MBA 564 Final Project

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The Importance of Population Health Management

It is well known that the US spends a lot more money on healthcare than other countries, yet has worse patient outcomes (Ashish, 2019). Population health encompasses health outcomes, patterns of health determinants and policies that affect both (Langabeer, 2018). Population health gained more attention with the implementation of electronic health records that offered opportunities for sharing of patient information between providers. The goal of population health is that everyone has the same opportunity to receive quality health care. Its focus was on preventative care, addressing social and cultural determinants of health and chronic disease management (Ashish, 2019). Whereas, population health management focuses on underserved populations and seeks to implement strategies that reduce or eliminate disparities between groups (Langabeer, 2018).

Three examples of population health management include integrating community public health initiatives, including social, behavioral and environmental factors of the population and converting individual patient data into information that can be communicated to other stakeholders in an effort to affect meaningful change (Langabeer, 2018). Langabeer (2018) explained that analysis found the largest domain related to population health was noted in health behavior measures. Life expectancy and quality of life is integral to population health measures. Analysis and big data provide the opportunity to hone in on factors that are modifiable and identify interventions that focus on patient characteristics especially social and cultural determinants of health (Langabeer, 2018).

Bor et al. (2017) noted that in the US, income inequality has increased over the last forty years. Life expectancy has only risen for those with middle to high incomes. Lack of access to

technology, decreased economic mobility, soaring healthcare costs and years of inequities have widened the gap between those who can access the highest quality healthcare versus those who have no access (Bor et al., 2017). Furthermore, Bor et al. (2017) explained how poor health could affect economic productivity resulting in bankruptcy and a cycle of physical and cognitive developmental impairment. When all of its citizens are afforded equal opportunities, the country prospers. Ashish (2019) shared the Centers for Medicare and Medicaid Services (CMS) definition of population health management "both a clinical perspective focused on delivering care to groups enrolled in a health system and a broader perspective that focuses on the health of all people in a given geographic area and emphasizes multi-sector approaches and incorporation of nonclinical interventions to address social determinants of health."

Social determinants of health identified for the Healthy People 2030 initiative group these determinants into five domains. They are economic stability, education access and quality, health care access and quality, neighborhood and built environment and social and community context ("Healthy People 2030", n.d.). These factors are so important for marginalized populations. Polluted air and water, access to nutritional foods and physical activity opportunities are the minimum needed by all people. Unsafe housing, lack of transportation, discrimination and violence seek to prevent these populations from rising out of poverty. Unfortunately, it seems there are institutions and individuals who go to great lengths to prevent upward social mobility.

The latest version of the CDC health disparities and Inequalities Report (CHDIR) was released in 2013. The CDC fact sheet defines health inequities as "avoidable, unfair differences in health status seen within and between populations" ("CDC health inequities", 2013). The fact sheet further explains that according to the World Health Organization (WHO), the social

determinants of health that are the conditions into which people are born and live are mostly responsible for these inequities ("CDC health inequities", 2013).

The Four Perspectives of Patient, Provider, Payer and Population

The four major perspectives of a population health management process includes the patient perspective, the payer prospective, the provider perspective and the population perspective. These four viewpoints form a structure to consider the resources of all health-related services. Everything must be considered within this context and all entities must collaborate and work in concert to provide the most effective solutions because it is a cycle where each is affected by the other.

The patient perspective is either an individual or a similar group of individuals. The provider perspective may include a single physician practice, a physician group practice, a health department, a single hospital, a health care system or even consumers. The payer perspective addresses government programs such as Medicare, commercial payers such as United Healthcare or self-pay by individual patients. The population perspective addresses programs, policies, unintended consequences and downstream effects (Langabeer, 2018).

The four perspectives work together to address population health management. Data needs to be analyzed by members representing each viewpoint. Discussion about ways to improve population health program delivery to marginalized communities is the way to improve population health measures. Review of the processes and determination of whether goals were met and evaluation of the associated costs informs the next iteration of the process. For organizations, this can help guide process improvement projects and improve publicly reported quality measures.

Langabeer (2018) discussed the continuum of care that begins with the individual and access to healthcare and disease prevention. It includes all services including hospitalization and return to the community where the patient is able to access care. This is a complex topic because there is disparity between populations and their ability to participate in and receive preventative healthcare. Exercise is an example that is integral to good health. Community assessment of resources such as transportation and free gym memberships for qualifying individuals in the community must be ongoing.

Care coordination is the process of health entities such as hospitals, insurance companies and individual physicians to share information, and provide support and resources for individuals to prevent adverse events such as hospital readmissions. An example could be a newly diagnoses diabetic. Ideally, a health professional should follow-up in a timely manner to reinforce education about the disease process and answer any questions. Verifying that the patient has access to medication and equipment as needed and understands how to take the medication is important. A few weeks ago, a patient was at the local pharmacy, explained to the pharmacy assistant that she was out of town, and did not have her insulin. Fortunately, the pharmacist was able to contact the insurer and get authorization to dispense the medicine. Without this process, the patient may have ended up in the hospital. Langabeer (2018) discussed care teams that result in the best access to all types of health care for individuals. It is the collaboration of care across perspectives that prevents patients from falling through the cracks.

Accountable care organization (ACO) models were developed with the coordination and collaboration of care at the core of patient health care delivery services. Goals were to use a team-based approach and focus on patient centered care. This methodology empowered patients with responsibility for their own healthcare outcomes. Making and keeping appointment, filling

and taking medication as prescribed and reporting of any concerns to the provider. Preventative care and early intervention are the cornerstone of managing cost-effective healthcare. Both the physician and the health care entity are required to meet clinical quality performance standards. When these standards are met, financial rewards in the form of shared savings are the reward (Wu et al., 2016). New electronic health care record systems were required to monitor things like drug-allergy interactions and drug-to-drug interactions. Patient problem lists with diagnoses, medication lists and recent lab results were incorporated. However, for physician practices only slightly more than thirty-six percent said they were able to integrate inpatient and outpatient data (Wu et al., 2016). Another issue with medical records is the specificity required for International Classification of Disease Clinical Modification (ICD-CM) 10 codes. In the previous version, ICD-9-CM there were about thirteen thousand codes. ICD-10-CM has close to one hundred-thousand codes. That is because although in the US the codes are used for billing, in the rest of the world they are used for morbidity and mortality tracking by the WHO. Physicians need to document in detail. Documenting congestive heart failure is incomplete. Physicians need to specify in their documentation if they are treating an acute, acute on chronic or chronic CHF and clarify if it is systolic, diastolic or combined to be able to capture the severity of illness (SOI) and risk of mortality (ROM) of their patients.

Physicians often view this as a burden and do not understand that it reflects on their personal quality ratings because documenting on every patient is how observed over expected mortality ratings are derived. It is also important for the next provider. Prior to the pandemic, in the state of Florida there was a huge volume of seasonal residents who maintained residences in multiple states. Accurate information needs to be communicated for the best outcomes.

Data collection and reporting capabilities are necessary to capture relevant data. Newer software with artificial intelligence and search features can help with data mining. The idea was that patient data from all sources would be stored in one place where all caregivers had access. However, lack of interoperability between systems has largely thwarted this goal with scanning and faxing of office records on inpatient accounts needed for scheduled elective procedures.

Another factor is the myriad of software programs that need to communicate with one another and the interfaces that need to be developed. Upgrading of systems is very expensive and in a year such as 2020, where the pandemic drastically reduced hospital admissions and likely physician office visits the revenue that might have been allocated is nonexistent.

There were some real benefits to using health information technology (HIT). One of them was improved registry information about certain types of patients such as those who had open-heart bypass procedures. A novel feature was patient decision support via education and shared decision-making. Patient portals provided easy access to health information. An aspect that was anticipated was risk stratification (Wu et al., 2016). With the recent advances in artificial intelligence, predictive modeling is now in the limelight again.

A final issue with electronic health record (EHR) systems is vendor support. Wu et al. (2016) explained that some ACOs were able to share information across providers. Variability of the types of EHRs based on purchase price and adoption of the EHR based on the physician's age and the size of the practice affect sharing of information across platforms.

An often-overlooked barrier to success of changes for underserved populations is the service location and convenience for patients. Pati et al. (2016) identified important considerations for success of initiatives. The first is the ease of access. Care configuration addressed where care is provided. Outdated buildings and their physical layouts impeded

transitioning to outpatient care for cost effectiveness. Examples included lack of waiting areas, nursing stations and drive up areas (Pati et al., 2016). Visual appeal of buildings and lack of nursing and physician staffing in rural settings seem to thwart the efforts of the Affordable Care Act (ACA) to encourage preventative care and healthy initiatives supported by regular visits for care, education and treatment (Pati et al., 2016).

Many references refer to population health in the context of those who have health insurance. The focus is on chronic disease management, lifestyle and behavioral changes. Health and lifestyle coaching are growing industries. Lantz (2019) described the medicalization of population health which he explained leads to physicians diagnosing and treating social problems in the context of a biomedical lens. Lantz uses obesity as an example. He warns that classifying obesity as a disease shifts focus to individuals rather than a community-based or public policy approach (Lantz, 2019). Michelle Obama tried to draw attention to health school lunches especially since many children get their only meal at school (pre-pandemic). Community gardens were also ways to bring nutrient rich fruits and vegetables into communities lacking nearby supermarkets with affordable pricing and high quality food choices. Lantz (2019) raised concerns over the propensity of population health management initiatives to take a medicalized approach to social, economic and political practices. The subpopulations that continue to have disparities are those with racial, ethnic, socioeconomic or location disadvantages (Lantz, 2019).

CDC's Five Steps for Conducting a Community Needs Assessment

A Community Needs Assessment (CNA) is a tool for gathering data and comparing it to the current state of a community. It helps formulate a plan for change by addressing policies, resources, systems and the environment. Once a community has taken stock of strengths and weaknesses, collaboration among the four perspectives supporting population health

management can align to allocate resources and policies to effect meaningful change (Langabeer, 2018).

The CDC states the chief results of a community needs assessment fall into three categories of change: policy, systems and environmental. Policies can be related to organizations or to government. An example would be taxes on tobacco to discourage smoking ("CDC community needs", n.d.). An example of a system change would be a healthcare organization's decision to make its campuses tobacco free ("CDC community needs", n.d.) and give a credit to employees who do not smoke. Environmental change can be broken down into three categories: physical, social and economic. Physical examples would be walking paths or healthy food choices in the cafeteria. Social examples could be changes in attitudes accentuating positive benefits of a recommended behavior change. Economic examples are the insurance discounts above for non-smokers ("CDC community needs", n.d.).

Langabeer (2018) defined the Centers for Disease Control's (CDC) five steps for conducting a CNA. Step one involves planning for a CNA. This begins with the creation of a team and an agenda, generating a list of questions, defining processes and reviewing data. Step two is performing the assessment, following the guidelines developed by the team and collecting the data. Step three is developing measures. The data serve as a framework to identify measures and actions. The team should conduct a comprehensive review of these measures. Step four is analyzing the data collected by the team and writing a summary report of that data to share with others. The final step (step five) is creating an action plan to implement measures. Discussion of the aforementioned strengths, weaknesses, and ranking the importance of findings. Determining which entity will be the resource and key stakeholders for each of the findings. Working together for create a strategic plan.

An effective method for prioritizing measures is to use tiers developed by Madan and Weeks (2016) and Kassler et al. (2017) explained by Langabeer (2018) with discussing healthy life expectancy (HLE) as the first tier. The second tier as to look at factors that contribute to HLE variations. The third tear assesses disease prevalence. This is a strong template to use for collaboration with key stakeholders to assign resources and develop processes to address.

All new processes need to assess return on investment (ROI). Langabeer (2018) offered an idea for tracking health care utilization. If patients schedule and keep regular visits with primary care providers for monitoring and avoid costly hospitalizations, the return on investment for the healthcare insurer is lower costs. This could be translated to an incentive for the patient in terms of a lower premium or some kind of recognition to keep them engaged. If providers and hospitals participate in Value-Based Purchasing (VBP), they receive incentives based on cost savings (Langabeer, 2018). Insurance companies will herd new patients to the providers who provide the highest quality cost effective care to patients.

Conclusion

The four perspectives incorporating patients, payers, providers and population serve as scaffolding for population health management improvement strategies. The ideas to implement originate in the community health needs assessment. A team reviews the data and creates a strategic plan that aligns with the mission and values of the organizations. The strategic plan is integrated into performance improvement plans of the organization and supports its quality initiatives. Quality measures are publicly reported and the changes can be measured in terms of the subpopulations of patients who were lacking access and engagement. Improved healthy life expectancy with decreased complications of chronic diseases demonstrates measureable impact.

Cramer et al. (2017) noted that hospitals that belonged to a larger healthcare system and accountable care organizations (ACOs) had a higher evolution to meeting CNA goals. Contributions to CNA factors with financial and other resources had impact. The Patient Protection and Affordable Care Act is largely responsible for this requiring a CNA every three years (Cramer et al., 2017) with financial incentives and penalties for organizations. A question on follow-through and sustainability remains. Most of the organizations in the study created a strategy but there are many reasons that strategies fail to realize their objectives. In communities with a higher volume of uninsured patients, less progress on CNA goals was noted. 2020 and 2021 data will be of particular interest with the COVID-19 pandemic and loss of employment and employer sponsored health insurance. The US plan to provide vaccinations is a first step but highlights what CNA have always identified as the goal of PHM plans, which is to decrease the disparity between subpopulations and their access to healthcare.

Ashish (2019) discussed that there really are not definitive studies demonstrating success of PHM initiatives. He stated that some processes might be cost-effective but not cost saving. In programs such as the ones where houses are provided for patients with substance abuse disorders, the reduction in expenses does not offset the cost of the initiatives (Ashish, 2019). Nonetheless, it is the right thing to do, to put people above profits.

Finally, all of this data is based on the quality of input into EHRs by providers and hospitals. The interoperability of systems and inclusion of both inpatient and outpatient medical records are needed to allow for accurate reporting of relevant data points and the ability to use predictive modeling for early intervention.

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