POPULATION HEALTH MANAGEMENT

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Population Health Management

Population health management (PHM) is a key concept in managed care. Improving population health, enhancing the patient experience, and reducing per capita cost are the primary goals of a philosophy called the Triple Aim.[1] PHM extends beyond healthcare organizations, requiring the cooperation of other types of institutions, such as public health departments and social service entities. This multifactorial approach takes into account many different components of overall health, including socioeconomic status, behavioral health, and physical environment.[2] PHM is an interdisciplinary effort, calling for the collaboration of physicians, pharmacists, nurses, mid-level practitioners, therapists, and social workers, among others.

In this model, large-scale trends drive patient interventions. Predictive modeling is used to stratify risk; the objective is to evaluate patterns of change in risk distribution, working to modify factors that contribute to illness and disease exacerbation.[3]This can be achieved by incorporating principles of individualized medicine into a population health framework. By leveraging available data from all sources (e.g. medical chart, laboratory data, and claims data), patients with the greatest need for care may be identified; the most appropriate type of care (disease management, targeted intervention, etc.) may also be identified. All said, PHM strives to deliver the right care to the right patient at the right time.

Preventive Health

One of the cornerstones of PHM is preventive health. This strategy is well suited for all patients; however, literature suggests that significant return on investment is associated with applying these tactics in those who are at risk of developing chronic conditions or those early in a disease course.[4] Vaccines are a major player in preventive health, particularly those indicated for patients with certain chronic conditions (e.g. pneumococcal vaccination in diabetes and pulmonary disease). Screenings serve an important role as well; perhaps the most notable of these are biometric health screenings, which use physical characteristics and common laboratory data to evaluate health status. Lifestyle modifications are also critical. Dietary services may provide patients with education and continued support in making health-conscious choices. Health coaches may further aid patients in constructing goal-directed diet and exercise plans, in addition to discussing stress management techniques. Ultimately, the intent of preventive health is to prevent or slow disease progression.[5]

Disease Management

For patients who develop chronic conditions, clinical programs are needed to help them maintain an active role in their treatment. Disease management is a proven system to guide patients through fundamental education points and equip them with necessary knowledge.

Empowering patients with goal setting and self-motivation techniques is vital in this practice.[6] Longitudinal evaluation and feedback by the care provider are also central to success. Since its inception, disease management has grown significantly from a small core of conditions, such as cardiovascular disease, diabetes, and pulmonary disease. Chronic diseases such as hepatitis C virus, human immunodeficiency virus, multiple sclerosis, osteoporosis, and rheumatoid arthritis are just a few examples of how these programs have expanded. Medication therapy management (MTM) and comprehensive medication management (CMM) are frameworks for optimizing drug therapy to improve outcomes and have become mainstays in this process. Encouragement of adherence to drug therapy regimens, explanation of potential adverse events, and review of therapeutic expectations are all important elements of these approaches.[7]

By conducting comprehensive medication reviews (CMRs) and targeted medication reviews (TMRs), pharmacists play an active role in disease management. These interventions often entail patient education and encouraging therapy changes with prescribers. Pharmacists may also collaborate with comprehensive case management programs and receive referrals from other healthcare professionals (e.g., nurse case managers) to assist in optimizing drug therapies, assessing side effects, and providing medication education. Additionally, the use of comprehensive case management programs has expanded from traditional medications to specialty medications with an increased emphasis on high cost therapy management to reduce total cost of care. As population health management programs mature, it is likely that there will be expanded roles for many healthcare professions.

Acute Health

Another constituent of PHM is addressing acute health needs. Although PHM aims to minimize costly inpatient stays and visits to emergency departments, acute services will always be an essential piece of healthcare. However, the methods for providing that care have begun to change. One way that patients are experiencing this shift is through increased access to their provider's office, with some even offering same-day appointments. Other practices have implemented home visits or mobile observation units, which can be especially crucial for patients with transportation issues. Some organizations have even begun to use telemedicine to maximize resources and personnel. PHM seeks to promote the prudent use of acute care, ensuring a variety of modalities are available.[8]

Transition of Care

Transition of care often presents a hurdle following the provision of acute services. The integration of care process models may help to lessen healthcare waste. Examples of these models include Care Transitions Intervention (CTI), Transitional Care Model (TCM), and Better Outcomes for Older Adults through Safe Transitions (BOOST), all of which are being extensively validated from research by The Joint Commission. Several key measures for this movement include shared accountability through multidisciplinary collaboration and

communication; standardized transition plans, procedures, and forms; and risk assessment throughout hospital stay.[9] Timely follow-up, support, and coordination after the patient is discharged should also be performed; one way to achieve this is through intensive care management. These types of programs identify persistent utilizers of high-cost care and attempt to streamline the transition process while simultaneously addressing existing gaps. Pharmacy services play a role in this process as well; medication reconciliation is one of the most integral responsibilities in care transition.[10] This process may be completed pre-admission, post-admission, and even for medications on hand in the home. The goals of medication reconciliation are to prevent re-admissions and improve outcomes through drug therapy optimization. Medication appropriateness is assessed in terms of dose, indication, and safety considerations with respect to the patient's concomitant medications and comorbid conditions. Through medication reconciliation and patient education, therapy changes may be initiated with prescribers.

Network Models

Models to administer a PHM-based approach are largely dependent on resources. Narrow networks occur when payers prefer a specific pool of providers and facilities. Many plans that have surfaced from the Affordable Care Act (ACA) contain narrow networks. Advocates of narrow networks cite the ability of payers to steer members toward providers who deliver high-quality care.[11] Critics, however, maintain that the lack of choice is inconvenient for members. Integrated delivery networks (IDNs) also offer a particular set of providers to members. The difference with IDNs, though, is that the providers, sites of care, and payer all belong to the same overarching system. IDNs offer the whole gamut of healthcare services to patients in a certain geographic region.[12]

Accountable care organizations (ACOs) differ from the previous two models in that they are designed to merge payers and providers into one entity. They use quality metrics and alternative payment models to provide value-based care. Within ACOs, providers are not incentivized to see a higher volume of patients to achieve higher reimbursement from payers (referred to as fee-for-service [FFS] pricing). Instead, in most instances, capitation (paying a flat rate per enrollee), outcomes-based pricing (pay-for-performance), or other payment models are used. The Triple Aim is in full effect in this model; clinical outcomes are balanced with economic outcomes, such as incremental cost effectiveness ratios. Like narrow networks, ACOs were also popularized by the ACA. Although some critics argue that costs to launch them outweigh the potential benefits, ACOs have been proven to generate savings.[13]

What's Needed Now

Improvements in Health Information Technology and Robust Data Sharing

With all stakeholders making a continued commitment to the Triple Aim, the presence of PHM will only grow stronger. One of the most significant challenges in this process is the availability

of information. Data sharing among providers, facilities, and payers allows for the creation of benchmarks that balance quality and cost. Systemized Nomenclature of Medicine Clinical Terms (SNOMED CT) is an information technology offering that seeks to standardize language across different providers and sites of care. The intent of SNOMED CT is to fashion all the elements of an electronic health record into a consistent, reproducible structure.[14]

One of the goals of improving health information exchange is to facilitate the distribution of actionable information about the patient to the point of care or to individuals who can use it to make clinical decisions at the appropriate time. Pharmacists could use this type of information to improve the medication reconciliation process, eliminate unnecessary medications, and more meaningfully evaluate the safety and effectiveness of a patient's medications.

New Care Delivery Models

Another objective is to create cost transparency by moving beyond a FFS, encounter-based model. Adjudication systems within a FFS model are built for individually billing all procedures and tests involved in a patient's care, while capitated payment environments do not take into account each component of care that went into a given encounter. Merit-based incentive payment systems (MIPS) that are being implemented for Medicare plans are an early example of this philosophy. They are based on a composite threshold performance scale that takes into account quality measures, cost of services, meaningful IT use, and clinical practice improvement areas.[3,15] Other payment models are being developed and tested for their impact on population health. The Comprehensive Primary Care Plus model (CPC+) is one example, with multiple payment methods addressing different patient populations and facets of practice.[16]

Part of PHM's evolution has been the push to reliably measure clinically and economically relevant outcomes. Moving forward, the incorporation of humanistic outcomes, e.g. patient-reported outcomes, will continue to be emphasized.[17] The patient experience is being assessed through the computation of total value that an intervention can bring. An example of this shift is the calculation of quality-adjusted life years (QALYs), which measure the quality of life lived following an intervention, such as initiation of a medication or provision of a medical service or procedure. Also important to the patient experience is a more personalized integration into the care process. Part of the next steps for this will be tailoring patient education materials within program activities and during visits, as well as maximizing use of all available communication and outreach pathways.[2]

Conclusion

The advancement and dissemination of PHM will impact the viability of our future healthcare system. All three parts of the Triple Aim will continue to drive interventions that support better outcomes. A patient-centered focus, program organization, data sharing, reporting accountability, and continuous quality improvement from all players are integral for success. At

its core, PHM is about interprofessional collaboration, a synergistic effort with the ultimate goals of providing cost-effective care that keeps patients satisfied and populations healthy.

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