How will this module help me successfully implement a registry?

1. Five STEPS to develop and implement a registry.
2. Answers to common questions about registries.
3. Tools to develop training materials and track progress.
Introduction

A point-of-care (POC) registry is a system to identify and care for patients with chronic conditions, as well as a means of tracking preventive care in your practice. It can be integrated into your practice's electronic health record (EHR), a separate database program, or even a simple spreadsheet that is manually updated. POC registries can be extremely useful for managing common chronic illnesses, such as diabetes or coronary artery disease, at the population level. It can help your practice track high-risk, high-need patients, to ensure that services are delivered to all patients in a timely manner according to evidence-based medicine (EBM) guidelines. When optimized, your practice's POC registry system can be used to create customized planned visit protocols for each patient visit and for outreach between visits.

Five STEPS to creating a point-of-care registry for your practice:

1. Develop the criteria for your registry.
2. Build the registry framework.
3. Develop workflows and train the team to use the registry.
4. Put your registry into action.
5. Evaluate and apply registry findings.

Develop the criteria for your registry.

Registries take work, especially during the launch and pilot phases. It is critical to have the entire care team (including non-clinical and support staff) on board with developing and maintaining the registry. Take the opportunity to engage your entire practice during the brainstorming session to determine what an effective registry will look like. The entire team can be an integral part of developing the infrastructure of the actual registry, once it has been developed, non-clinical and support staff members of the team may be the ones running the reports on a regular basis and it will be important that they are familiar with its design.

To be effective, POC registries must fulfill five criteria:

1. Include a list of all the patients in the practice with the target condition(s) (e.g., diabetes, asthma, hypertension, etc.).
2. Show a "snapshot" of the EHR to detail important clinical parameters and identify the gaps in EBM-recommended care.
3. Aggregate the results from all patients in the practice with the specific condition to assess the overall quality of care provided (e.g., the percentage of patients with diabetes who have controlled blood pressure).
4. Produce support for outreach and follow-up (e.g., all patients with diabetes who have not had an A1c in 6 months, an eye exam or diabetes education referral).
5. Integrate clinical quality reporting into the process of care rather than as a separate endeavor.
Ensure you have sufficient support of a medical assistant (MA) or nurse to return phone calls, make appointments, update medication lists, etc. Ideally, patients should be able to see their own data in the POC registry, either provided via an online portal, mailed to them before their visit, or given to them at the visit. Additionally, for any registry system, it is important to ensure that patient confidentiality and data privacy and security requirements are adequately addressed.

Q&A

What can I monitor with a POC registry?

Your practice should start with one or more chronic conditions that are commonly seen in your patient panel, have well-developed EBM guidelines and established clinical performance measures.

Examples include:

- Diabetes
- Hypertension
- Asthma
- Coronary artery disease
- Chronic obstructive pulmonary disease (COPD)
- Attention deficit hyperactivity disorder (ADHD)
- Depression

You could also use a POC registry to monitor preventive services such as age-appropriate screenings and immunizations, and to track social determinants of health.

Can I use a POC registry for following high-risk patients?

You can use a single POC registry system to track and follow up with patients who have been identified as high-risk and high-need. This represents a more patient-centered approach rather than a disease-specific registry and can be very useful to support care managers, care coordinators, and/or a care transitions team as they follow those particular patients in your practice. It is important to collaborate with the care managers of patients who are already receiving other care coordination services in order to integrate the care into your registry. For example, a registry of patients on opioids for non-cancer pain may aid in ensuring that they are followed closely and have a physical therapy referral annually or are screened for depression.

How can I include multiple conditions in my POC registry?

It is recommended that you use a system that will enable your practice to have an all-condition, or a patient-centered registry. However, you may want to expand to include multiple conditions in your POC registry after your practice has had some experience with its systems and workflow when it includes one condition. Once your practice feels more comfortable with these processes, you can then expand the effort to other chronic conditions and preventive services over time such as patients with diabetes and hypertension on appropriate blood pressure medicines such as ACEi (angiotensin converting enzyme inhibitors).
This system should also display all the parameters for a patient with multiple chronic conditions, which helps to identify gaps in EBM-recommended care. Almost all patients in the practice need age-appropriate screenings and immunizations as part of your preventive medicine strategy. Registries within EHR systems will eventually help track and measure the rates of these services for all patients (note, however, that many registries are being built outside of EHR systems so you are not limited to those within EHRs).

How is a POC registry different from a national database registry?

POC registries differ from national database registries in three fundamental ways:

- POC registries are available to the physician and care team during any type of patient encounter to show the current status and highlight gaps in EBM care parameters.
- The POC registry information is part of the regular office workflow.
- POC registries can be designed to feed data into national databases, but the current constructs used by most national database registries limit their ability to feed data in real time.

Most national database registries are designed to collect data, establish useful comparisons, and provide reports back to practices at some regular interval. Comparison data is necessary to evaluate how your practice is doing relative to other practices with similar patient demographics and risk profiles.

Build the registry framework.

Survey, assess, and select a POC registry system that best fits with your current EHR, target patient populations, and practice workflows. Your program should include all the clinical parameters that you rely on to make informed medical decisions. These parameters need to be presented in an organized and complete format, allowing you to focus on those aspects of care that need the most attention. You may consider using a generic registry template within your EHR or developing a custom version with a programmer. It should be noted that working with your EHR vendor to create the registry, as opposed to developing or buying a separate system, may help avoid workflow problems and separate log-ins.

Q&A

What are some examples of POC registry systems I could use or purchase?

Many EHRs have modules for a registry function that are either not installed or not turned on. Be sure to check with your EHR vendor and evaluate the registry functionality against the list of five criteria above. Working with the EHR vendor is generally preferable to building a separate registry, given that it will be built into the existing workflow of the EHR that your practice is already familiar with. If a module is not available through your EHR, then stand-alone registries are available for a fee.

The three basic components of stand-alone registries include:

- A database to store patient information. This includes a server, database management software, and management tools.
- A data model to organize and integrate information.
- Software tools that allow users to sort, manipulate, and create reports from the information.

You may purchase each of these components individually to create a stand-alone registry, purchase them as a package, or choose to use a simple spreadsheet. No matter what approach you choose, you should make sure that it is fully integrated into your practice workflow.
What searchable fields do I need to include in the POC registry program?

Keep it simple. In addition to the usual demographic data to identify and contact the patient, you only need to include the clinical parameters you and other care team members would want to know to make an informed decision about care.

For example, if you are setting up a diabetes registry that would be compatible with the Diabetes Collaborative Registry, you will want searchable fields for:

- Body mass index (BMI)
- HbA1c
- Lipid levels
- Blood pressure
- Blood pressure control (angiotensin-converting enzyme inhibitor/angiotensin II receptor blocker [ACE/ARB] use)
- Kidney function (albumin/creatinine ratio, eGFR or creatinine)
- Smoking status
- Dates and results of dilated eye exams
- Dates and results of foot exams
- Influenza, pneumococcal, and hepatitis vaccines

These are the same searchable fields required to calculate most of the clinical performance measures that may need to be reported to payers, CMS, and for maintenance of certification (MOC) part IV activities. Keep in mind that the fields must conform to electronic Clinical Quality Measures (eCQMs) in order to suffice for federal value-based payment reporting.

Who sets up the POC registry?

Designate a small work group to investigate the available options, the costs, and the functionality. While the entire care team will contribute to the registry, these specific team members will spend the most time working with the system or software. This group may also help design a workflow and formalize the procedures, roles, and responsibilities for the use of the registry. Data entry should be automated wherever possible, so integration with your EHR is important to reduce duplication of work. For example, lab test results or blood pressure readings from the EHR should automatically populate on the patient summary page of the registry with a visual cue about the result being in or out of range. There may be some manual tasks or set up, such as at the time of entry of a new patient in the registry.

Develop workflows and train the team to use the registry.

Involve the entire care team to keep the POC registry up to date and complete by developing new workflows or adapting existing workflows to ensure that the data is properly and reliably entered. Establish how clinical and clerical members of the team should use the registry to follow up on gaps in care and how to plan for visits to ensure that gaps are closed and timely care is provided.

The entire team should have access to the registry and be able to use protocols and standing orders to identify and address patient care needs. Designated staff, such as physicians, nurses, MAs, care managers or panel managers, should be well trained in executing their role in managing the registry to improve data reliability, consistency of care, and outcomes for patients.
Q&A

What kind of training should the team receive to make sure data in the POC registry is accurate and reliable?

Ideally, one or two individuals (preferably two) in the practice should be trained in registry implementation, maintenance, and daily integration into the workflow. If you are using an EHR-based registry, your vendor should offer training. You may find additional registry training as part of population health and care coordination curriculums. These two “registry specialists” should be responsible for sharing their knowledge with everyone on the practice team. Much of the training will involve educating the care team about where information from the EHR flows into the registry, so that the data is as accurate and complete as possible. There may be some manual tasks in the initial set up process or at the time of entry of a new patient into the registry. For more information about using a registry to improve care, see the panel management module.

How can I incorporate the POC registry into my existing workflows to maximize the impact?

Implementing a POC registry is just one of many systematic changes you can make to improve practice efficiency and effectiveness. As you consider the design and implementation of your registry, there may be some overlap and synergies in workflows. Other STEPS Forward™ modules can help guide how it might integrate with or facilitate pre-visit planning, expanded rooming and discharge, panel management, and risk-stratified care management. The combination of these approaches with the registry should yield efficient, comprehensive, and effective care for patients with chronic conditions.

Put your registry into action.

When implementing your new POC registry, your practice may want to start by focusing on just one patient population, such as your patients with diabetes and limit it even further by identifying an age range (for example: between 40 and 65 years old). Use a phased approach to allow the team to adapt to the POC registry and the new workflows to manage care between visits.

Although one or two people should be responsible for making sure the registry is working properly and used by all, every care team member should contribute to its maintenance by entering information when missing fields are identified. The more complete the information, the better it works.
Consider starting by assembling a list of patients with a specific condition. All patients who have the specific condition should be added to the POC registry, as patients come in or as a new diagnosis is made, make sure they are added or that their profile is updated. As the registry grows, it will become more useful for monitoring EBM care and facilitating outreach.

You may choose to collect information in a spreadsheet until you have selected a software package or if you do not have an EHR system in your practice. Your team may find that it is more comfortable starting with a spreadsheet and then moving to the registry function in the EHR.

Diabetes tracking worksheet
(MS EXCEL, 20 KB)

The home screen for a typical registry dashboard often contains tabs for each condition you are tracking. This information may be presented for the patient panel of each individual physician in the practice or for the practice as a whole.

Within each condition, there are tabs for patients, measures, data entry and review. Figure 1 shows the hypertension patient screen for a single physician in a practice.

![Figure 1](image)

This view provides filtered results of patients whose results are out of range. This makes it easy for you to see which patients need intervention based on these results. Figure 2 depicts the screen of sample patients with out of range results in the registry for the panel above.
Evaluate and apply registry findings.

In addition to providing more efficient and effective care for your patients with chronic conditions, registries can help with quality improvement efforts. For example, if you learn from the registry that only 50 percent of your diabetic patients have their blood pressure under control, you could make changes in your treatment approach, initiate a health coaching program, or pursue a more active follow-up approach with these patients. The registry can then be used to track whether these process changes improve the percentage of patients whose blood pressure is under control. Depending on the sophistication of your POC registry, you could generate the following types of reports to improve your practice:

- Patient reports at the time of the visit.
- Exception reports to flag patients not meeting management targets.
- Progress reports for staff and providers to measure care delivery.
- Population reports to monitor and stratify at-risk patients.

Q&A

How do I make sure our POC registry is adaptable and sustainable to meet ever-changing practice and payer standards?

As your practice starts to feel comfortable with the existing registry, let your patient population and practice priorities guide expansion to include another chronic condition. The registry function is basically the same regardless of the sub-population, so adding another common chronic condition (or two) should be easier. If clinical performance measures change or more measures are added by regulators or payers, you will need to actively manage the modifications in the parameters you track or the acceptable ranges that you set in the system.

Doesn’t the POC registry just add more work for everyone? What is the advantage?

Initially yes, but your practice may soon see a return on the investment. A well-functioning registry can reduce the amount of digging you have to do to identify what EBM care your patients need.
Some of the advantages of a properly implemented system that meets all five criteria may include:

- Less chaotic care for the patients and an improved patient experience.
- A more even distribution of work across the care team.
- A better practice workflow.
- Engagement of the entire team because everyone can update and view the registry.
- Active participation in patient care by the entire team through use of standing orders and established protocols.
- Elimination of data gathering activities by the physician during the patient visit.
- Clear presentation of clinical parameters that are out of range so that the physician and team can focus on the areas that need the most attention.
- Potential revenue capture for pay-for-performance or other value-based payment models.

Conclusion

A POC registry can allow you to be proactive – rather than reactive – in your approach to providing care to patients with chronic conditions, including preventive care. This organized approach to tracking and reporting specific disease measures and management will help you and your practice team reveal opportunities for improvement and the delivery of better and more efficient care to your patients.

Learning Objectives:
At the end of this activity, you will be able to:
1. Describe a point-of-care registry (POC) and list the benefits of implementing a registry in your practice,
2. Summarize steps to select the criteria for your registry and build a registry framework;
3. Explain how to design practice workflows and train your team to use the registry.

Article Information

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*Disclaimer: Individuals below who are marked with an asterisk contributed towards Version 1 of this learning activity.

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Glossary

evidence-based medicine (EBM): Clinical research and expert opinion to make recommendations about the best treatment for patients with a specific condition.

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References