i2i POPULATION HEALTH
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WHITE PAPER

Population Health Management
A Key Addition to Your Electronic Health Record

Rosemarie Nelson, MS
Principal Consultant, MGMA

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Introduction

Office-based medical practice is changing fast. The government is providing incentives to practices that use electronic prescribing and electronic records systems, and will soon penalize those that don't. Health reform will shortly deliver many newly insured patients to your office. A host of new patient care models aimed at making health care more team-based are emerging. Reimbursement tied to outcomes will demand a greater level of patient management and engagement in the care process.

Meanwhile, as practices continue to face declining reimbursement and naturally rising operating costs (think about energy and supply costs, and retaining staff with competitive wages), the result is shrinking profit margins. It may seem impossible for practices to sustain and even increase profitability despite the challenges posed by a business environment that demands even higher levels of patient service, delivery of clinical benchmark data, and strict attention to financial detail. But it's not.

The Care Continuum Alliance defines population health management as a proactive, accountable and patient-centric population health improvement approach centered on a physician-guided health care delivery system, and designed to enable informed and activated patients to address both illness and long-term health.

When the bottom line is in jeopardy, most practices' initial instinct is to cut costs, especially with the threat of dramatically different reimbursement models on the horizon.

That's why my suggestion — to invest in a key technology called a Population Health Management (PHM) system, sometimes referred to as a patient registry, — may feel counter-intuitive. But the right PHM application can do more to increase profitability than can reducing staff hours. PHMs have also been shown to be a key driver of improving quality measures; can cut down on internal staff time (and associated costs) on a number of communication and administrative tasks; and will likely play an important role in care delivery for the Accountable Care Organizations (ACOs) that are emerging.

This white paper will define PHMs and examine how they can be used to:

- Manage population health with a focus on specific disease states and preventive care services
- Engage patients to take actions necessary to maintain their health
- Remind patients who have not been seen recently, filling appointment schedules
- Secure and increase pay-for-performance (P4P) revenue
- Help you differentiate your practice from the rest, to compete effectively in a modern healthcare delivery environment

Now, some of you may be scratching your head and saying to yourself, "I thought my EHR system did all that." Let me assure you that, while EHR systems have reporting solutions, in this paper we will show how the functionality provided by PHMs and the impact that a PHM can have on your practice is distinct and worthwhile in addition to your EHR.

Managing Populations of Patients

The work of population health management includes coordinating the delivery of care across a population of patients to improve clinical and financial outcomes, through disease management, case management and demand management. The work begins with the identification of a patient population and flows through the entire process of delivering and evaluating interventions, ending with concurrent measurement.

There are many reasons a practice may need to identify and work with a defined group of patients. Primarily, there is a need to identify and proactively work with patients to ensure they are receiving care according to the evidence-based standards agreed upon by the practice. Practices may be participating in an incentive program designed by an insurer to manage all health plan members who have a disease, regardless of the severity of individual cases.

For example, a health plan in California is paying providers a bonus for working with their patients with diabetes to achieve these targets:

- **64.8% have a HbA1c below 9**
- **42.9% have LDL less than 100**
- **61.1 % have BP below 140/80**

By managing an entire population with a given disease, interventions can be targeted to sub-populations to achieve improved individual outcomes that, in turn, improve outcomes measures for the entire population. A practice may choose to identify and concentrate resources on those patients who do not meet the above targets. This has a triple benefit of improving the outcomes for these at-risk patients, decreasing the likelihood of debilitation and high-cost complications, and ensuring revenue from participating in Pay-for-Performance (P4P) programs.

Stage 2 and 3 of Meaningful Use is projected to include the requirement to meet targets for clinical measures. A PHM system is necessary to reach set targets because it gives the care team access to the data for each population and subpopulation every day. This makes it possible to test interventions designed to improve outcomes, measure their effectiveness, redesign them, and spread them when they are proven effective. This ensures receiving the incentive payments for each stage of Meaningful Use and, in the future, maximum Medicare reimbursement rates.

Why isn't an Electronic Health Record Enough

Why isn't an Electronic Health Record Enough to Manage and Report on a Specific Population of Patients?

As Health IT solutions have evolved, providers have become more adept at using solutions to meet their needs. For example, when only a Practice Management (PM) system was available, we determined that we could use that system to create a report to list all the patients with a specific diagnosis based on billing (claims) data. Today, a PM system may be able to list all the patients with a specific diagnosis that have not been seen in the last X months, but cannot easily eliminate any of those patients from that list if the patient has an appointment scheduled in the next six weeks. Also, with only a PM system available, thousands of physicians receive incentive payments – a percentage of their Medicare reimbursement for

the year – from the national Patient Quality Reporting System (PQRS) by entering and submitting special billing codes transmitted on the insurance claim to reflect the care given to patients. Using a PM system for population health management is limited to identifying patients in a population and reporting on those patients singularly, or with only one dimension of care.

Today, actual clinical data (vs. claims data) about populations of patients is more readily available because approximately one third of all physician practices use an EHR. This number grows every day and another third are predicted to implement an EHR within in the next few years. An EHR is designed to support documentation needed for billing; it collects and stores data for each individual patient, creating a care plan and a chronological record of their care. In the traditional practice setting, a physician records, reviews and evaluates patients' records, one patient at a time.

In the paradigm population health management, the physician or – in a growing number of practices – the care team looks simultaneously at all patients with a particular diagnosis or those in need of preventive services. Multiple unique populations and subpopulations are identified, and proactively worked with, to bring them into compliance with standards of care.

In a typical EHR, the registry can be used to query the data, however there are significant limitations. EHR registries are commonly used to identify patients who are receiving a medication for which some change is recommended or required, as in the case of a safety recall or the availability of a new and more effective or less expensive alternative. EHR registries can be used to identify patients overdue for a cancer prevention screening tests or patients with a chronic disease needing a single lab test. For example, using the P4P measures above, it is not possible to simultaneously identify patients with diabetes who are overdue for an appointment, do not have an appointment scheduled, and are outside of the targets for their HbA1c, LDL and BP. This would most likely require multiple separate queries and then it would require someone to manually reconcile them, without custom programming skills in the practice.

Each query in an EHR most often produces an Excel spreadsheet, which is only actionable with some difficulty. Once a list of patients with addresses and phone numbers is created, it can be exported to Excel. It is then possible to merge that list with a letter. The challenge in using an EHR in both of these examples is that

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it is a cumbersome, multi-step, multi-application process, and the effectiveness is difficult to determine. Once the letters are sent, the issues only continue. For example, how does the staff know who responded to the letter, and more importantly, who did not, and therefore needs a second follow-up action? How many different populations and subpopulations of patients must be contacted at regular intervals in order to proactively manage their care? Using an EHR, a new Excel spreadsheet would be needed every day to capture the patients who are now due for a test or screening, with no indication of which ones were contacted the day before. Care managers find themselves working with multiple pieces of paper and colors of highlighters in an attempt to track their work.

It is also worth noting that the ability to create a list of patients using the registry and analytics in an EHR or in a PHM is predicated on the use of structured documentation features within the EHR. For example, capturing smoking status and identifying patients who smoke and do not have a cessation plan requires

the use of structured data. If a provider or care team member documents smoking status and cessation plan in unstructured text notes, it is nearly impossible in most commercially available EHRs to create a registry list based on this unstructured information or to get this same data into a Population Health Management system.

Population Health Management to the Rescue

The nature of technology is iterative. The more we use it, the more we want it to do for us. Physicians and practices need to consider technology to support their population-level care management, not only as an essential component to effective practice within the Chronic Care Model, but also as a necessary tool for responding to the forces driving quality improvement, such as P4P and incentives for achieving Patient-Centered Medical Home (PCMH) Recognition. Without EHRs, and without active and effective use of PHMs, physicians and practices will have much greater difficulty in efficiently delivering safe and effective preventive care, and care for patients with acute and chronic problems.

A PHM system interfaced to an EHR provides a comprehensive tool-set for identifying populations of patients, engaging patients in their care, documenting encounters, and on-demand reporting. The EHR is focused on capturing the data about each individual patient and the PHM system takes this data, aggregates it and supports taking action with groups of patients, creating an environment where quality improvement and improved reimbursement goals can be achieved with greater efficiency, thereby improving profitability.

The PHM system supports the provider and the provider-led care team by regularly, even daily, monitoring patients by age, gender, diagnosis and/or conditions. It delivers tools to easily take action to reach out to patients. You can identify a specific group of patients and with the click of one button, send a customized email or produce a letter – printed, folded and sealed, ready for pick up by the postal service. For example, you can easily use the PHM to find the patients in the P4P example earlier: patients with diabetes whose HbA1c is greater than 9, an LDL greater than 100, and a BP over 140/80. With a PHM, unlike a registry in an EHR, it is possible to see which patients fall into one, two or all three of these groups, and take actions accordingly.

In addition, a Population Health Management system fulfills the constantly changing need for access to clinical data by delivering reporting tools designed specifically for clinical data. EHR analytic solutions are most often

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imported from other industries, requiring an expert data analyst to adapt them for use with clinical data. Each clinical report and adaptation of a report requires hours of the analyst's time, which is a costly investment many practices cannot afford.

Another important component of population health management work is to coordinate follow up with patients who have a specific test result – for example, those with an abnormal cervical cancer screening test.

EHR and PHM Comparison

Compare and contrast how an EHR and a PHM each do this work.

1. Test result delivered to provider

2. Provider tasks support staff to contact patient (via letter, email or phone)

3. Staff creates a recall action for a repeat test within the prescribed time period

EHR Model:

4. Staff manually tracks patient return for test using paper log. Periodically, calling patients or printing and manually addressing letter for mailing.

<div align="center">**OR**</div>

A data analyst develops a custom analytics report, identifying patients with a recall action that is overdue and no future appointment is scheduled for that patient. Run report periodically, export to Excel, and merge with letter that is printed and mailed. Each time, manually work with list to exclude patients who received a letter from a previous mailing.

PHM model:

Standard query set up and run regularly, identifying all patients due and single click action to generate letter, email or text message to patient. Automatic tracking in the PHM identifies patients that did not respond, for a second and even third contact at defined intervals, with no custom reporting or manual tracking.

4. We can see from this comparison how and why a PHM is considerably more effective and efficient at following up with patients. The impact of this on a practice is significant given the complexities of follow-up protocols and the increasing number of different groups of patients requiring follow-up action.

Why Both EHR and PHM?

The effective use of health information technology (HIT) depends on integrating diverse systems in order to record, organize and use data to maintain a longitudinal patient record for decision making, proactively working with patients, and reporting.

At the practice level, the EHR and a PHM system are the informatics backbone.

Population Health Management systems have been used when working with populations of patients for more than a decade. The strategies supported by a PHM system represent an important opportunity to maximize patient outreach, engagement and coaching that, in turn, promote self-care and healthier populations. PHM systems foster comprehensive, successful accountability for the clinical, economic and patient experiential outcomes of an attributed population.

We talked about the EHR and PHM, and how they work together. An EHR is core to cost-efficient information exchange, visit documentation, and e-prescribing. PHM is core to achieving quality outcomes and improving population health. An EHR without a PHM is like a practice management system without a clearinghouse[1]; as the song says, "you can't have one without the other."

[1] A clearinghouse is essential for filing insurance claims and getting paid.

Editorial Board

Rosemarie Nelson, MS
Principal Consultant, MGMA

Rosemarie Nelson's experience in medical office management and information technology, combined with her years of consulting to physicians and practice professionals, gives her unique insight into the needs of and challenges facing physicians and medical practices. As a medical practice consultant, Rosemarie has established significant expertise in system implementation. As a manager in the Office of the Future project, she led new technology planning and development for improved clinical operations. Rosemarie has managed project implementation teams and software engineers in the design and implementation of medical practice software, and subsequent training of personnel. Drawing on diverse operational, clinical and financial experience, she provides practical solutions help medical groups achieve success in their objectives.

i2i Population Health

Founded in 2000, i2i Population Health is a pioneer and leading provider of population health management and business intelligence solutions. Our team of health information technology, analytics, clinical, and quality improvement professionals is focused exclusively on creating healthier populations by partnering with and empowering health care organizations to deliver the highest quality care. We provide actionable solutions through smart technology that supports easier and greater access to data, and improves the efficiency of health care teams. Our goal is to enable dedicated providers to practice superior care by supporting them with a tightly integrated system of software, services and community resources. For more information, visit www.i2ipophealth.com.

Contact i2i Population Health

Contact i2i Population Health for more information on population health management or for a demonstration of i2iTracks:

- Call toll-free: 866-820-2212
- Email: info@i2ipophealth.com
- Visit: www.i2ipophealth.com