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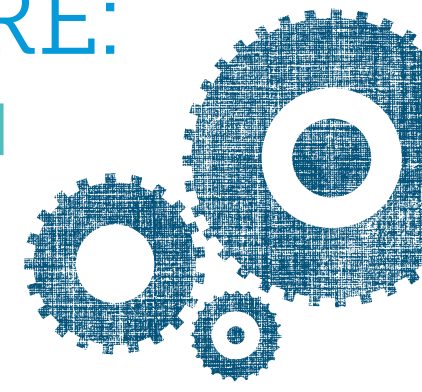
INEFFICIENCY IN PRIMARY CARE: Common Causes and Potential Solutions



This practice-based research project highlights key sources of inefficiency in primary care and real-world suggestions for how to improve.

Health care is the largest service industry in the United States,[1] with annual spending reaching $2.9 trillion in 2013.[2] Unfortunately, the delivery of health care is often inefficient, with analysts estimating the industry is wasting billions due to clinical inefficiency (unnecessary services, overuse of emergency departments, misuse of medications, etc.).[3] But inefficiency is also prevalent in the nonclinical processes involved in patient care, from scheduling to test result reporting to prescription refills. Inefficiency can be defined as using more inputs (or resources) than is necessary to produce a unit of beneficial patient care or service,[4] and it is linked to unnecessary variation in operational and clinical processes.[5]

Numerous process improvement techniques have shown promise in reducing health care costs related to inefficiency,[6-9] but these techniques have typically focused only on inpatient processes. Given the resources dedicated to primary care, we recently undertook a project to better understand the sources of and remedies for nonclinical inefficiency in primary care.

Project overview

We surveyed a diverse group of 13 practices. We focused on a group of five local practices from the Statewide Network of Colorado Ambulatory Practices, a practice-based research network that includes two federally qualified community health centers, a large hospital-based academic practice, and two private practices. We also approached eight practices outside the state that belonged to the Medical Group Management Association.

We asked all practices what technologies and methods they had adopted to improve practice efficiency and which of 14 common workflow issues they had experienced. For the Colorado practices, we also sought their attitudes toward formal methods of process improvement and conducted on-site observations. We later ranked the specific sources of perceived inefficiency based on their influence on quality improvement, cost containment, and patient safety in the study practices.

What we found was that virtually every practice had so many perceived inefficiencies that they didn't know

where or how to start addressing them. Even practices with established quality improvement teams struggled to effect change. The sources of inefficiency were diverse and pervasive. To organize our findings, we grouped the sources of inefficiency into 1) activities that occur "previsit," or prior to patient check-in, 2) activities that occur during the patient visit and at check-out, and 3) activities that occur "post-visit," or after patient check-out.

Inefficiencies during previsit

The key areas of inefficiency occurring before the patient visit were identified as follows:

Appointments and scheduling. Setting up patient visits was considered a pervasive source of inefficiency within the participating primary care practices, requiring constant attention from office managers. A major scheduling problem was patients missing their appointments, with practices reporting that up to 30 percent of appointments ended in "no-shows." Practices attempted to reduce the percentage of "no-show" appointments by 1) making a reminder phone call to patients, 2) asking physicians to counsel patients with no-shows about their inappropriate behavior, and 3) punishing repeat offenders with restricted scheduling (allowing the patients to schedule appointments only for certain hours) or even expulsion from the clinic. Of these, the reminder phone call was the most successful strategy with practices reporting a 30 percent reduction in no-shows.

Similarly, late patients were said to cause significant delays in the patient cycle, which reduced productivity and revenue. In the practices observed, patients arriving late were typically accommodated if the provider had time to see the patient. To reduce patient tardiness, practices sometimes assessed financial penalties, asked patients to reschedule, or restricted frequently tardy patients to extended hours scheduling. Practices noted that a common cause of tardiness was patient use of public transportation, especially among handicapped and older patients, and it was more difficult to identify an appropriate or successful strategy to reduce tardiness for these patients.

Practices also reported being challenged to control the length of patient appointments. For example, patients scheduled for 15-minute appointments sometimes spent a full hour with the physician, hurting productivity and increasing wait times for other patients. To reduce this problem, practices reported training front-desk and scheduling staff to ask patients specific questions about the purpose of their visit to determine an appropriate visit length when making an appointment.

Some practices with an electronic health record (EHR) system indicated that their EHR's clinical decision support mechanism could predict the appropriate length based on the nature of the appointment. Lastly, some practices reported successfully using a group visit approach to more efficiently manage patients with chronic conditions such as diabetes and asthma or those needing prenatal care.

Patient phone calls. Practices reported receiving as many as 20 patient calls per provider each day. In many practices, the front-desk staff was responsible for answering these calls. Depending on the timing and nature of these calls, they could potentially interfere with other front-desk duties, such as check-in, insurance verification, and reminder calls. In numerous practices, this led to high call abandonment rates, low rates of returned calls and messages, long hold times, and ineffective use of staff time.

Larger practices combatted the problem by using call centers, located off-site or on-site but away from the front desk, to handle all patient phone calls and direct calls to appropriate staff. They reportedly decreased patient hold times and abandonment rates and increased the number and percentage of calls successfully answered and returned. As for smaller practices, some found it valuable to implement a phone-tree process that uses a computer to direct patient calls to the appropriate staff.

Practices are likely to see a dramatic shift to online portal use in the near future, which could eliminate some of the inefficiencies related to phone calls but could also introduce inefficiencies related to managing portal messages. Only one of the surveyed practices had implemented a portal when we conducted our research, and it was in the early stages, so we do not have data to determine how portals and email messages affect practice efficiency.

Insurance eligibility verification. All practices noted that verifying insurance eligibility was complex and time

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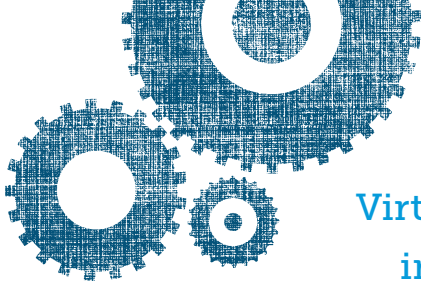

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consuming, especially for patients with coverage through Medicaid or the State Children's Health Insurance Program, which frequently change their eligibility rules. Practices often attempted to verify insurance before the visit and, in some cases, had designated staff for the task. To improve efficiency, practices used government-sponsored eligibility verification websites for public programs and telephone verification with private insurers.

Call centers and online portals can reduce interruptions from patient telephone calls.

Inefficiencies during the visit

The key areas of inefficiency occurring during the patient visit were identified as follows:

Practice layout. Some practices reported that their physical layout and size constrained their ability to grow, modernize, and improve. In some cases, a suboptimal layout created bottlenecks or forced patients to backtrack while moving through the practice, increasing the length of visits and decreasing the percentage of value-added time for the patient.

A clunky practice layout can create bottlenecks and increase cycle time.

Of the five locally observed practices, two had changed their clinic layout to accommodate improvements recommended by the practice care teams. Techniques used to improve patient flow included 1) creating a single path for patients to flow through the clinic, 2) streamlining the patient cycle to accommodate patient care teams, and 3) standardizing exam rooms so providers and staff always know where supplies are located.

Proper use of electronic health records can reduce the time it takes staff to find patient records and make lab orders and medication lists more accurate.

Communication. The patient's medical record is an essential component to communication during the visit as it documents the patient's encounters with the practice; therefore, it must be legible, up-to-date, and accessible. However, whether practices used an EHR, a paper record, or both, they reported ongoing frustrations and concerns about having standard and reliable access to medical records. For example, although EHRs have reporting modules, the modules may not allow a practice to retrieve and present data in ways that meet its needs. That said, practices using an EHR did note that it had improved accuracy in lab test ordering, patient medication lists, and coding and billing and decreased walking distance and "chart chasing time" for medical assistants (MAs).

Other tools such as color-coded paperwork, colored lights outside the exam room that indicate the next step or service needed, and two-way radios helped staff communicate more easily, decreased unnecessary variation, and reduced the time required for patient "hand offs." Two practices that had recently started using two-way radios noted that communication between physicians and MAs greatly improved, and the amount of walking time decreased for both. One other practice stated that it was converting to two-way radios from the indicator light system to decrease walking distance and patient handoff time.

Delegation and staffing. Practice managers consistently reported that having the most effective number and mix of staff and clearly defining each staff member's role were central components to an efficiently operated practice. Practices also reported that poor human resource management was a common source of inefficiency. Examples included inappropriate division of labor between staff, poor work flow, inadequate interaction or dialogue between staff members, difficulty in adapting when employees were out sick or on vacation, and staff being territorial over duties.

To improve efficiency, several practices created primary health care teams composed of physicians, nurses, MAs, and other nonclinical staff who work together daily to treat

FOR MORE IDEAS

The authors present much of their research into the causes of inefficiency in family medicine practices, as well as potential ways to reduce that inefficiency, on a website: http://cufamilymedicine.org/efficiency.

an established cohort, or "community," of patients. Practice managers reported that the team approach improved efficiency by increasing flexibility in staff scheduling, clarifying the roles and responsibilities of staff, improving communication, increasing patient and provider satisfaction, and streamlining the patient cycle. Practices adopting the team approach also reported that it strengthened intrapractice relationships, decreased negative dynamics between staff members over responsibilities, fostered a more positive learning atmosphere for MAs, and strengthened relationships with patients.

Two practices that had implemented the team approach stressed the importance of having buy-in and support from the leadership within the organization, as well as providing staff training and education prior to implementation. (For more on teamwork, see *FPM*'s Care Team & Staffing topic collection: http://bit.ly/1ykns9j.)

Inefficiencies post-visit

The key areas of inefficiency occurring after the patient visit were identified as follows:

Medication refills. Practices noted that handling medication refill requests is a high-volume, repetitive task in primary care offices with many steps and opportunities for error. Patients directly contacting the practice for refills, in person or by phone, added substantial variability and represented a major "time sink" for both MAs and front-desk staff at several practices.

Some practices addressed this by developing standardized communication systems with pharmacies, including faxed forms and electronic prescribing systems. Practices noted that e-prescribing helped boost efficiency by avoiding the need for staff to manually fax authorizations and provider approvals for refills. E-prescribing also improved documentation and the accuracy of medication lists.

Refills of narcotics are a particular concern. These requests must be carefully reviewed to ensure consistency with the plan of care developed by the provider, taking additional staff time and adding extra steps to the refill process. Some practices reported the use of "pain contracts" with patients, and in some cases special "pain quality teams" were formed to oversee refill processes for "problem" patients. (For additional reading on this topic, see "How to Monitor Opioid Use for Your Patients With Chronic Pain," *FPM*, November/December 2014, http://www.aafp.org/fpm/2014/1100/p6.html.)

Dealing with third-party payers. Primary care practices often seek to maximize payments from third-party payers. But dealing with payers was reported to take enormous staff time because of the need to frequently contact payer representatives regarding prior authorization for specific services, permission for referrals, etc. Additionally, care guidelines and billing requirements vary between payers. As with eligibility verification, practices often found that they needed to dedicate staff to these tasks to efficiently accomplish them. EHRs also reportedly helped by making billing more efficient and coding more accurate.

Managing test results. Practices reported that laboratory testing, including blood tests, pathology tests, and radiography, had enough variability and complexity to cause inefficiency. For instance, practices struggled with the variety of tests ordered, the number of laboratories performing the tests, the number of different practice team members involved in the process, and the need for test tracking and auditing. This led practices to need additional staff time to collect charts and retrieve faxes, as well as deal with the increased poten-

■ Properly formed care teams can increase flexibility, improve staff relations, and streamline the patient cycle.

■ Standardizing communication procedures with pharmacies can make refill requests easier to manage.

PRACTICE RESOURCES FROM *FPM*

You can access the following articles in *FPM*'s Practice Efficiency topic collection at http://www.aafp.org/fpm/efficiency:

"Making Every Minute Count: Tools to Improve Office Efficiency," *FPM*, April 2005.

"Improving Office Practice: Working Smarter, Not Harder," *FPM*, November/December 2006.

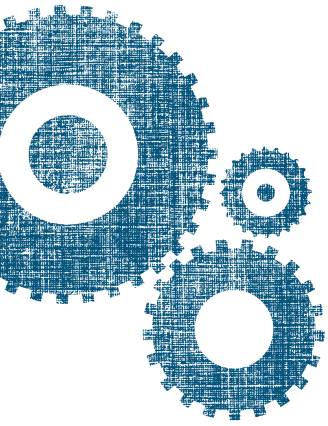
"Six Tips for Improving Practice Efficiency and Patient Satisfaction," *FPM*, February 2007.

"Seven Strategies for Creating a More Efficient Practice," *FPM*, September 2007.

"The Ideal Medical Practice Model: Improving Efficiency, Quality and the Doctor-Patient Relationship," *FPM*, September 2007.

"Addressing Common Inefficiencies in Office Practice," *FPM*, November/December 2010.

"A Streamlined Approach to Prescription Management," *FPM*, November/December 2012.



Practices reported training front-desk and scheduling staff to ask patients specific questions about the purpose of their visit to determine an appropriate visit length when making an appointment.

tial of test-associated medical errors. Some practices reported success by dedicating MAs to collecting and preparing blood samples and other specimens for processing. Practices using EHRs also reported improved efficiency with the tracking and management of external test results, including automated test requisition forms and reconciliation of test results sent and received.

Some practices have dedicated personnel for verifying insurance coverage and managing lab test results.

EHRs can also make coding more accurate and reconcile lab requests and results received.

There are several potential barriers to change, including a lack of funds for investing in improvements, perceived low return on investment, and opposition to new methods.

Barriers to achieving efficiency in primary care practices

The participating practices identified three major barriers to successfully implementing process improvement strategies:

Capital. Most practices do not have cash reserves sufficient to fund meaningful changes, including money to hire consultants, purchase an EHR, and provide dedicated staff time to comprehensively address inefficiencies.

Return on investment. Practices are not convinced they will realize any quantifiable financial return from taking steps to reduce inefficiency. For example, when looking at the possibility of purchasing or enhancing an EHR, a practice might wonder if the cost and lost productivity during implementation will negate the project's benefits.

Physician resistance. Physicians will sometimes not want to change methods and protocols they have used for years and understand well. Even if they invest the time to learn the new methods, they may not sustain the change and may fall back on old patterns.

Next steps

Our project was not intended to develop evidence-based best practices for improving efficiency in primary care but rather to fill a knowledge gap in the literature. With the data we collected we created a website (http://cufamilymedicine.org/efficiency) that busy primary care practices can use to learn about common sources of inefficiency in primary care and real-world suggestions on how to improve.

We have also included in this article a list of past *FPM* articles focused on how practices have improved efficiency (see "Practice resources from *FPM*," page 21). These articles provide primary care physicians with some assurance that they are not alone in the struggle for greater efficiency and that they can successfully improve in these areas. FPM

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