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New Directions in Patient Throughput

Modernize your check-in and work-up for smoother days and a healthier practice.

By Christopher Kent, Senior Associate Editor

Few aspects of your practice affect your overall success more than your patient throughput: how your patients are moved through your practice, from check-in to check-out. Improving throughput by minimizing wait times and increasing efficiency, without compromising care, makes a big difference in several areas.

For example, your patients will be more satisfied. They'll spend less time sitting around and more time receiving medical care. Your relationship with them will be strengthened, and they'll be more likely to recommend your practice to others. You'll be able to see more patients in less time, which does a lot to offset Medicare cutbacks and economic slowdowns. Your staff will be happier and less frustrated, and you'll work fewer late nights.

We recently interviewed doctors and administrators at four practices known for their progressive, proactive, efficient patient flow, to find out what tools and strategies they use to help manage patient throughput:

- Beach Eye Care, located in Virginia Beach, Va., directed by G. Peyton Neatrour, M.D.
- the Christenbury Eye Center, based in Charlotte, N.C., founded by Jonathan D. Christenbury, M.D.
- the Katzen Eye Group, the largest private eyecare practice in the Baltimore area, founded by Leeds E. Katzen, M.D.
- Drs. Fine, Hoffman & Packer in Eugene, Ore.

Two of these practices -- Beach Eye Care and Christenbury Eye Center -- are "paperless." The other two are investigating the possibility of switching to electronic medical records, but for now continue to use traditional filing methods.

Because of their different working environments, these practices shared a wide range of insights, strategies and technology recommendations that have helped them improve patient throughput. Here, we've assembled the highlights of what they've learned.

The information is presented in two parts:

- First, we'll discuss strategies for maximizing patient throughput at each consecutive point before and during a patient visit.
- Second, we'll examine the advantages -- and pitfalls -- of switching to electronic medical records to enhance patient flow.

PART ONE: The Patient Visit, Step by StepPART ONE: The Patient Visit, Step by Step

Take care of business before the patient comes in

Handling as many issues as possible before the patient arrives is a key to improving patient throughput, especially when the patient is new. Here's what our four practices suggest:

Get the patient's registration information ahead of time. Depending on your level of computerization, you can use one or more of the following options:

- Provide registration forms on your Web site. Have patients print them out at home, fill them out and bring them (or mail them) in. Using PDF format ensures that patients will be able to print them out no matter what type of computer they use. (For example, you can check out the Katzen Eye Group's new-patient form at www.katzeneye.com.)
  According to Richard Edlow, O.D., chief operating officer at Katzen, the number of new patients using this option has risen to about 50% in the year since they made it available. "It's one of the best things we've done," he says. "It really speeds things up when the patient arrives. It also saves us the time and postage it takes to send out a package of forms."
- Have patients fill out forms on-screen, using their home computers, and submit them electronically over the Internet. Beach Eye Care and the Christenbury Eye Center uses a customer relationship managing software called Goldmine to capture demographic and contact information in this manner.
  Jonathan West, practice administrator at Beach Eye Care, says that this feature is only used by a small percent of patients so far, and almost entirely LASIK prospects. "About 28% of our patients visit our Web site, but only about one quarter of them send in information via the Internet. However, it does save time when the patient comes in, and usage is increasing."
  Note that even practices with full electronic capabilities should provide patients with the option of submitting forms manually. Some patients aren't computer savvy, or they're un-comfortable sending personal information over the Internet.
- Interview the patient over the phone. Drs. Fine, Hoffman & Packer use an IDX software program that prompts the interviewer to ask all necessary questions about demographic, contact, referral and insurance information.
- Mail a registration packet and health history card to the patient and ask him to fill it out and mail it in before the appointment, or bring it in with him if he doesn't have enough time to mail it. (Providing a pre-addressed envelope is important.)
  When the patient comes in, review information already on the computer with the patient, or compare it to hand-delivered documents to make sure nothing is incorrect or omitted.

Authorize insurance in advance. Two helpful strategies:

- Check referrals and benefit eligibility and apply for referrals via the Web whenever possible. Today, the majority of third-party payers will allow you to do this.
- When the patient calls to make an appointment, ask why he or she is coming in. Staff members at Drs. Fine, Hoffman & Packer say it makes a huge difference in managing insurance coverage to know ahead of time whether patients are coming in for routine vision care or with a medical chief complaint.

Provide automated information for the patient. Save time by making information available over the Internet or telephone. The Katzen Eye Group provides directions to its office on the practice's voice mail, and offers patients the option of printing out written directions and maps by visiting the practice Web site.

While you have them on the phone, remind patients to bring insurance cards, co-pay and referrals. This simple reminder may save your front desk a lot of time and trouble and prevent unnecessary delays in patient flow.

Make the most of your waiting area

Many practices that offer refractive surgery have found it advantageous to create two separate waiting areas, to better accommodate the distinct personalities of refractive and general patients. As the Katzen Eye Group discovered, this layout can also be used to minimize front desk congestion.

Redirect overflow. Richard Edlow, COO at the Katzen Eye Group explains: "Because patient volume has increased in recent years, we created two entrances to our practice with two separate check-in counters. The original rationale was to have one waiting area for refractive patients, one for other patients. But then the refractive surgery market went soft and refractive patient volume dropped off.

"At some point it dawned on us that we could use the infrastructure we'd created to manage overall patient flow. Our practice is very busy, and we'd often have congestion at the front desk. Now, we post a sign directing the patients of whichever doctor's schedule is most crowded to the second waiting area. This takes about 30% of the patient volume away from the main front desk."

Position staff for maximum flexibility. Beach Eye Care has a similar setup featuring two waiting areas, separated by a 720-gallon saltwater fish tank. However, they use a single "front desk" that's placed between the two waiting areas. This allows the same personnel to help patients on either side, as needed.

Minimize wait times

Minimizing wait times is obviously essential to maintaining patient flow and keeping patients happy.

Expedite sign-in. Once you've eliminated the need for patients to fill out forms upon arrival, try these strategies to help prevent congestion at the front desk:

- Place a small copy machine at each check-in desk so staff can copy insurance cards without leaving the desk.
- If possible, scan materials that patients bring in into your computer system to eliminate transcribing and paper copies.

Use video technology to monitor patient flow. As patients finish checking in at the Katzen Eye Group, their color-coded files are placed in a rack, organized by doctor. A wireless TV camera is permanently focused on the rack, and the image is relayed to the office of the practice's chief operating officer. Part of his job is to keep an eye on the rack. If he sees that charts are backing up, he goes out front and reroutes patients and resources to prevent a major backup from occurring.

Track timing closely. Even though Drs. Fine, Hoffman & Packer don't use EMR, they monitor patient flow in great detail. Laurie K. Brown, practice administrator, explains: "On the patient's routing slip, we write the scheduled appointment time, the time the patient actually arrived, the time the patient was met by the technician, the time the technician finished the testing and the time the doctor saw the patient," says Ms. Brown. "Tracking this lets us spot problems and address them." For example, if the tracked times indicate that patients are waiting a long time between dilation and the exam, the staff will consider reprioritizing tasks so technicians can respond more quickly.

Practices using EMR can monitor timing via computer, making the data easier to organize, summarize and graph. The Christenbury Eye Center monitors how long each part of the sign-in process takes, and analyzes the data in numerous ways, breaking it down by type of patient, for example, or by new vs. pre-existing patients. By constantly using this data to refine check-in procedures, the practice has reduced check-in time for new patients to less than 10 minutes.

Use scheduling templates, but adjust them as needed. "We create a scheduling template for every doctor," Ms. Brown explains. "Because every doctor works differently, the template defines how many patients of which type the doctor will see at which times. Once the template is created, we monitor the results. For example, if we see that every day at 10:00 a.m. a given doctor falls behind schedule, we may need to change the ratio of comprehensive exams to recheck visits in that time period to resolve the problem."

Be helpful and direct with patients if a backup occurs. If wait time at Drs. Fine, Hoffman & Packer is lengthened because of an emergency, staff members explain the cause to waiting patients, make them comfortable, offer them coffee and ask if they need assistance. "This makes a big difference in how patients view the delay," observes Ms. Brown.

Manage flow during work-up

As patients are escorted from the waiting area into testing -- which is handled by technicians (not doctors) in all four practices -- delays can be minimized using low-tech or high-tech methods, or a combination of both:

Use color coding to manage files, data and patient flow. Color coding can telegraph key information about the patient.

- Katzen Eye Group uses color-coded charts to identify the type of patient (OD-referred, LASIK, pseudophakic, etc). When anyone picks up the chart, he already knows a lot about the patient, even before he peruses the chart inside.
- At Beach Eye Care, the computer automatically colors the patient's name on-screen when registration/verification is complete. This notifies the appropriate technician (who has the patient list displayed on his monitor) that a patient is ready to be escorted to testing.
- At Drs. Fine, Hoffman & Packer, each doctor has a different color tab, which is attached to the patient's chart. The staff tries to honor the patient's preference of doctor, which is usually highlighted in the computer, but sometimes the preferred doctor isn't available. The tech who picks up the chart can see whether the sticker disagrees with instructions, and check to see if a mistake was made.

Use preprinted template chart pages. If you're not using EMR, preprinted "forced entry" forms will ensure that no tests, procedures, exam data or follow-up issues are omitted during the patient's visit. Every item on the page must be acknowledged, either with data or "N/A" to indicate it wasn't relevant for this patient. A new page can be used for each visit, and then added to the patient's file.

Use multiple-copy fee tickets. The Katzen Eye Group uses three-part carbonless fee tickets as receipts and flowsheets. One part is given to the patient as a receipt; one copy goes to billing; one copy is used for routing the patient to testing, and later for managing follow-up tasks, such as sending letters to referring doctors. (Referring doctors are preprinted on tickets of existing patients as part of their demographic information and handwritten on new patient tickets.)

Have patients choose eye wear before being dilated. Patients make choices faster when dilation isn't interfering with their ability to see how frames look in the mirror.

General Strategies for Enhancing Patient Flow

Like surgical technique, keeping patient throughput as efficient as possible requires ongoing attention and adjustment:

- Monitor every aspect of patient flow and adjust accordingly. If you ignore this issue, patient care will suffer. All four practices quoted in this article track patient flow every day.
- Discuss tracking data and observed problems at staff meetings. This allows the entire staff to brainstorm ways to eliminate roadblocks and unforeseen delays.
- Cross-train staff. Staff members who can serve in multiple roles are your best weapon against delays when a staff member is out sick, or when congestion occurs in one area while staff in another area has a light workload.
- Create procedure manuals. Techniques for expediting patient throughput can only work if everyone is aware of them. Manuals can also help when staff members fill in for one another.
- Survey your patients regularly about their experience in your office. Drs. Fine, Hoffman & Packer survey patients by phone every 2 weeks. They randomly select new and established patients of all of their doctors. "This provides great feedback, allowing us to praise what's right and change what's wrong," says practice administrator Laurie Brown.

Use a light panel to track patient status and doctors. Laurie Brown, at Drs. Fine, Hoffman & Packer, has high praise for the Expeditor system installed in their practice. They've placed a master panel on the wall near the tech station and one in the staff's break room. The latter is monitored by a Web cam, with the image displayed on every computer monitor in the practice. Color coding on the panel shows who's in which room, when patients are ready, and when a technician is needed at a given location. (The system also functions as a dilation timer.)

Use a dilation timer. Many good EMR systems will also time patient dilations; some light panel tracking systems do the same thing. (See above.) Drs. Fine, Hoffman & Packer's Expeditor system is positioned in the sub-waiting area, which is visible from the technician station. When technicians seat patients and insert drops, they choose an amount of time and push a button above the slot where the patient's chart is placed. After the time has elapsed, the timer produces a beep and a light flashes (until turned off by the technician) to indicate that dilation is complete. This system can also be used in any exam room.

Incorporate Nidek's Epic refracting lane. Two of the four practices mentioned the Epic system as having a major impact on patient flow. Favorable points mentioned included its compact size, the fact that a refraction can be performed using only the keyboard, having a lensometer and autorefractor built into the system, and being able to easily show the patient the difference between the old and new prescriptions.

Eliminate exam delays

By speeding information transfer and letting the doctor focus more on his area of expertise, exam times can be minimized without lowering the quality of care.

Provide information outside the exam room. At the Christenbury Eye Center, which uses EMR, the technician calls up the patient's data on a monitor outside the exam room before the doctor arrives. This gives the doctor a head start before he encounters the patient.

Practices using paper files can use a similar strategy, by placing the patient's file in a bin outside the exam room. Information can be conveyed by the color coding of the file, or by placing the file in the bin in different positions to indicate the type of patient or type of exam needed.

Use scribes. At the Katzen Eye Group, all the doctors work with scribes during the exam. COO Richard Edlow comments: "Originally our busiest three doctors were the only ones who used scribes, but the difference in efficiency was so obvious that we decided to provide a scribe for all 14 doctors at our practice. The scribe enters data on the chart, takes the patient to the optical or check-out and manages the prescription."

PART TWO: Going Paperless

One of the common themes expressed by staff at all four of these practices is the desire to eliminate paper records and forms. Christenbury Eye Center and Beach Eye Care have both made the transition to almost completely paperless record-keeping; the Katzen Eye Group and Drs. Fine, Hoffman & Packer are investigating making the change, but haven't done so yet.

Staff at both practices that have made the transition say that it's one of the key factors that has helped them improve patient throughput.

Electronic records: the benefits for patient flow

How does patient throughput benefit from going paperless? Here are a few of the advantages described by the staffs at Christenbury Eye Center and Beach Eye Care:

Shorter patient visits. Because of the efficiency of patient flow, the lack of congestion, the lack of paperwork and the doctor's ability to complete the exam with less work, patients are in the office a shorter time. In fact, Dr. Christenbury says he sees twice as many patients per day as he did when the practice used paper records.

Electronically managed test results. Data from testing, including fundus photos, go directly into the computer and are immediately accessible from any PC in the practice. This saves time and eliminates

Christenbury's Paperless System

Dr. Christenbury, who founded the Christenbury Eye Center in 1987, began moving the practice to a totally electronic system in the fall of 1998. Today, the entire practice, encompassing about 50 employees, uses a paperless system.

The main office uses more than 100 workstations and has several servers on the local area network. The satellite offices each contain 5 to 10 workstations, connected to the network via Citrix Metaframe over a frame relay line. (The satellite offices can dial into the main facility network via

the possibility of a transcription error. (Outside data can also be imported into the system using scanners, digital cameras, or even copied from other software using a clipboard function.)

Faster diagnosis. "With our current setup, I can walk into the exam room, and all the test results are onscreen," explains Dr. Christenbury. "I spend my time examining the patient and talking instead of flipping through the pages of the patient's chart."

Surgery planning on the spot. Dr. Christenbury says the computer allows him to target the laser treatment for a potential LASIK patient on-screen during the exam. "I have all the relevant data right in front of me, including OrbScan measurements," he says. "Because much of the data goes directly into the computer from the instruments, we've never had a problem with erroneous data entry into the laser.

"Likewise, when seeing cataract patients, I have the IOLMaster results and formula on screen. I choose the IOL and a backup lens right there and then. I don't have to come back to the case later and try to remember what I was thinking when I examined the patient. Also, all the data I input comes up on the screen in the surgery center, including the procedural mode I'll be using, which type of anesthesia to use, and so forth. Because this is available in the computer, the scrub nurse can set up the room ahead of time."

By managing surgical planning during the exam, patient flow at the time of surgery is also improved.

telephone in the event a frame relay line goes down.)

The practice uses two software programs: Medinformatix (a medical information system) and Goldmine (a customer relationship managing system). Once an appointment has been scheduled using the Goldmine system, all data is transferred electronically into the medical information system. The two systems use a shared medical record number to associate the records and eliminate duplicate data entry. Data from testing, including fundus photos, go directly into the computer and are immediately accessible from any PC in the practice.

The EMR system is backed up by a document repository that stores all documents and notes from every patient visit, including legally relevant documents such as consent forms.

(Keep in mind that the software and hardware any specific practice chooses for EMR should depend on the size and specific needs of the practice.)

Flow problems are easy to correct. The EMR system makes it easy for the staff to monitor efficiency and spot a problem, such as one staff member chronically forgetting to take care of a specific task. Data can easily be organized into charts or graphs for clarity.

Smoother (and easier) scheduling. A well-designed scheduling program can make it easy to maintain an even workflow and ensure that a steady stream of patients is treated with minimal waiting time. The Goldmine system used at Christenbury:

- allows for enterprise-wide scheduling, coordinating multiple facilities, multiple physicians and many simultaneous users
- allows authorized users to instantly access schedules of facilities or physicians, and makes changes available to all users
- provides multiple book views for quick evaluation of scheduling load.

No interpreting of handwriting. More than one person at these practices mentioned problems resulting from misreading a doctor's handwriting when using a paper system.

No disappearing paper. According to Summer Owens, executive assistant to Dr. Christenbury, one of the most noticeable advantages of the system is also one of the simplest. "These days," she says with a smile, "no one in our practice ever asks 'Where's the chart?' "

Customization: The Key to EMR

Christenbury Eye Center and Beach Eye Care both use systems designed by Medflow, Inc. According to Jonathan West, practice administrator at Beach Eye Care, the best thing about their system is that it's customizable. "We

love this system. It's tailored for us by the system's creator. Whenever our doctors need better access to certain information, or we find a way to improve patient flow, the system can be adjusted accordingly."

Likewise, Dr. Christenbury and the staff constantly refine the program to improve every detail of patient flow. "You almost have to customize," says COO Clay Baker. "In our experience there's no one platform that does everything well."

For example, the system's original exam flow sheet forced the staff at Christenbury to go through multiple screens to find specific data from different visits, or different categories of patient. They redesigned the interface so that almost any information can be accessed with a single click. Not only did this provide the doctor with more organized data structure and quicker access to data, it also saved practice technicians more than 10 minutes per day in clicks and program navigation.

Going Paperless: Look Before You Leap

D. James Riggi is president and founder of Medflow, Inc., located in Charlotte, N.C. His company created and customizes the EMR systems in use at both Christenbury Eye Center and Beach Eye Care. Riggi lists the following factors as key to success if you decide to implement a totally electronic system:

A Only attempt the transition if your practice leadership is truly committed to making the change. It can be one of the most difficult things a practice ever does, and many practices abandon the attempt halfway through the process. (Dr. Neatrour had Beach Eye Care make the transition 4 months before moving into their new building. "Adapting to EMR before the move was extremely important -- too much change at one time would have been overwhelming," he says.)

- Pick a vendor that's been through the process multiple times with diverse ophthalmology practices.
- Choose software that was engineered from the ground up specifically for ophthalmology/optometric practices.
- Don't buy anything unless you've seen it working in a real ophthalmology practice.
- Never buy untested or undocumented software.
- Make sure you get a complete solution that already has all the components and interfaces you need -- general, refractive, optical, contact lens, ambulatory surgical center, and so on. A partial EMR solution will just create more work for your staff.
- Make sure the vendor takes complete responsibility for ongoing configuration and customization of the system, or your staff will be running for the doors.
- When you actually make the transition, you'll need extra staff to manage both systems during the overlap period. Find out what the extra cost in human resources will be.
- Make sure your software vendor specifies the date at which you'll stop using paper charts. Write performance guarantees that define due dates and deliverables into your contract, with monetary penalties

attached.

- During the transition period you'll need to cut back on patient volume because your staff will be doing extra work and trying to learn a new system. Make sure the vendor guarantees that your patient volume will return to normal within 2 weeks after the transition begins. (You don't want to see decreased volume for 6 months.)

For more information about the Medflow system, visit www.medflow.net on the Web.