specialty developed guidelines to help referring providers determine if their patient needs a specialty referral. The guidelines also give advice on how to manage common, benign conditions in the primary care setting, and what alarm features should warrant a specialty referral. These guidelines were made available in the “Referrals” section of our electronic health, since a busy primary care provider would not have time to access a separate resource. This also allows us to push updates automatically to users at many different clinic locations.

2. Direct access procedures
   • Problem: Valuable clinic slots in highly impacted specialties such as gastroenterology were being taken up by relatively healthy patients requiring routine procedures such as colonoscopy.
   • Solution: We enabled referring providers to directly order procedures, rather than first requiring a clinic visit. Triage questions were embedded in the procedure order to select out high-risk patients. All requests for direct access procedures are reviewed by a specialist, and if approved are sent directly for scheduling. This saves clinic slots for patients who truly need a consult prior to their procedure. It is also patient-friendly since it reduces the number of times a patient much travel to the clinic. This workflow is made possible by all relevant information, including clinic notes, previous procedure reports, and lab results being available in one electronic health record.

3. Customized referral order
   • Problem: All specialty clinics used the same generic referral order, which often did not contain critical information required for triaging and scheduling.
   • Solution: We created customized referral orders for each specialty; these include buttons for common referral reasons, followed by “cascading questions” that are specific to the diagnosis. We minimized the number of questions to ensure that each one provides critical information to the triaging specialist.
These questions were developed in close collaboration with primary care physicians, based on the referral guidelines mentioned above.

4. e-consult
   - Problem: Primary care providers with clinical questions that did not require a full consult had no standardized method for communicating with specialists. In some cases, they placed a consult just to get a simple question answered.
   - Solution: We instituted e-consults for all specialties under the new program. The e-consult functionality was built directly into our electronic health record in parallel with the standard referral order. This allows an e-consult to be seamlessly transitioned to a full consult if the problem is more complex than initially thought, and vice-versa. More importantly, it also creates a record of the e-consult question and the specialist’s reply, in case the same issue arises again or the patient gets a new primary care provider. Even if a patient does need to be seen in clinic, the specialist can give advice to the referring provider on how to manage the patient while waiting for an appointment. This is superior to older methods of “curbsides” or email communications, which are not recorded in the chart. Electronic consults are also patient-friendly because they provide timelier specialist input without requiring the patient to travel to the specialty clinic.

5. Specialist triage
   - Problem: Some specialties reported getting consults for patients that did not require a visit, or who had an incomplete work-up/missing records. The designation of “urgent” versus “routine” was not consistent among referring providers.
   - Solution: We created a new workflow, where all referral orders are sent to a specialty-specific work queue prior to authorization or scheduling. Here, specialty physicians review referrals daily for appropriateness, completeness, and urgency. Referrals that do not need a face-to-face visit are converted to e-consults, with advice sent to the referring provider on how to manage the patient. If the referring provider has further questions, he or she can simply reply to the message. Back-and-forth communication is encouraged so that each patient receives timely care in the right setting. This entire conversation becomes part of the patient’s medical record. If a face-to-face visit is needed, the specialist can ask for records or other critical information before the visit is scheduled. This ensures that patients get maximum value from their initial specialist visit, rather than being told that more records are needed. Finally, the specialist can review the urgency of each referral and select one of several flags that indicate the timeframe within which the patient should be seen.

6. Insurance Authorization
   - Problem: Some patients did not receive timely insurance authorizations
   - Solution: The scheduling urgency flag selected by the triaging specialist is used by authorization center staff to prioritize their work. This flag is not simply “urgent” vs. “routine,” but breaks down routine referrals into 1 week, 3 weeks,
etc. This ensures that authorizations are processed in accordance with clinical priority. Once authorization is obtained, the referral is directly sent to scheduling staff, who make an appointment within the timeframe designated by the triaging specialist.

7. Proactive scheduling and intake
   - Problem: Many referred patients did not get a scheduled appointment; one reason was long phone wait times that resulted in call abandonment rates of >30% in some clinics. Furthermore, many of our patients have linguistic, socioeconomic, and cultural barriers that make it difficult to from them to navigate the healthcare system. Sometimes patients who did call were not ready to be scheduled because of pending insurance authorizations or lack of urgency. This created more frustration for patients, and unnecessary calls to the specialty clinic.
   - Solution: Patients are not expected to call the clinic. As soon as a referral is triaged and insurance authorization is obtained (usually within 1-3 days), the specialty clinic staff contact the patient and offer an appointment within the timeframe designated by the triaging specialist. Attempts are made to contact patients at different times of day using all available modalities (phone, letters, and secure messaging via our electronic health record's portal). All attempts are documented in the chart, so referring providers’ offices can track the progress of their referrals. Specific notations are made in the chart if patients decline the appointment, or wish to have a later appointment date. This process creates a more patient-friendly experience, greatly diminishes incoming call volume to specialty clinics, and creates greater transparency in the referral process for all stakeholders.

8. Reporting
   - Problem: There was no easy way to track referrals and ensure that no patient “fell through the cracks”; there was also no regular report to assess how well (or poorly) individual clinics were meeting access goals.
   - Solution: We developed customized reports, most of which are automated through our electronic health record. These reports designate the disposition of each referral, stratified by clinic. Consolidation of all activities within our electronic health record enables us to incorporate all triaging and scheduling events into these reports. In addition to measuring the percent of patients scheduled and median wait days for routine and urgent consults, we also track the percent of referrals handled electronically, the time taken for triage, and the percent compliance with DMHC rules for timely specialty access. These reports are shared at monthly meetings open to all staff. Report writers and application support personnel are present at these meetings as well. This enables us to modify reports in real time, while troubleshooting referral and scheduling issues before they become problems. It also enables to share best practices and insights about how to further improve the patient experience around specialty access.
9. Referral coordination

- **Problem:** Primary care providers were spending valuable clinic time tracking down records and compiling other information; referring providers who were not using our electronic health record had difficulty in accessing specialists’ recommendations.
- **Solution:** Referral coordinators were assigned to each primary care clinic. These coordinators are able to compile records and ensure that all referrals are complete. They can also communicate with the authorization center and specialty clinics regarding any issues with referrals. Finally, they can follow-up on referrals to ensure that the specialist’s recommendations and received by the referring provider. This “loop closure” is a vital final step in ensuring a seamless and reliable referral system.

10. Primary Care Provider Assignment

- **Problem:** Patients without a primary care provider often bounced from specialty to specialty, while seeking emergency room care for problems that could have been handled in a primary care clinic.
- **Solution:** Whenever they encounter a patient without an identified primary care provider, emergency room or specialty physicians can simply forward the chart to a “Panel management pool” in the electronic health record. This group contacts the patient and assigns a primary care provider based on patient preference. Most importantly, they also schedule the first visit with the provider, usually within a couple of weeks. Triaging specialists can also forward new referrals to Panel Management, so that a PCP is identified prior to the specialty clinic visit. This aids in transitioning patients back to primary care, opening up more new visit slots for specialty clinics.

We utilized several tactics and strategies to maximize our chance of sustained improvement. These included:

1. Early and ongoing involvement of key stakeholders: All systems were designed with input from end users. This ensured that the systems reflect actual workflow and address existing gaps that contribute to poor access. It also increased “buy-in” among front-line staff, who ultimately determine whether any changes will be sustainable.
2. Data validation and transparency: large amounts of data were collected and parsed; they were reviewed by multiple individuals from various disciplines to ensure accuracy. Then, these data were shared openly with everyone in the organization. This ensured that we were all operating from a common set of facts. We continue to share data and metrics with the entire group, giving us an objective assessment of whether our re-design is meeting its goals.
3. Phased roll out: by starting with a few clinics, we were able to test and refine our processes before implementing hospital-wide changes. This also enabled us to provide individual attention to each clinic’s unique needs while ensuring that key elements of our re-design were maintained. An emphasis on quality over speed was critical in ensuring that our changes were impactful and sustainable.
4. Leverage strengths of the electronic health record: The triage and e-consult process is facilitated by having all critical information contained in one record; this enables
referring providers and specialists to rapidly access key clinical data and agree on a treatment plan.

RESULTS

The re-design was piloted in 3 clinics, and has now grown to encompass approximately 2/3 of all adult specialty clinics. We found immediate and sustained improvement in key metrics for each specialty, as shown in the following table:

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Percent of referrals scheduled</th>
<th>Median wait days (routine appt)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>Current</td>
</tr>
<tr>
<td>CARDIOLOGY</td>
<td>39%</td>
<td>97%</td>
</tr>
<tr>
<td>ENDOCRINOLOGY</td>
<td>51%</td>
<td>90%</td>
</tr>
<tr>
<td>GASTROENTEROLOGY</td>
<td>27%</td>
<td>96%</td>
</tr>
<tr>
<td>GYN ONCOLOGY</td>
<td>83%</td>
<td>100%</td>
</tr>
<tr>
<td>HEMATOLOGY</td>
<td>74%</td>
<td>98%</td>
</tr>
<tr>
<td>INFECTIOUS DISEASE</td>
<td>52%</td>
<td>95%</td>
</tr>
<tr>
<td>NEUROLOGY</td>
<td>50%</td>
<td>65%</td>
</tr>
<tr>
<td>NEUROSURGERY</td>
<td>59%</td>
<td>72%</td>
</tr>
<tr>
<td>ONCOLOGY</td>
<td>88%</td>
<td>98%</td>
</tr>
<tr>
<td>OPHTHALMOLOGY</td>
<td>33%</td>
<td>82%</td>
</tr>
<tr>
<td>OTOLARYNGOLOGY</td>
<td>53%</td>
<td>78%</td>
</tr>
<tr>
<td>PLASTICS/BURN</td>
<td>58%</td>
<td>90%</td>
</tr>
<tr>
<td>PODIATRY</td>
<td>37%</td>
<td>98%</td>
</tr>
<tr>
<td>RADIATION THERAPY</td>
<td>96%</td>
<td>94%</td>
</tr>
<tr>
<td>REHAB / PM&amp;R</td>
<td>40%</td>
<td>89%</td>
</tr>
<tr>
<td>RHEUMATOLOGY</td>
<td>34%</td>
<td>98%</td>
</tr>
<tr>
<td>UROLOGY</td>
<td>39%</td>
<td>98%</td>
</tr>
<tr>
<td><strong>OVERALL</strong></td>
<td><strong>54%</strong></td>
<td><strong>90%</strong></td>
</tr>
</tbody>
</table>

The average wait time for urgent patients across all specialties was 1.6 days.

In addition to the above, more than 500 electronic consults are processed every month, with some specialties handing 30-50% of their workload in this manner.

As shown in the supplementary material, these improvements were realized soon after roll-out and have been sustained for up to one year.

SIGNIFICANCE

Timely access is the first step to good medical care. The traditional system of all specialty access being in the form of face-to-face visits is not tenable in the setting of increased demand and limited resources. It is also often not the quickest or most convenient method for patients and referring providers to get specialty input. Therefore, we expanded our understanding of access to include virtual co-management via electronic consults, as well as direct access to procedures.
for selected patients. This enabled us to use available clinic slots more efficiently. By also streamlining our referral and scheduling processes, we were able to realize immediate and lasting improvements in two key access metrics: the percent of patients scheduled and the median time wait time for an appointment. More importantly, the patient experience has improved and we are now able to provide more timely service to our referring providers. Our ongoing reporting metrics will allow us to ensure that excellent access is maintained across all our specialties, and to identify any problems early on. The system also allows both specialty and referring clinics to track each referral and ensure referral loop closure.

**SUSTAINABILITY AND SCALING**

By starting with 3 pilot clinics, we were able to test our processes and ensure that the re-design achieved its objectives. We have now successfully expanded it to 18 clinics, with plans to bring it to all adult specialties within the next 12 months. By adapting key features of the re-design to each individual clinic, we ensure that the unique needs of each specialty are met. At the same time, having standardized reporting metrics ensures consistency and quality control across all clinics. The ongoing success of the pilot clinics, which instituted the re-design more than 1 year ago, suggests that these changes are sustainable. The continued enthusiasm and engagement among support staff and providers also indicates good prospects for sustainability and scaling.

**KEY LESSONS AND ADVICE**

1. Engage key stakeholders early on in the process: only by having primary care providers, schedulers, authorization center staff, application experts, and report writers involved in the design stage were we able to develop a sustainable system that addressed all problem areas in the referral process.
2. Whenever possible, consolidate all clinical information and referral activity into a single electronic health record – this enables rapid triage, shared decision making, and automated reporting of key access metrics.
3. Validate data carefully, then share it widely: Having a shared set of facts is essential for making collaborative decisions. Ongoing data collection and reporting allows front-line staff to see the impact of their efforts in real time. If metrics are improving, it provides encouragement and positive feedback. If they are not, then it gives an opportunity to re-think on how we can do better.
4. Focus on patient experience: Although improved metrics are important, focusing on patient experience increases enthusiasm among providers and staff. Everyone wants to work in a positive and engaged environment, so making our patients happy is a goal everyone can support.
Phase 1

**Percent Scheduled**

- UROLOGY
- RHEUMATOLOGY
- HEMATOLOGY

**Median Wait Days for Routine Appointment**

- UROLOGY
- RHEUMATOLOGY
- HEMATOLOGY
Phase 2

Percent Scheduled

Median Wait Days for Routine Appointment
Phase 3

Percent Scheduled

Median Wait Days for Routine Appointment
Phase 4

Percent Scheduled

Median Wait Days for Routine Appointment
Phase 5

Percent Scheduled

Median Wait Days for Routine Appointment