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BUILDING A FOUNDATION FOR POPULATION HEALTH
Patient Registries

Executive Summary

As reimbursement continues its shift from volume to value, providers need better tools for managing the care and costs of their patient populations. With nearly half of all Americans suffering from at least one chronic illness, EHR-based patient registries are key to delivering more efficient and effective care.[1] Although the registry concept has been around for decades, it has only recently evolved into an actionable, database-driven tool powered by rules-based logic. When designed and implemented effectively, patient registries can help providers align higher cost, higher acuity methods with the populations that need them, while keeping other patients in lower cost settings. This white paper identifies the specific characteristics to look for in a patient registry tool, and presents two use cases to illustrate how registries can be used to segment patient populations for targeting more precise interventions.

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Segmenting Patient Populations

Patient registries can facilitate a better understanding of a patient population by segmenting patients into smaller, more manageable, and actionable groups. Here, patients are grouped into populations based on four risk statuses:

Health Promotion

Healthy patients do not have risk factors for impending chronic conditions or major health issues. Costs associated with their care are low, but organizations must still focus on prevention, care coordination, and general wellness to prevent these patients from rising in the risk spectrum.

At-Risk

At-risk patients are in danger of developing chronic conditions, with the potential for intervention and costly procedures. This population requires a higher degree of care coordination and patient engagement to prevent chronic diseases; they must be monitored more closely and nudged toward routine preventive care and behavioral change.

Chronically Ill

These patients have one or more chronic diseases that require maintenance. This segment is the most important to control, particularly under value-based purchasing programs in which the costs associated with poor management rise exponentially as patients' conditions worsen.

Critically Ill

Although critically ill patients constitute only about five percent of patients, they account for 40-50 percent of healthcare expenditures, making them the most resource- and cost-intensive segment of the population.[2] These "super utilizers" often have multiple chronic or critical illnesses, and require intensive nursing care. Their conditions are no longer stable, and they are at high risk for life-threatening episodes.

Following this initial stratification, organizations can then filter registries into smaller, more manageable worklists based on other characteristics (e.g., age, gender, smoking status, BMI, insurance, provider, etc.). Then, engagement strategies can be designed to target each of those groups. For example, an organization's healthiest segment may respond favorably to wellness messaging, health screenings, preventive care measures, contests and challenges, (for example, using wearable fitness devices) and other strategies aimed at maintaining good health. The younger subgroup within this segment might be engaged via social media while older members of this group might prefer a newsletter or annual wellness visit. Higher risk populations will no doubt require more intensive forms of intervention, such as remote monitoring devices sent home with chronically ill patients and more active case management for critically ill patients.

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The Right Tools: Registries and Worklists

Patient registries and worklists are dynamic tools that reflect the state of all relevant information in the EHR at the moment they are viewed, updating in real time as patient conditions and health data change. Distinctions between registries and worklists are as follows:

Registries

Registries include comprehensive groups of patients, typically based on chronic conditions. A provider could have multiple registries for a specific condition (e.g., a Medicare diabetes registry versus private payer diabetes registries) as well as registries for immunizations and wellness. They are generally viewed as the "wider net."

Worklists

Once the larger population is identified on a registry, providers can further stratify and segment their patients into smaller, more manageable subgroups called worklists. A worklist could be "high-risk diabetic patients with HbA1c levels over nine percent who have not been seen in 90 days" or "patients with BMI scores above 30 who smoke and have not been contacted in 30 days." Whereas a registry might be maintained at an organizational level, worklists could be created at the individual practice or provider level.

For dynamic patient registries and worklists to be truly effective, they must also have the following characteristics:

1. **Usable.** Physicians and other users must be able to adopt registries and worklists into their workflow. They must be intuitive, mobile, and fast, so users can filter, organize, and save new lists with a few clicks. Ideally, they display (or provide quick access to) other relevant data in the EHR.

2. **Dynamic.** They must be updated as conditions change in real time. Registries and worklists must not be seen as "reports" to be run monthly, weekly, or even daily. They are up-to-the-minute views of all relevant patient data in the EHR — ideally from all care settings.

3. **Flexible.** Tools must be adaptable to a variety of care environments and practice settings, from small practices to large, multi-specialty physician groups operating within IDNs. The ability to add and refine lists as populations (and environments) change will be essential.

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4. **Actionable.** Users must be able to take action directly from the registry without going to a different screen; once they've filtered and sorted their list, they must be able to select one or more patients for an intervention.

5. **Interoperable.** An effective system must be able to import government or community-based registry data, data from other healthcare organizations (operating different EHRs and registry products), and Patient-Generated Health Data via fitness devices and other wearable technology owned by patients or sent home with them.

Use Cases: Two Scenarios

These scenarios below illustrate how ambulatory patient registries can be adapted to different settings to engage patients in population health programs, and depict how they can help organizations transition to value-based care models.

Scenario 1: Small Physician Office

Dr. Smith is a family practice physician and partner in a five-physician clinic whose staff includes two nurse practitioners. She uses ambulatory patient registries and worklists, as do her nurse practitioners, since they typically perform follow-up with patients based on physician recommendations.

Dr. Smith and her partners meet weekly to improve communication among clinicians. These meetings start with a review of high-level registry data. The group has established separate condition-based registries for the three most prevalent conditions in their community: diabetes, hypertension, and CHF. Each week, they review one of these registries to discuss patient care and wellness strategies. They've also created a separate worklist for managing patients who qualify for the CMS Chronic Care Management (CCM) Services program, allowing them to bill monthly for spending at least 20 minutes of clinical staff time managing patients with two or more conditions.[1]

The practice has parsed their registries into more manageable worklists. In a recent huddle, one physician wondered how many of their hypertensive patients were smokers under the age of 40. It took under a minute to produce the list of nine patients, which was then sorted by severity and assigned to an NP. Later that week, the NP sent the patients a letter and email about the practice's new smoking cessation program.

Dr. Smith and her colleagues are currently operating in a fully fee-for-service environment. They use their registry tools to help them identify patients overdue for routine care, pinpointing those patients who should be scheduled for preventive care and proactively contacting them to schedule appointments. They also recently created a Chronic Care Management (CCM) registry as well as a Complex CCM registry to manage patients with two or more chronic conditions and track their monthly non-face-to-face clinical staff time. This has enabled them to capture additional reimbursement while improving both patient experience and outcomes. As a result they've seen a significant improvement in their financial performance.

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Scenario 2: Large IDN

Memorial Health System (MHS) is an integrated delivery network comprising three hospitals, five family medicine centers, more than a dozen specialty clinics, and a long-term care facility. They formed their own accountable care organization under the Medicare Shared Savings Program, and ended the previous two fiscal years with small profits.

Prior to entering the ACO, MHS staff focused primarily on overseeing care planning for chronically and critically ill patients. After entering the ACO and implementing their patient registries, care coordinators began working with at-risk patients as well. They also widened their focus from individual care to population care, eventually carving out a small group of care coordinators who work directly with the executive team on population-level care coordination for their ACO patients.

Care coordinators at MHS developed registries for all major chronic conditions evident in their ACO population. Each condition-based registry is managed by several coordinators, who divide registries into smaller worklists based on risk profile and general health status. These worklists are then sorted and filtered by other demographic characteristics and behavioral-based criteria.

MHS makes a concerted effort to bring every ACO patient in for their annual wellness visit and health risk assessment, a billable visit covered entirely by Medicare. These visits provide an opportunity for the clinical staff to collaborate with patients on setting realistic health goals and to discern the best way to keep them engaged. If the patient or another family member has access to the Internet, they help the patient enroll in their patient portal during the visit.

They also have begun sending many of their chronically ill patients home with home monitoring devices, such as wireless weight scales, blood pressure cuffs, and pulse oximeters. By creating a "home monitoring" worklist, staff at MHS can keep an eye on their patients from afar and contact them promptly if they notice abnormal values, which are marked accordingly on their worklists. They can also remind patients to resume taking their readings if they notice an extended period of inactivity. Of course, each patient on the home monitoring worklist also appears on registries associated with their conditions, and home device data is marked to indicate that these readings were captured by the patient at home.

Since deploying their registry tools, MHS has expanded wellness, preventive care, and health maintenance programs significantly. They've also detected small drops in ED visits and acute readmissions among their chronically ill populations. By keeping lower-margin chronic disease patients out of high-cost acute environments, they've increased their ACO's profitability.

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Conclusion

Healthcare organizations empowered with the right patient registry tools will establish a strong foundation for a larger population health strategy. These tools will add value in both the fee-for-service and value-based healthcare environments, serving as a bridge between reimbursement models and bolstering the cost-containment efforts necessary for ACOs. Under a fee-for-service model, practices will be able to identify patients overdue for routine care, screenings, and preventive measures, thus supporting responsible revenue generation. Ambulatory practices owned by or affiliated with integrated care networks — particularly those using a shared EHR across the continuum of care — will be well positioned to manage their patient populations more successfully.

References

1. Ward BW, Schiller JS, Goodman RA. Multiple chronic conditions among US adults: a 2012 update. Prev Chronic Dis. 2014;11:130389. DOI: **http://dx.doi.org/10.5888/pcd11.130389**

2. Cohen, S. The Concentration and Persistence in the Level of Health Expenditures over Time: Estimates for the U.S. Population, 2012–2013. Statistical Brief #481. September 2015. Agency for Healthcare Research and Quality, Rockville, MD. **http://www.meps.ahrq.gov/mepsweb/data_files/publications/st481/stat481.pdf**