COMMENTARY

The population health model: A timely approach for mission hospitals

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Abstract

Mission hospitals have long provided a source of care, healing, and spiritual support for populations around the world, often serving the disadvantaged and rural residents not served by other facilities. Yet the future of mission hospitals has been thrown into doubt, and options for repurposing these institutions must be explored. The approach of mission hospitals to healthcare delivery has historically differed from those of other health systems (including many faith-based facilities) due to their isolated locations in lower-income countries. The multi-purpose attributes of mission hospitals make them excellent candidates for adopting a population health approach. The population health model, as now being developed in the United States, represents a radical departure from traditional clinical practice and reduces the system's dependence on clinical care as a means to improving community health. The population health model emphasizes treatment of populations rather than individuals, a holistic approach to the provision of care (addressing social determinants in the process), and the involvement of the community in multi-sector collaboration for collective impact. Mainstream hospitals have had difficulty in implementing a true population health model for a variety of reasons, but mission hospitals appear to represent an effective vehicle for putting this model into practice. A population health approach appears to complement the philosophy of mission hospitals, and mission hospitals appear positioned to advance the population health movement.

Key words: mission hospitals, population health

Introduction

A certain man was going down from Jerusalem to Jericho, and he fell among robbers, who both stripped him and beat him, and departed, leaving him half dead. By chance a certain priest was going down that way. When he saw him, he passed by on the other side. In the same way a Levite also, when he came to the place, and saw him, passed by on the other

> *side. But a certain Samaritan, as he traveled, came where he was. When he saw him, he was moved with compassion, came to him, and bound up his wounds, pouring on oil and wine. He set him on his own animal, and brought him to an inn, and took care of him. On the next day, when he departed, he took out two denarii, and gave them to the host, and said to him, 'Take care of him. Whatever you spend beyond that, I will repay you when I return.'* (Luke 10:30–35, WEB)

The parable of the Good Samaritan is one of the best-known examples offered by Jesus to exemplify his perspective on human relationships. What the Samaritan did for the robbery victim went beyond the fact that he "bound up his wounds." He provided transportation for the injured man, obtained lodging, and attended to his physical and emotional needs. Further, he provided funding to the appointed caregiver with instructions to provide whatever the victim needed. Within his limits, he was applying the population health model, a response more reflective of the approach of mission hospitals than of hospitals controlled by other entities.

Hospitals in the United States (U.S.) and around the world are faced with a changing environment for the delivery of health services. Trends can be observed in the U.S. and other high-income countries that are having a serious impact on the ability of healthcare systems—however structured—to address contemporary health conditions.[1,2] These trends include the growing mismatch between the services provided and the needs of the population, the misallocation of resources to high-end services, and—in the U.S. in particular—stark inequities in the availability and provision of care.[3] There is growing concern over the ability of modern Western medicine to bring about improvement in community health.[4] The more cynical would argue, in fact, that the system—at least as it operates in the U.S.—may be doing more harm than good. Indeed, in the U.S. today, medical errors are the third leading cause of death (after heart disease and cancer).[5]

The population health model is being championed in the U.S. in response to these developments because it recognizes the three components involved in community health improvement: clinical medicine, mitigation of the negative aspects of the social determinants of health, and policy reform.[6] The healthcare system is generally only concerned with the first of these and is limited in its ability to address the other two components even if so inclined. Mission hospitals, on the other hand, are commissioned to address the first two components and, where possible, the policy component.

The Changing Context for Healthcare

For two or three decades after World War II, there was a comfortable fit between the healthcare system and the needs of the population it served.[7] Health status steadily improved with significant credit being accorded to the healthcare system. Public health measures were responsible for much of the improvement in health status but never received the accolades showered on feats of "heroic" medicine. But the air of confidence surrounding the U.S. healthcare system in the 20th century has now been eroded by the realities of the current healthcare environment. The key developments contributing to the current dilemma are summarized below.

Changing patient characteristics

The various trends that played out over the last quarter of the 20th century dramatically reshaped the patient population and had major consequences for the healthcare enterprise.[6] The aging of the population contributed to an epidemiological transition through which chronic diseases and debilitating conditions replaced acute conditions and communicable diseases as the major health threats. This transition was further influenced by changing lifestyles and effective public health measures.

A changing patient profile was accompanied by the transformation of the "patient" into a "consumer". Patients came to be referred to as clients, customers, consumers, or enrollees, terms that imply different characteristics from those accorded to patients.[8] This development has resulted in a shift from patients as passive recipients of healthcare to active players in the management of their own health.

Changing disease etiology

The shift from a predominance of acute conditions to a predominance of chronic conditions was accompanied by a significant change in disease causation. The major killers a century ago (and throughout human history) were almost invariably attributed to a single factor. Although non-communicable diseases were not unknown, few members of the population lived long enough to contract so-called "diseases of civilization." Today's major killers reflect the interaction of a variety of factors, resulting in a more complex view of disease causation that recognizes the interdependence of biological and non-biological factors. Non-communicable diseases became predominant within the U.S. population, and the rest of the world is now following suit.[9] These chronic conditions arose from the combined effect of a lifetime of stress and the unhealthy lifestyles adopted by Western countries. Throughout much of the 20th century, it could be argued that society members were "innocent bystanders" when it came to the source of disease. With the advent of diseases of civilization, it became clear that modern society had become the source of most of the health problems of its citizens through individual choice or through the social determinants of health.

Changing health system challenges

At a time when the healthcare environment is undergoing dramatic changes, the hospital remains the focal point of the system. The U.S. system's inability to adapt to a changing environment has prevented society from addressing the root causes of our health problems. The health conditions that we observe in a community, it is argued, are not the problems but are merely *symptoms*. The real problems are poverty, housing insecurity, food insecurity, unsafe and dangerous communities, lack of educational opportunities, income inequality, and lack of parks and greenspace. No amount of clinical care can overcome these "social determinants" of health and illness. Indeed, it is well documented that providing access to medical care does not necessarily lead to an improvement in health status.

While the emphasis of this discussion has been on the situation in the United States, similar circumstances exist in other developed nations. In some ways, their situations may be more advanced (e.g., more advanced aging) and in others less advanced (e.g., unhealthy lifestyles), but all generally face the same issues with regard to improving community health. Most developed nations do have the advantage over the U.S., in that they have more highly developed public health infrastructures and more centralized control while public health in the U.S. is being steadily deemphasized.

The situation in developing countries is somewhat different in that they are typically not as far along in terms of the epidemiological transition as more developed countries. These populations are more likely to suffer from acute conditions and communicable diseases. However, analyses by the World Health Organization indicates that these countries are moving toward a situation similar to that in the U.S. much more rapidly than the process that unfolded here.[10] In fact, the list of the top 10 causes of death globally today mirrors the distribution for the U.S. This is not meant to diminish the importance of infectious diseases in lower-income countries (and even among subpopulations within the U.S.) but to highlight global trends that have been identified.

Most observers believe that community health improvement is, or at least should be, the

responsibility of the community (however community is defined).[4] The collective impact of various interests in the community working with the healthcare system is considered the key to improved community health status.[11] The healthcare system cannot do much about existing poverty, lack of affordable housing, or hunger, but the community may be able to do something. At the end of the day, *community* health status must be proactively addressed by the affected community.[4]

The Emergence of the Population Health Model

The failure of Western medicine to address contemporary health problems in the U.S. has generated growing interest in "population health" among health professionals, policy analysts, and government agencies. Assessing health from a population, rather than a patient perspective, represents an opportunity to develop a better understanding of the health status of populations while offering an innovative approach to improving community health.

The term "population health" has been used very inconsistently, and Deprez and Thomas have developed a more useful definition that involves two dimensions:[4]

- As a noun, population health views the health status of a population in terms of its health and well-being as measured by several population-based measures. The emphasis is on broad measures of health focusing on attributes of the group as a whole rather than the traits of individuals.
- As a verb, population health refers to an approach to improving health status that operates at the population level rather than the individual level. It focuses on social pathology rather than biological pathology and involves the "treatment" of conditions within the environment and policy realms in addition to the provision of clinical services to individual patients.

The application of the population health model can be explored at two different levels. At the micro-level, a population health approach might involve identifying individuals at high risk and intervening to reduce their risks. At the macro-level, the approach might involve reducing the average risk level for the total population by initiatives or policies addressing the social determinants of health. The macro-level approach is the hallmark of the population health model.

It has been argued that population health represents an amped up version of public health. The authors argue that, although the public health profession should have led the way in the development of population health, it did not. The public health infrastructure has been experiencing a decades-long decline in terms of its resources and capabilities. Its functions have been reduced to the bare minimum required by law at a time when the profession should be taking the lead role in community health improvement.[12]

Attributes of population health

The authors consider the following eight attributes to characterize the population health approach.

Recognition of the social determinants of health problems. An understanding of the social determinants of health is critical to the population health model, and the importance of social pathology over biological pathology must be recognized.

Focus on populations (or subpopulations) rather than individuals. Application of the population health model involves measuring the health status of the total population rather than simply compiling the clinical readings for individual patients. This assumes that community health status exists independent of the status of individual society members.

Shift in focus away from patients to consumers. Over time, "patients" came to be seen as "consumers." The trend was initiated by baby boomers who wanted the benefits of quality care as patients coupled with the efficiency, convenience, comfort, and value that they had come to expect as consumers.

Geography as a predictor of health status and health behavior. There is increasing recognition of the importance of the spatial dimension in the distribution of health and ill-health. Where one lives is not only a predictor of health status but also a powerful determinant of the kind and amount of medical care received.[13]

Health status as defined by the community. A community-based (participatory) understanding of the critical health issues is a prominent feature of population health. Rather than defining community health status from the top down based on epidemiological metrics, the model emphasizes a bottom-up approach that reflects the perspectives of community residents.

Acceptance of the limited role of medical care. While the cost of healthcare to consumers influences the amount of care consumed, there is no evidence that more care translates into better health. Indeed, a premise of the population health model is that health services make a limited contribution to the overall health status of the population.

Changes in health behavior are not ultimately individual actions. The decisions made with regard to health behavior are not the result of individual volition but reflect the impact of the individual's social context, cultural milieu, and life circumstances. Improvement in personal health status needs to be addressed within the context of the community environment in order to leverage resources for advancing health status.

Improvements in community health require collective impact. In accordance with the above attributes, the responsibility for health improvement falls to the larger community. Involvement by a wide range of community organizations supported by the healthcare system is necessary to create the collective impact required to "move the needle" when it comes to community health improvement.

Mission Hospitals and the Population Health Model

Mission hospitals have a mandate that is broader and deeper and follows a different timeline than that of even faith-based hospitals in the U.S. Unlike faith-based institutions in higher-income countries, mission hospitals have been primarily established in rural areas rather than urban centers. Isolated as they are, they constantly struggle with sustainability.[14] For most mission hospitals, government subsidies are meager, and already inadequate support from religious denominations has dwindled significantly in recent years.[15]

The mission of these hospitals encompasses the spiritual and communal aspects of life as well as the physical. Of necessity, this means taking into consideration the life circumstances of individuals and families along with the social determinants that affect their health status and health behavior. Indeed, religion has come to be seen as a social determinant of health in its own right.[16] Mission hospitals tend to be more integrated into the community, although often guided by distant denominational offices, and their policies more reflective of the needs of the community served. Although perhaps not applying the population health label, they have been forced to adopt a population health approach out of necessity.

In this sense, mission hospitals already reflect the major provisions of the population health model and the holistic approach highlighted in the Good Samaritan parable. It could be argued that the philosophy underlying the operation of mission hospitals anticipated the emergence of a population health approach making the mission hospital "system" fertile ground for the promotion of this strategy for improving community health. The potential of this approach for mission hospitals

stands in contrast to the many barriers that limit the application of this model by hospitals in the U.S.

Mission hospitals already have diverse goals as they pursue restoration and social cohesion while dispensing medical care. More so than hospitals in higher-income countries, advocates for mission hospitals think in terms of populations rather than individuals. The entire population is targeted with the intent of effecting group-wide change. Since mission hospitals were pursuing a population health approach before it was recognized within the broader healthcare community, they are in a better position than their counterparts in higher-income countries when it comes to implementing a population health model.

The implementation of a population health model requires a change in mindset and a rethinking of the roles of various healthcare organizations. A hospital must begin to see itself not as a hospital but as a multi-purpose community resource. The dispensing of medical care remains a part of the organization but should support the holistic health of the community, emphasizing the importance of population-based initiatives. This mindset already exists within mission hospitals.

While the population health model may represent a path forward for the mission hospital, the mission hospital is at the same time well positioned to promote the population health movement. Mainstream hospitals have had difficulty in implementing a true population health model for a variety of reasons, but mission hospitals appear to represent an effective vehicle for putting the model into practice.

The biggest barrier facing mission hospitals in pursuing a population health approach is inadequate financing and the absence of sustainable business plans. The population health model encourages and requires multi-sector collaboration in order to marshal resources from a variety of sectors for purposes of collective impact. This collaborative approach appears to represent a means for mission hospitals to pursue their mandates and support their vision. As stated by Bill Foege, former director of the U.S. Center for Disease Control and Prevention:

> It is not impossible to dream of thousands of congregations working alongside public health, sharing an understanding that health is a seamless whole — physical, mental, social, spiritual — that poverty and illiteracy and addiction and prejudice and pollution and violence and hopelessness and fatalism are forms of brokenness, diseases that require the deployment of both their assets in building whole, healthy communities.[17]

The Good Samaritan realized the importance of a holistic approach to managing the health of the robbery victim. He knew that simply binding the victim's wounds would not make him whole again. A full range of services is required not only for patients but for all community residents in order for them to not only be cured but to be truly healed. The mission hospital appears to be uniquely positioned to advance the population health model and replicate the Samaritan's efforts on a broad scale.

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Peer Reviewed: Submitted 31 Mar 2020, accepted 15 Oct 2020, published 15 Dec 2020

Competing Interests: None declared.

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Cite this article as: Thomas R, French N. The population health model: A timely approach for mission hospitals. Christ J Global Health. December 2020; 7(5):82-88. https://doi.org/10.15566/cjgh.v7i5.363