Strategies for Better Patient Flow and Cycle Time

These tried-and-true techniques will increase revenue, reduce expenses and improve satisfaction with your practice.

Leigh Ann Backer

If there were CPT codes for searching for information and supplies, waiting for resources to become available and providing non-visit-related services, patient flow wouldn't matter so much. Imagine getting per-minute reimbursements while you're waiting for a urinalysis result or an available exam room; while you're looking for a lost X-ray film or a chaperone; and while you're returning calls and authorizing refills. Your practice's financial picture would look much rosier.

Unfortunately, CPT is not that comprehensive, and reimbursement from Medicare and private payers is dropping, leaving your practice with shrinking profit margins. With no sign of an uptrend in the foreseeable future, a growing number of family physicians around the country are concluding that their best opportunity for increasing income and decreasing overhead lies within their own offices. By studying patient flow, they've been able to increase efficiency and uncover hidden capacity and, as a result, generate more visit revenue, cut expenses and improve their patients' satisfaction as well as their own.

Gordon Moore, MD, a solo family physician in Rochester, N.Y., has studied patient flow processes in his part-time administrative role at Strong Health in Rochester and as a participant in the Institute for Healthcare Improvement's Idealized Design of Clinical Office Practices (IDCOP) collaborative. "We have encumbered ourselves to the point where we're dragging around an incredible amount of weight," Moore says. He recalls a three-provider practice that counted 39 places in which to find charts – and, not surprisingly, employed the equivalent of one full-time staff person, sometimes a clerk and at other times an MA, clerk or physician, to locate charts. "We need to challenge our assumptions and simplify the rules that drive this behavior," he says.

There is no such thing as ideal cycle time, and good patient flow can't be defined in terms of a particular number of visits per day. The "answer" for each practice should depend on the nature of its patient population, the practice style of its physicians and the goals and priorities of the practice, says Elizabeth Woodcock, MBA, director of knowledge management for Physicians Practice Inc. and author of *Mastering Patient Flow* (see the reading list on page 50). ➤

Leigh Ann Backer is the managing editor of Family Practice Management. *Conflicts of interest: none reported.*

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Practices have found that they can increase efficiency and uncover hidden capacity by improving patient flow.

The optimal cycle time and patient flow varies from one practice to another depending on patient mix, practice style and goals and priorities.

Flow mapping requires walking through a patient visit from start to finish with the patient's point of view in mind.

Practices measure cycle time by tracking the number of minutes associated with various steps in the patient visit, including periods of waiting.

Woodcock, Moore and others say the key to better patient flow is to develop a deep understanding of your practice's patient flow process, identify problem areas, develop a concept of your ideal system, and then, through small tests of change, begin moving toward your goal.

Charting your flow

Before you can make meaningful changes, you must understand the patient care process in your practice well enough to identify bottlenecks and understand their root causes. Flow mapping and cycle-time measurement are two techniques that can help.

Flow mapping involves walking into your office as a patient and taking detailed notes about your entire visit – what happens to you as well as what you observe – and your impressions along the way. Moore suggests looking carefully at customer service, paperwork, equipment and space inadequacies, duplication and rework, correction, value-added and non-value-added activities.

> **"We have to look not at what we're doing to serve ourselves but what we are doing to serve them."**

Cycle-time measurement builds on flow mapping and involves measuring and charting the time associated with various parts of the patient visit. Total cycle time is generally defined as the number of minutes between when a patient arrives at the practice and when he or she leaves.

In determining what to measure, you can be detailed, take a high-level view of the visit or aim for something in between. (See the example below.) Most important, the measures should distinguish waiting time from the rest of the visit. Moore says using four essential data points – when patients arrive, when they see the doctor, when the interaction with the doctor ends and when they leave the practice – will give you a good indication of value-added time (face-to-face time) and all other time associated with the visit.

Once you've decided what to measure, you'll need to decide on a sampling method and determine who will do the measurement. For example, you might choose to measure cycle time for patients scheduled at 10 a.m. and 3 p.m. once a week for each physician.

At the Milton S. Hershey Medical Center/Pennsylvania State College of Medicine family practice in Hershey, Pa., patients carried the cycle-time charts on clipboards with clocks attached as they proceeded through their visits, and practice staff noted times on the charts. Thomas J. Weida, MD, medical director of the group and a member of the *FPM* Board of Editors, said this approach yielded good results. Other groups ask patients to record the times or they designate staff members to shadow patients throughout their visits, recording times as they go.

Woodcock recommends averaging the cycle times per physician per month and plotting them on a graph. When total cycle time for an average office visit regularly exceeds 60 minutes, there's usually room for improvement, she says.

Other measurement strategies. Bill Soper, MD, MBA, suggests that more informal methods of assessment have worked well in his two-physician group in Kansas City, Mo. He pays careful attention to the times listed on routing slips and regularly asks clinical and non-clinical support staff and especially patients how things are going. "Patient complaints are probably the most sensitive indicator of all," says Soper, who is also a member of the *FPM* Board of Editors.

Another way to help identify patient flow problems is to have physicians create an "interruption list" on which they note things that cause them to have to step out of the exam room – a phone call from a pharmacist, a form, a patient handout, etc. Woodcock also recommends systematically following up on chart transfers. When not due to insurance changes, chart transfers are often "the signal that something is wrong in your practice," Woodcock says.

KEY POINTS

- Flow mapping, cycle-time measurement and interruption lists can help practices identify bottlenecks.
- Using small tests of change, practices have discovered solutions to their patient flow problems.
- Visit planning, co-location, efficient office design, exam room standardization, documentation shortcuts and streamlined check-in and checkout processes have proven successful.

Envisioning a visit that flows

With a better understanding of your process and its shortcomings, you'll be prepared to imagine what your process *should* look like and develop some goals for getting there.

You may determine that the ideal process is one in which you don't have to leave the exam room during a patient encounter or one that frees you to go home almost immediately upon completion of your last patient visit, knowing that your charting and all the day's non-visit-related care is done. However you define your ideal, Moore recommends keeping your patient at the center of your efforts by studying your practice from the patient point of view and defining value in terms of patients' needs.

"When patients come to our practices, they're usually looking for reassurance, and they want us to help them get well. What we give them instead is arrival, check-in, waiting room, weigh in, waiting in the exam room, checkout – all in addition to the interaction with the doctor," Moore says. "We have to look not at what we're doing to serve ourselves but what we are doing to serve them. The effects can be earth-shattering in the way they free us to spend more time delivering the kind of care our patients love and that makes us feel like we're doing something valuable," Moore says.

Next, you can work to identify steps in your patient flow process that don't add value and can be eliminated, as well as the essential components of the visit, keeping mind that even the latter can be improved upon.

Improving patient flow will require the commitment of a physician leader as well as the entire staff. Woodcock urges groups that lack this esprit de corps to focus instead on creating a culture that embraces change and seek opportunities for improvement.

"Patient flow is not up to the doctors. It's not up to the front office or the nurses. It's up to the practice," Woodcock says. "A physician can't just come in one morning and say, 'We've got to be more efficient.' There has to be a group effort, as well as focused leadership from a physician in the group."

To get buy-in, Weida suggests expressing the potential benefits to others in terms of what's important to them, for example, getting home on time, generating higher income, providing better quality care.

With the support of others in your practice, you'll be ready to implement changes and see whether they make a difference. Moore recommends testing one small change at a time and then measuring the effects to see if your interventions are helping to move you toward your goal.

"We have to be very careful that our efforts to improve flow don't have unintended consequences," Moore says. "We don't want to cut into the interaction time. That's the value of what we're delivering." Moore uses a simple four-question survey to measure patient satisfaction in his own practice, periodically asking 10 consecutive patients to complete the survey.

In addition to measuring patient satisfaction and continuing to track your cycle time, you can look at work hours for physicians as well as other staff, revenues, and patient and staff satisfaction to determine whether your efforts are working.

Redirecting your flow

The following strategies have proven successful in certain family practices and might be worth trying in yours. With your goals in mind and the ability to tolerate some trial and error, you'll be on your way to better patient flow.

Visit planning. One of the most effective patient flow strategies, visit planning is also among the easiest to implement, says Woodcock.

First and foremost, visit planning requires a chart preview, normally done the day before or the morning of the visit, to determine whether all appropriate documentation is in the chart and ready for the physician. This enables the clinical support staff to alert

SAMPLE CYCLE-TIME FOR A 15-MINUTE OFFICE VISIT

Step	Time (minutes)
Wait at check-in	2
Complete check-in	6
Wait in waiting room	14
Move to exam room	4
Wait for physician	10
Interaction with physician	19
Move to checkout	3
Wait at checkout	3
Check out	4
Total cycle time	65 minutes
Percent of time spent with physician	29 percent

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Other measurement strategies include having physicians track the reasons they have to interrupt patient encounters and simply talking with patients and staff about their perceptions of patient flow.

Patients' interests should be central to the patient flow process.

Any effort to improve patient flow requires physician leadership and an organized team effort.

Monitor improvement efforts to make sure they're working and that they don't have negative unintended consequences.

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The key components of visit planning are chart previews and huddles.

Visit planning enables you to make sure before the patient arrives that the necessary information and resources will be available.

Physicians who do continuous-flow processing complete dictation and non-visit-related work as it arises throughout the day.

Benefits of continuous-flow processing include time savings, better capacity, fewer errors and increased satisfaction.

the physician to potential problems that could derail the visit. For example, if a nurse discovers that a test result that's critical to determining a patient's treatment plan won't be available until after the patient's scheduled appointment, the visit could be rescheduled rather than the patient and physician making this discovery in the exam room.

Another effective visit planning strategy is a brief meeting between the physician and clinical and clerical support staff, also known as a "huddle." The purpose of the huddle is to review the schedule and identify ways to make the day flow better and do contingency planning for unexpected demand, Woodcock says. For example, realizing that Mrs. Jones is bringing in one son to check for an ear infection and that she always asks the doctor to check her other son, you could go ahead and have both boys' charts pulled.

Chart previews and huddles can help you to determine the reason for the visit and prepare accordingly, whether that means having particular instruments and supplies ready, getting an X-ray or a throat culture done or asking an MA to write out prescriptions for a

MAKING TIME FOR NON-VISIT-RELATED CARE

Your practice's patient flow process is only as good as your ability to handle the multitude of non-visit-related tasks that arise during the course of an average day. Refill requests, phone calls and charting all must be managed, and an emerging school of thought suggests that the most efficient way to do this is in real time, responding to these needs as they arise rather than dealing with them at the end of the day.

Family physician Gordon Moore, MD, of Rochester, N.Y., has made this approach, known as "continuous-flow processing," a guiding principle in his solo practice and credits it with enabling him to save time, increase his capacity, decrease errors and increase satisfaction.

Elizabeth Woodcock, MBA, an Atlanta-based consultant and director of knowledge management for Physicians Practice Inc., recommends the approach as well. She knows of a family practice that uses "the fourth exam room" to represent its commitment to incorporate all non-visit-related work into the day.

According to Moore, successfully completing dictation and other non-visit-related work as it comes along depends on doing the following: Anticipating the work by estimating the time and resources needed (allowing for direct care and non-visit-related care) and carefully matching appointment times and lengths to resources.

If continuous-flow processing seems like a more radical step than you're ready to take, the following are more traditional approaches to help prevent non-visit-related care from interrupting your patient flow.

Phone calls

Woodcock tracked phone calls in family practices and found that as many as 30 percent of the calls received are from repeat callers. In some cases, then, your receptionist or phone triage person has to field the same inquiry twice, look for the same chart twice, engage the nurse twice. If return calls will be batched later in the day, one solution to the problem of repeat calls is to emphasize to callers that calls will be returned "at the end of office hours" (unless the problem is urgent, of course). Weida says this strategy has helped reduce the number of repeat calls his practice receives.

Refill requests

Jodie Escobedo, MD, of Santa Monica, Calif., uses several simple protocols for managing refills that effectively transfers much of the work associated with managing refill requests to her practice's clinical support staff. (Look for an article about her system in an upcoming issue of *FPM*.) The system enables her to spend more face-to-face time with patients and less time on the phone, she says. Escobedo also writes prescriptions for a full year in as many cases as possible. "We're an open-access office and our retention is good, so I can be confident that patients will schedule and return for necessary follow-up visits. If they don't, we have electronic ticklers that are generated at the same time an order is entered so that our first-class staff can be counted on not to let follow-ups fall through the cracks," Escobedo says.

Bill Soper, MD, MBA, uses a partially automated system in his two-physician group in Kansas City, Mo., that has all but eliminated the need for a clinical support staff person to spend much of each day fielding refill requests. When requests come from pharmacies, the receptionist forwards the calls to a message recorded by Soper that asks them to fax a written request to the practice. The faxes come into the practice on a computer, are batched, printed, reviewed and signed by the doctor and then faxed back to the pharmacy, usually the same day. Refill requests from patients are forwarded to voice mail for the nurses, who often encourage patients to have their pharmacist submit the request. Soper reports that patients and pharmacists have responded well to the system and that it has substantially reduced calls to the practice.

patient with several chronic conditions who will be coming in for prescription refills.

"Visit planning has helped our patient flow tremendously," Soper says. "I'm much more efficient if I don't have to leave the exam room."

Weida's group has also benefited from visit planning. He now wants to take their efforts a step further by developing clinical protocols for several common procedures and diagnoses that will ensure that clinical support staff know the required setup and preparation.

Co-location. Putting people whose work is contiguous in contiguous space – or at least in close proximity to one another – is the theory behind co-location. For example, Moore says, practices participating in the IDCOP collaborative have had success at locating schedulers in the same area as the clinical team. They can hear how the flow is going and make informed decisions about whether to try to work a patient in.

Co-location helps decrease messaging and all of its negative consequences: errors, rework, delays and other forms of waste. At the same time, it leads to better understanding of patient issues and of the daily work that all members of the group do.

For many practices, co-location requires shoehorning staff into tight quarters and, for some, the geographic limitations are too difficult to overcome. Walkie-talkies have been a good alternative to co-location for some practices, Moore suggests. (See "A Simple Technology to Improve Office Efficiency," page 55.)

Efficient office design. When Soper established a new practice two years ago, he was able to design his new office space with patient flow in mind. He made sure the receptionist is close to the door, that the location of the reception desk enables her to view the entire room and that the design of the counter at the reception area is such that patients can fill out forms there. "It decreases the number of contacts that our staff have to have with patients and enables them to be more efficient," Soper says.

To minimize the amount of ground the clinical team would have to cover when taking patients from the waiting area to exam rooms (he once worked in a practice where they were separated by 85 steps), he also made sure the exam rooms are in close proximity to the waiting area.

Soper designed the exam rooms so that they're just big enough to accommodate three adults and equipment, which allows him to pivot and reach most anything he needs during the exam.

Co-location helps decrease messaging and all of its negative consequences.

He determined that three exam rooms per physician would be the minimum necessary for him to avoid delays. He also has a room without an exam table that he and his colleagues use for encounters that require limited or no physical exams. All the exam room doors are within view of the nurses' station.

Moore decided that he could best serve his patients interests with a continuous-flow practice style that requires just one room. See *FPM* articles in February 2002 (page 29), March 2002 (page 25), and May 2002 (page 39) to read more about Moore's practice.

Streamlining check-in. To help keep the check-in process from bogging down, Soper has looked carefully at the forms patients have to fill out at check-in to make sure they're focused and well-designed so that patients can complete them relatively quickly and easily.

Jodie Escobedo, MD, and her three family-physician colleagues did the same thing in their Santa Monica, Calif., practice and ultimately decided to eliminate the history form that patients had previously filled out. "We realized it just made no sense," she says. "The small amount of time you gain because the patient may have documented your review of systems for you isn't worth the time and frustration for the patient. We'd have to go over it with the patient and put it into the electronic record anyway. I think paperwork is sometimes used to keep patients busy and give the system time to catch up."

Soper's practice pre-registers patients as often as is possible and has begun considering a Web-based registration process. Weida's group will begin pre-registering patients in the next several months, with a secretary registering patients by phone several days before their scheduled appointments.

Streamlining registration also gives practices the capacity to collect co-pays at check-in, Woodcock says. This can help the checkout process, which is often complicated by the need to manage referrals and schedule follow-up appointments. ➤

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You can reduce the number of repeat calls you receive by telling callers that most calls will not be returned until the end of the business day.

Developing protocols to help manage refill requests can help smooth patient flow.

Co-location involves putting people whose work is contiguous in contiguous space to decrease messaging and improve understanding.

Office design can have a significant impact on patient flow and efficiency.

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Check-in can be streamlined by redesigning or, when possible, eliminating the forms patients must fill out and by pre-registering patients.

Stocking and arranging exam rooms in a standard way can improve efficiency.

Problem-specific templates that enable you to document by exception can help reduce charting burdens.

Instruction letters for patients receiving referrals and a protocol for scheduling follow-up visits are two strategies for streamlining checkout.

Exam room standardization. Soper recommends that exam rooms be stocked and the supplies and equipment be arranged in a standard way. "This applies to stethoscopes, otoscopes, tongue blades and flashlights as well as to things like skin biopsy trays and joint injection trays, which we use regularly in our practice," Soper says.

Moore also emphasizes the importance of getting all physicians in a practice to agree on a standard set of supplies. "When we let 'I was trained that way' drive our preferences and behavior, we often end up with wasted inventory as well as variation that slows us down. We're more efficient if we can use standard approaches and, when necessary, modify them based on patient need," Moore says.

> **"I think paperwork is sometimes used to keep patients busy and give the system time to catch up."**

Documentation shortcuts. Soper uses documentation templates "in nearly every visit" that guide him through a list of the components related to the particular problem he's treating and allow him to document by exception. In most cases, he's able to simply check the "normal" box. Soper uses dozens of templates, most which came with his EMR system and some of which he's developed himself. But you don't have to be an EMR user to benefit from the use of documentation templates.

Records 1-2-3 (www.records123.com) and Formedic (www.formedic.com) are among the companies that sell pre-printed documentation forms, or you may want to develop your own. Weida's group has benefited from using a template for routine gynecological exams that he developed (see "A Tool for Better Well-Woman Exams," *FPM,* April 2002, page 51).

Streamlining checkout. Despite the fact that it's the last step in the patient visit, checkout can significantly affect your patient flow – for the worse if it ties up staff time that could be better spent on other tasks or for the better if it minimizes subsequent calls to the office.

To speed up the referral process, Soper's practice has developed about 40 one-page instruction letters – one for each of the consultants he and his colleagues commonly refer patients to. The checkout person simply fills in the diagnosis that the physician wrote on the patient's routing slip and emphasizes that the patient should call the consultant's office to schedule the appointment as soon as possible.

"We used to think patients expected us to make their appointments for them, and there are still some who do, but most patients, and particularly the ones who are working and have lots of obligations, would rather make their own appointments. While they're standing at checkout, they don't necessarily know what day would work," Soper says.

Weida's practice is beginning to take advantage of the checkout process to make sure follow-up appointments are scheduled for the appropriate lengths of time by noting on the encounter sheet, for example, that the patient needs to return in four weeks for a 30-minute appointment. Because some patients leave before scheduling their follow-up visits, he's also letting the patient know the length of the visit so that he or she can pass the information along to the scheduler when calling in.

Big rewards

The physical layout of your facility and the feasibility of modifying it, the degree to which your practice is computerized, and the culture in your practice can each significantly limit or enhance your ability to improve your patient flow process. However, even small changes in your patient flow process have the potential to pay big dividends in terms of more income and greater satisfaction for your patients, your staff and you. FPM

Send comments to fpmedit@aafp.org.

SUGGESTED READING

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