Pre-Visit Laboratory Testing
Save Time and Improve Care

AMA IN PARTNERSHIP WITH

Christine A. Sinsky, MD, FACP
Vice President, Professional Satisfaction, American Medical Association

CME CREDITS: 0.5

How will this module help me successfully implement pre-visit laboratory testing?

1. Outlines strategies to simplify the process of implementation.
2. Provides answers to common questions about pre-visit laboratory testing.
3. Gives guidance to address what you may encounter during implementation.
4. Shares case reports describing how practices are successfully using pre-visit labs.
Pre-visit laboratory testing involves ordering patient laboratory tests for completion before upcoming appointments. This gives physicians the opportunity to discuss results with patients at their visit, eliminating the need to review results later, and coordinate follow-up care.

Interactive Calculator: Pre-Visit Laboratory Testing
Use this calculator to estimate the amount of time and money you could save by implementing pre-visit laboratory testing in your practice. Results should be verified for your specific practice and workflows.
Enter the amount of time (minutes) per day spent by physicians and staff on activities that could be eliminated by pre-visit lab testing.

Interactive
Time and cost savings calculator

Six steps to implement pre-visit laboratory testing:

1. Re-appoint the patient at the end of each visit.
2. Pre-order labs and other needed tests.
3. Use a visit planner checklist to arrange the patient's next appointment(s).
4. Arrange for tests to be completed before the next visit.
5. Delegate computerized order entry.
6. Empower staff to manage the inbox.

Re-appoint the patient at the conclusion end of each visit.

Re-appointing patients at the conclusion of each visit saves time, promotes continuity, and may improve adherence to follow-up visits. It also signals to patients that you want to see them again and will plan ahead to make their visit as meaningful as possible.

Many practices find that scheduling one year or more in advance saves staff time. Some patients will later have to call to reschedule, but this is less work than a system that requires all patients to call to schedule their next visit.

Some practices that choose not to book one year or more in advance instead create a system to store appointment times and associated lab requests, and then contact the patient two weeks before the due date to schedule the appointment and pre-visit laboratory tests. Others will send the patient a postcard asking them to call in. While each of these approaches requires more “touches”, they are reasonable alternatives for clinics that do not schedule a year in advance.
Q&A

Will there be more “no-shows” if we schedule patients six or 12 months in advance?

Pre-visit laboratory testing, especially when coupled with an automated reminder, often decreases the rate of no-shows in a practice. Implementing an automated or manual reminder system that contacts patients via phone call, letter, email, or text message gives patients the opportunity to confirm that they will be present at their next visit or indicate that they would like to reschedule.

How can I accommodate my patients who don’t want to take an extra day off from work to have laboratory tests done?

Many health care organizations have extended laboratory hours that allow patients to come in before work, after work, or on weekends. In addition, some health care organizations allow patients to have labs drawn at a satellite facility closer to their home. Many labs allow the patient to schedule their blood draw, saving the patient time.

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Pre-order labs and other needed tests.

When re-appointing patients, *prospectively* identify pre-visit lab tests for the next visit. For example, at the end of an office visit, schedule a patient with diabetes to return in three months to complete a fasting blood sugar and HgBA1c before the visit so the result is available to the patient and physician at the following appointment.

If patients miss the lab appointment, the appropriate team member can call them, inviting them to come in for the test that they missed and, when appropriate, remind them of their upcoming appointment with the physician. This phone call can serve as a safeguard to reduce no-shows for office visits. The reminder call can also alert staff to the occasional situation where the patient has moved or is not planning to keep their appointment with the physician for other reasons, allowing that time slot to be opened up for another patient.

"Pre-visit lab through point-of-care testing saved our clinic $25 per visit in physician and staff time."

J. Benjamin Crocker, MD Internal Medicine, Ambulatory Practice of the Future, Boston, MA

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Use a visit planner checklist to arrange the patient's next appointment(s).

A visit planner is a checklist that allows the physician to indicate the interval until the next appointment and any associated labs to be scheduled. It should be quick and convenient to use, requiring no more than a few seconds of physician time. The visit planner is most useful if it is customized to the practice or an individual physician or specialty.
Q&A

Our physicians are overwhelmed by the process of selecting a diagnosis code for each test ordered. Do you have any suggestions?

When creating the visit planner, pair each test with the most frequently used diagnosis codes for that test. The physician can then easily check the appropriate diagnosis code for each patient, alleviating the need in most circumstances to search through a long list for the appropriate diagnosis code. Some practices work with their IT department and/or electronic health record (EHR) vendor to create an electronic version of the checklist.

I commonly order bundles of tests. Can the visit planner help with this?

Yes, you can create “order sets,” or bundles of tests grouped by condition. This simplifies the ordering process and reduces the likelihood of missing laboratory tests. For example, when using an order set, a single checkmark provides diagnosis codes along with orders for an entire panel of tests. For a patient with diabetes, this could include orders and corresponding codes for HgBA1c, lipid profile, urine albumin/creatinine ration and creatinine blood test.

Is it desirable to have a nurse call the patient one week in advance of the appointment to arrange the needed orders?

Some organizations hire a nurse to “scrub” the patient’s chart one week before the appointment, and then use standing orders to identify the appropriate lab tests. While this involves rework (another clinician reviewing the record and developing an understanding of the patient’s needs) and risks inaccuracy (not all of the necessary tests will be triggered by protocol), it is still a more efficient and more patient-oriented system than completing the laboratory tests after the appointment.

Arrange for tests to be completed before the next visit.

Some organizations arrange for patients to have lab testing a few days before their appointment with the physician, while others have developed processes for rapid turnaround of the lab testing and results, so the patient may come for the lab test earlier on the day of their appointment with the physician. The goal with each approach is to have the lab results available at the visit so the physician and patient can discuss them face-to-face.

Educating the patient about the importance of monitoring their condition at appropriate intervals increases patient engagement. This allows the patient and physician to complete all management decisions at that time, rather than having the results slowly return to the office, generating multiple phone calls and additional follow-up work for the physician and care team to conduct.

Q&A

We use a commercial laboratory that holds future lab requests for only two weeks. How would we implement pre-visit laboratory testing?

Pre-visit laboratory testing saves the clinical practice sufficient time to be worth the investment of working with commercial laboratory vendors to hold orders for 12 months or more. Alternatively, your EHR might enable you to place future orders, which could be released by a clinical team member two weeks before the patient’s upcoming visit.
Can this same process be used for other tests?

Yes, the same process can be used for x-rays and other diagnostic tests to achieve the same efficiencies and improvements in patient safety and patient engagement. For example, by scheduling a mammogram or follow-up chest x-ray to occur before the next appointment, it is less likely that the test will be missed or that the results will be overlooked.

5 Delegate computerized order entry.

Using the visit planner checklist, the physician can check off laboratory tests that need to be administered before the next visit. Entering this information into a computer may require one to two minutes. Several minutes more per task can add up to hours of time per day. Delegating order entry allows physicians to focus on providing high-quality patient care.

Q&A

Does pre-visit laboratory testing require hiring additional staff?

No, however it shifts how and when the work is being completed. Pre-visit laboratory testing requires less staff time. For example, without a pre-visit lab process in place, the patient sent for a lab test after the visit may need to call for results. The receptionist or call center fields the call, and passes the message to the nurse, who discusses the matter with the physician. The physician must then review the chart for clinical details and communicate back to the nursing staff about next steps. The nurse then tries to contact the patient, which may require multiple attempts. These steps are avoided with pre-visit lab testing.

6 Empower staff to manage the inbox.

Staff can use physician-established protocols to review results and forward only those that are abnormal to the physician. This allows the physician to review the majority of labs only once, at the time of the appointment, and is referred to as “just-in-time” information processing. For example, if a team member reviews a patient’s lab results for urgent abnormalities prior to a visit and finds none, the physician will only need to review the results once at the time of the patient’s visit.

Q&A

How should we approach pre-visit laboratory testing for patients with new or unexpected medical issues that require additional laboratory testing after a visit?

This will happen on occasion. However, you generally want to design your processes to manage the majority of situations. If your system is running smoothly, you can handle the occasional variation, such as the need for post-visit labs.
What if the patient’s pre-visit laboratory testing yields an abnormal result?

The team generally handles abnormal results according to established protocols and by reviewing abnormal results with the physician. For example, if a patient has a newly-elevated blood sugar result, the staff will discuss with the physician, who may choose to order additional tests prior to the appointment and refer them to the diabetes educator. This provides an opportunity to advance the clinical evaluation prior to the appointment. Depending on the nature of the abnormality, the protocol may require the physician to inform the patient personally of the result, such as a new cancer diagnosis.

We don't send results to patients because our practice has a patient portal. Is there still a benefit to implementing pre-visit laboratory testing?

Yes. One main goal of pre-visit lab testing is to enhance the value of the visit, allowing the patient and physician to talk about the results face-to-face, and to create a treatment plan together. The patient can ask questions about their results and engage in shared decision-making around the treatment plan.

Conclusion

Scheduling future appointments and pre-ordering needed laboratory tests before the next visit sends the right message to patients. Proactively preparing your patients for their next appointment with pre-visit laboratory testing will ensure efficient use of time at each visit. Patients who are more actively involved in their own care generally experience better health outcomes and regularly obtain preventive care, such as having lab work done at the appropriate intervals. Additionally, this approach encourages the team to take a more active role in reviewing laboratory results to support the physician during a visit.

AMA Pearls

Make important decisions about changes in patient care at the appointment.

Testing before the visit gives patients the opportunity to discuss any changes in condition and treatment with their physician face-to-face. By moving decision-making to the time of the appointment, your practice can dramatically reduce time spent resolving patient issues after the appointment, including reviewing patient charts, communicating with staff, composing emails or letters, and responding to calls.

Organize care around an annual comprehensive care visit as appropriate to specialty.

The annual comprehensive care visit is an effective organizing tool for prevention and care of chronic illness in some specialties, such as internal medicine and family medicine. By organizing multiple components of care around a single visit, your patients save time and so do you. For example, a patient who may otherwise be contacted to schedule a mammogram in December, a blood pressure screen in March, and a pneumococcal vaccine in September can have these appointments...
bundled and conduct the diagnostic testing before the comprehensive care visit, when the vaccination can also be administered. Managing care components together is more reliable than monitoring and managing each care element separately.

**Develop the capacity to hold future laboratory and other test orders.**

It is best is to develop the ability to house future orders either within the lab, x-ray, or other electronic information system. This may require working with your commercial laboratory or hospital if the labs are run outside of your organization.

**Extend the “pre-visit paradigm” to other tests.**

The same pre-visit testing can be used for x-rays and other diagnostic tests with the same efficiencies and improvements in patient safety and patient engagement. For example, by scheduling a mammogram or follow-up chest x-ray to occur before the next appointment, it is less likely that the test will be missed or results will be overlooked. This process allows patients to discuss their results with their physician face-to-face.

### STEPS in practice

**Pre-Visit Lab Case Report: Ambulatory Practice of the Future**

Like most physicians, Dr. Ben Crocker at the Ambulatory Practice of the Future in Boston used to see his patients first and then send them to the lab after their appointments. As the results came back he reviewed each one individually. When all test results returned, he would write a letter to the patient or try to reach them by phone. This often required him to relearn the scenario for which the labs were ordered, and did not provide an opportunity for important face-to-face counseling on certain medical conditions. It was common for patients to call back with questions about their results that they did not understand from the letter or phone message.

The system of post-visit lab testing required handling each test result individually as it was released from the lab. Dr. Crocker was awash in results as multiple lab results from multiple patients returned to his inbox individually and were intermingled with other messages. He realized that it was not only a lot of work for him and for his staff to sort through and manage the data as it arrived piecemeal, it was inconvenient for the patient and it prevented him from being able to discuss the test results with the patient at the visit.

Upon this realization, Dr. Crocker and his practice instituted point-of-care pre-visit laboratory testing. The practice then compared the number of follow-up phone calls and letters from before and after implementation of the system. Pre-visit lab testing reduced the number of phone calls to the practice by 89 percent and reduced the number of letters sent to patients about lab results by 85 percent. There were significantly fewer (61 percent) revisits due to abnormal tests and fewer lab tests (21 percent) ordered overall since the results were reported in real time. This saved the practice $25 per visit in physician and staff time. Importantly, patient satisfaction with their care also increased.

### Learning Objectives:

At the end of this activity, you will be able to:

1. List steps needed to implement pre-visit laboratory testing;
2. Describe how to develop a process to ensure most patients complete pre-visit labs;
3. Identify ways to delegate computerized order entry to the appropriate staff.
Article Information

AMA CME Accreditation Information

Credit Designation Statement: The American Medical Association designates this enduring material activity for a maximum of .50 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Target Audience: This activity is designed to meet the educational needs of practicing physicians.

*Disclaimers: Those individuals marked with an asterisk below contributed towards Version 1 of this learning activity.

Statement of Competency: This activity is designed to address the following ABMS/ACGME competencies: practice-based learning and improvement, interpersonal and communications skills, professionalism, systems-based practice, interdisciplinary teamwork, quality improvement and informatics.

Planning Committee:

Christine A. Sinsky, MD, FACP, Vice President, Professional Satisfaction, American Medical Association*
Marie Brown, MD, Senior Physician Advisor, Professional Satisfaction and Practice Sustainability, American Medical Association & Associate Professor, Rush Medical College, Rush University Medical Center
Renee DuBois, MPH, Senior Practice Transformation Advisor, Professional Satisfaction and Practice Sustainability, American Medical Association
Brittany Thele, MS, Program Administrator, Professional Satisfaction and Practice Sustainability, American Medical Association
Mary Kelly, CME Program Committee, American Medical Association
Kevin Heffernan, MA, CME Program Committee, American Medical Association*
Ellie Rajcevich, MPA, Practice Development Advisor, Professional Satisfaction and Practice Sustainability, American Medical Association*
Sam Reynolds, MBA, Director, Professional Satisfaction and Practice Sustainability, American Medical Association*
Rhoby Tio, MPPA, Senior Policy Analyst, Professional Satisfaction and Practice Sustainability, American Medical Association*

Content Reviewers:

J. James Rohack, MD, FACC, FACP, Senior Advisor and former President, American Medical Association
Renee DuBois, MPH, Senior Practice Transformation Advisor, Professional Satisfaction and Practice Sustainability, American Medical Association
Brittany Thele, MS, Program Administrator, Professional Satisfaction and Practice Sustainability, American Medical Association
Beth Averbeck, MD, Associate Medical Director, Primary Care, HealthPartners Medical Group*
John Beasley, MD, Family Physician, School of Medicine and Public Health, University of Wisconsin, Madison*
J. Benjamin Crocker, MD, General Internist, Medical Director, Ambulatory Practice of the Future, Massachusetts General Hospital*
David Lynch, MD, Principal, Transformation Medical Practice Consulting*
Jeffrey Panzer, MD, Medical Director, Oak Street Health*
Ramin Poursani, MD, Medical Director, Family Health Center Clinic, University of Texas Health Science Center at San Antonio*
Rachel Willard-Grace, MPH, Research Manager, Center for Excellence in Primary Care, Department of Family & Community Medicine, University of California–San Francisco*
Thomas P. Healy, JD, Vice President and Deputy General Counsel, American Medical Association*
Ellie Rajcevich, MPA, Practice Development Advisor, Professional Satisfaction and Practice Sustainability, American Medical Association*
Sam Reynolds, MBA, Director, Professional Satisfaction and Practice Sustainability, American Medical Association*
About the Professional Satisfaction and Practice Sustainability Group: The AMA Professional Satisfaction and Practice Sustainability group has been tasked with developing and promoting innovative strategies that create sustainable practices. Leveraging findings from the 2013 AMA/RAND Health study, “Factors affecting physician professional satisfaction and their implications for patient care, health systems and health policy," and other research sources, the group developed a series of practice transformation strategies. Each has the potential to reduce or eliminate inefficiency in broader office-based physician practices and improve health outcomes, increase operational productivity and reduce health care costs.

ABMS MOC: Through the American Board of Medical Specialties (“ABMS”) ongoing commitment to increase access to practice relevant Maintenance of Certification (“MOC”) Activities, this activity has met the requirements as an MOC Part II CME Activity. Please review the ABMS Continuing Certification Directory to see what ABMS Member Boards have accepted this activity.

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Glossary

Re-appoint:: To schedule any follow-up appointments for patients at their current visit.

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References


