Adapting and Using Quality Management Methods to Improve Health Promotion

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Although the western world is the most technologically advanced civilization to date, it is also the most addicted, obese, medicated, and in-debt adult population in history. Experts had predicted that the 21st century would be a time of better health and prosperity. Although wealth has increased, our quest to quell health problems using a pathogenic approach without understanding the interconnectedness of everyone and everything has damaged personal and planetary health. While current efforts help identify and eliminate causes of problems, they do not facilitate the creation of health and well-being as would be done with a salutogenic approach. Sociologist Aaron Antonovsky coined the term salutogenesis in 1979. It is derived from *salus*, which is Latin for health, and *genesis*, meaning to give birth. Salutogenesis, the study of the origins and creation of health, provides a method to identify an interconnected way to enhance well-being. Salutogenesis provides a framework for a method of practice to improve health promotion efforts. This article illustrates how quality management methods can be used to guide health promotion efforts focused on improving health beyond the absence of disease.

Key words: Quality, salutogenesis, health, systems

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INTRODUCTION

The Sony Walkman was introduced in the late 1970's as an inexpensive and innovative way to enjoy portable music. Since it was a better way to access and listen to music, it promptly became popular. When the makers of the Walkman did not keep up with digital music access and listening (as is possible with the iPod and iTunes), it was replaced. Video rental stores were very popular until stand-alone kiosks were introduced with improved efficiency, access, and price. Now those kiosks are being replaced by online accessible movies. Each change was popularly adopted because the innovation spurring it resulted in an improved end user (human) experience.

While these innovations improved experience, it must be understood that change and improvement are not synonymous. When change creates better outcomes, it almost always requires creative innovation. True innovation is not simply developing a new method to do the same thing, it should be a way to improve or surpass an existing or previous level of achievement. Kiosk movie rentals and online music purchases, for example, not only improved access; a connected benefit was a dramatic reduction of waste and associated costs. These innovations are better ways. Innovation and improvement are necessary to promote better health. Simply eliminating bad things does not create good things. For example, research has demonstrated that eliminating dissatisfaction does not create satisfaction; satisfaction must be developed.[1,2]

There is a difference between better technology to deliver a product or service and a different paradigm or conceptual framework. The Walkman and iPod were developed to fulfill the same objective: music on the go. The difference is quality and quantity. The iPod can hold thousands of songs, while the Walkman's capacity is limited to the contents of a single cassette. The same is true for the evolution of movie delivery for home use. The kiosk supplanted the video store, which is in competition with online video streaming. There are differences in convenience, cost, and method of delivery. However, the end goal is the same—delivers movies for home viewing although as with the iPod, additional features were also available.

Delivering better technology to implement the pathogenic/disease detection/disease prevention model is conceptually and operationally different from salutogenesis. Salutogenesis is different in kind, not just in quality and quantity. Salutogenesis is not just another way to do the same thing.

Cowley and Billings explain that salutogenesis refers to that which gives birth to health. In traditional public health and community medicine approaches, a "pathogenic" perspective is used, and the focus is on disease or illness and its prevention or treatment. The pathogenic approach most

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often dominates interventions. A salutogenic perspective highlights the importance of starting from a consideration of how health is created and improved.[3]

Salutogenesis is different than pathogenesis. Pathos means suffering, pathogenesis is the birth of suffering. Ironically, most health professions have this term incorporated in their names. For example, conventional medicine is known as allopathy. Even alternative medical systems, such as homeopathy, naturopathy, and osteopathy, incorporate pathos in their names, and a focus on disease prevention or treatment is implicit in their clinical strategies. In contrast, salutogenesis is the creation of health and well-being. While the prevention and treatment of disease has its place, it is a dangerously incomplete approach for inculcating and cultivating human potential.[4]

The salutogenic model addresses the causes of global well-being rather than the origins of specific disease processes. It focuses on strategies, environments, and lifestyle choices that empower individuals to experience the full spectrum of the human experience.[5]

A state of good or positive health implies the presence of physical, mental, and social well-being factors. This means that the absence of a diagnosed illness or infirmity is not health.[6,7] Logically then, efforts to improve health should be based on factors that are or cause health, i.e., physical, mental, and social well-being, rather than based on the elimination of the causes of disease and infirmity. Health promotion is the science and art of helping people engage in actions that enable them to optimize their health.[7] Even so, confused traditional health promotion efforts have primarily relied on eliminating problems, risk factors, and disease to improve health rather than creating ways to actively generate health.[6,8,9]

Past generations believed the 21st century would be a time of prosperity when people would not be burdened by disease, discord, and problems. However, the emerging reality suggests that while the West grows wealthier in a material sense, it is the most addicted, obese, and medicated population in history.[10] These societal afflictions are evidence that current health promotion efforts focused on eliminating pathogenic or disease-causing conditions and their associated precursors are largely ineffective in improving health outcomes at the societal level. These failures suggest or advocate the thesis that desired outcomes must be caused to happen through conscious, deliberate efforts.[11]

By the 1980s, the American industries were comparing poorly to foreign competitors that produced higher-quality goods.[12] Recognizing the need to innovate and do more than just fix problems, business transformed by implementing quality management methods similar to what had propelled post-WWII Japan to capture market share.[13–17] Today, quality management methods are widely used across the globe, because results from businesses that focus on quality improvement yield better outcomes.[18] This article describes a liberally borrowed adaptation of quality management methods for health promotion to create pervasive comprehensive benefits that can improve health outcomes.

CREATING HEALTH

An ancient Buddhist saying explains, we must first master the art of seeing or we are not very likely to hit what we are aiming for. With this in mind, health professionals must clarify how they see health. Universally, people indicate that they desire health; however, upon review, it is clear that health is not what people desire but rather what health enables. Health enables people to think more clearly; work more productively; be better parents, partners, and lovers; etc. When business organizations wanted higher demand for its products, they learned that lower costs alone were not enough to create demand. Higher-quality products and services were necessary. To create better quality, businesses had to change their traditional ways and improve their processes. In a similar way, health professionals must understand the insufficiency of the current practices developed on the view that health is simply less disease. Rather, health should be viewed as a desired resource, because it allows people to realize their goals. A worthy goal is to improve health (the resource) as a way to improve outcomes. Simply eradicating problems will not be as effective.[19,20]

The World Health Organization's 1948 constitution defined health as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.[21] The definition contradicts the widespread convention that simply eliminating, avoiding, and preventing disease will create good health.[22] Consistent with this definition, Dunn[23(p787)] introduced the concept of wellness and described it as a "… darkly seen, undifferentiated" state. He defined wellness as a positive state that was more than a simple state of "unsickness"[23(p786)]. By introducing wellness and to differentiate it from a simple state of non-disease, he positioned wellness as the presence of positive or good health and assigned states of disease and infirmity to negative health, bad health, or not healthy.

Dunn used a health grid to describe the missing positive quadrant of positive health he referred to as wellness. The two-by-two grid had a health and environmental axis (Figure 1). The created quadrants showed health as high or protected in a favorable environment while unfavorable environments made healthy states unlikely.[23] In his way, he demonstrated that everything we do and are exposed to impacts our health. He also suggested efforts must be directed toward creating environments that nurture physical, mental, and social well-being.[23] He further implied what has been confirmed with current research that conscious and deliberate effort and action are necessary to cause and create health.[11]

HEALTH: WHAT MUST HAPPEN

Health (Illness) care expenditure in the United States first exceeded $2 trillion in 2005 and is projected to exceed $4 trillion by 2018. Federal forecasters have projected that by 2020, healthcare expenditures will near 20% of the gross domestic product (GDP).[24] According to the 2013 Annual Social Security and Medicare Trust Fund Reports projection, Disability Insurance Trust Fund asset reserves will be fully depleted in 2016. Hospital Insurance Trust Fund asset reserves are projected to be fully depleted in 2026.[25]

A transformation is needed to enable better health, because the continuation of ongoing traditional care with incremental

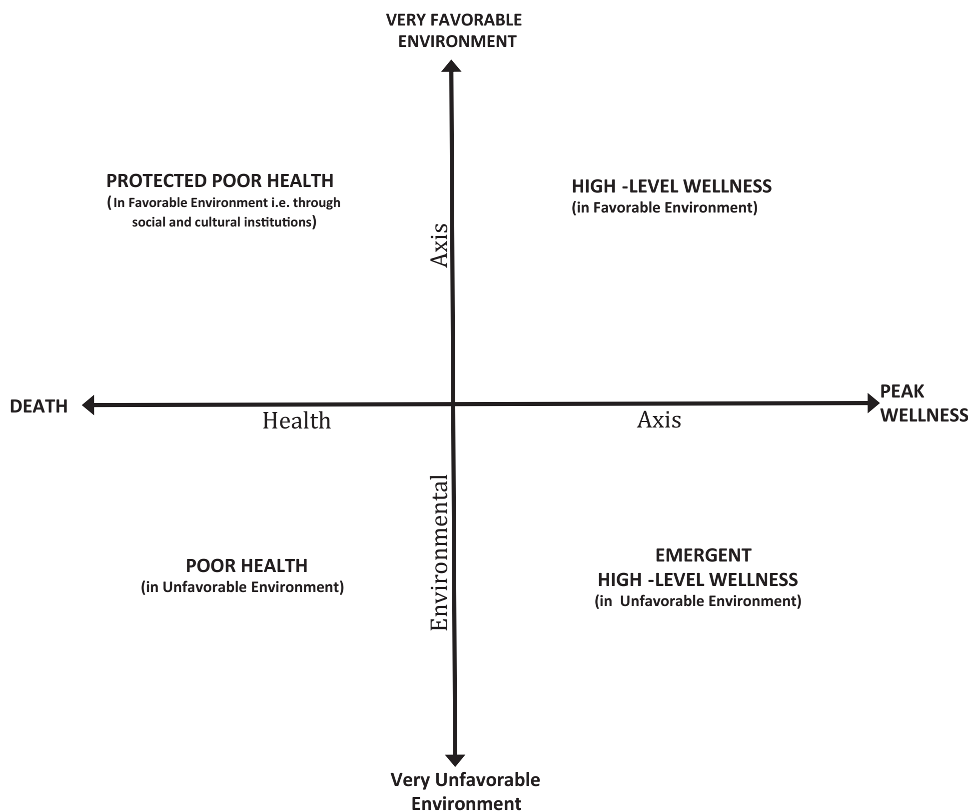

Figure 1. Dunn's health grid, its axes and quadrants. Adapted from Dunn.[23]
Source: US Department of Health Education and Welfare, Public Health Service, National Office of Vital Statistics.

change is insufficient. To drive this transformation, a new framework, philosophy, and model/theory along with new measurements are needed. Salutogenesis, the study of the creation or origins of health, provides the necessary theoretical basis for health promotion to create optimal health.[5] A theoretical basis about the causes of desired outcomes that seeks to discover methods to achieve optimal health seems obvious, yet this has not been used in practice. Despite a definition of health and health promotion that stresses physical, mental, and social well-being, pathogenesis, the study of the development or origins of disease with methods to avoid and prevent bad things from happening, remains the theoretical framework and guide for most health promotion efforts. A call to move health efforts toward a more positive focus has been echoed by many over the past 60 years.[8,19,26–30] The authors of this article advocate and reiterate the suggestions of Antonovsky[6] and others that salutogenesis be the guiding model and theoretical framework for health promotion.[5,31–33]

To understand the need for a shift from a pathogenic to a salutogenic approach, differences between the two frameworks require exploration. Reflection on practices shows how using a pathogenic framework guides professionals to identify a disease or problem to use as a starting point. After problem identification, the pathogenic approach then guides professionals to search for associated disease/problem precursors (so-called risk factors). Pathology works from the assumption that elimination of the precursors will, necessarily, result in better health. The most obvious limitation of this approach on the individual level is that by the time problems are identified, the disease process has already created inconvenience, disability, or even death.[6] On the societal level, this approach often fails to identify risk factors until they are deeply imbedded in the communal fabric. Essentially, the pathogenic approach is almost operating in an ex-post-facto manner that is reliant on the worst manifestation of a problem before attempting to formulate a solution. The most hopeful outcome from treating the problem using a pathogenic approach is a return to status quo, but only after substantial suffering and expense to those impacted by the identified problem. With pathogenesis, the stated aim is restoration, not improvement to a better state of health.[22]

Prevention is another approach to health that has evolved from the pathogenic paradigm. The idea of prevention is problematic to the creation of health, because by definition, prevention is about stopping something from happening or from getting worse. If prevention works, nothing happens. As described, prevention therefore just keeps people from getting worse. Another problematic side effect of prevention is that if no problem has been identified, the assumption is what they

have been doing is correct, thus stifling any motivation to engage in health-promoting actions.[22] In other words, the traditional pathogenic process sees health as the absence of problems, and this wrongly implies that if problems or disease is not present, actions must be health promoting. The existing process is insufficient because health must be deliberately caused to happen.[5]

Differentially, the starting point for salutogenesis is a better, not yet realized, state of health. Therefore, a salutogenic approach would guide health professionals to use a prospective focus and effort to determine the process and actions needed to develop a better outcome than previously experienced. Using salutogenesis as a theoretical basis for health shifts the focus from the retrospective work of pathogenesis to determine the causes of disease or infirmity to prospective work that determines actions and environments needed to produce better physical, mental, and social well-being.[5,34] This forward-looking method is at the core of salutogenesis and is counter to the traditional retrospective pathogenic methodology.[5,6]

DIFFERENT THEORY, DIFFERENT METHODS

The differences in pathogenic and salutogenic approaches emanate from unique assumptions. Pathogenesis is optimistic and assumes that humans are naturally healthy and will achieve high health if they could only avoid what causes problems or poor health. Salutogenesis is pessimistic and perhaps, more realistic, because it assumes that bad things may happen. The salutogenic approach therefore works to actively cause health to happen, which simultaneously attenuates any problems. Salutogenic health promotion creates something new by starting with an idealized outcome. For better outcomes to be realized using salutogenesis, such as desired higher level of physical, mental, or social well-being, the better outcome needs to be operationalized. In the beginning, groups or individuals should discover and clarify a desired state that will help them move toward their goal. Determining a desired state is valuable because seeing an outcome that is better than the current status or an existing status quo fuels motivation and interest in taking action.

Differences in using these approaches become clear using an athletic analogy. Athletes strive to continually improve, and their preparations can be seen as salutogenic. To improve, before an athlete begins a competition, he or she visualizes a better, not yet realized, improved outcome. In addition to an optimistic visualization, the athlete works to discover, develop, and engage in preparatory training to make that better outcome more likely. To continue the analogy, if an athlete were to use a pathogenic-based approach, those preparations would include learning how to avoid or prevent problems or difficulties believing this would be enough. Success for an athlete using a pathogenic approach would be to finish the event without problems, not to necessarily perform better. In contrast, a salutogenic approach by athletes would prepare them to not only finish the race and develop the capacity to deal with any unforeseen problems, it would also enable them to exceed previous performances.[35,36] Often, these approaches are seen as an "either or"; however, engaging in actions to enhance health must, by definition, also simultaneously prevent most problems, or they would not create better health. The need to address both the promotion of better health states and prevention of the problem of disease and infirmity suggests that a salutogenic approach makes sense.

Food consumption provides another example that highlights these approaches. While Dean Ornish is most notably known for reversing heart disease, he emphasizes an eating style based on pleasure, not pain, abundance, not deprivation, science, not myth, and about the joy of living.[36] As multiple experts explain, eating what they call plant strong (more vegetarian, vegan foods) provides for better personal and planetary health benefits while also providing the best protection from disease and infirmity.[37–41] The switch by many high-performing athletes to plant-based diets also highlights the benefits beyond prevention.[42]

The different starting point, assumptions, and expectations highlight the need for the use of alternate measurement techniques. Since the objective of prevention is to keep something from happening, pathogenesis has relied on the measurement of end points or outcomes that signify neutrality or the absence of problems. Salutogenesis alternately and primarily requires the use of process and progress measures to document gains and optimization, as has been done in interventions designed to increase performance. Notably, these investigations have documented that those engaging in salutogenic actions also had decreased incidence of problems.[5,43,44]

Review of findings document that pathogenic efforts may help keep people from falling back because of problems and therefore effectively treat disease, but these same efforts do not effectively create higher levels of health. Improvement efforts must be actions designed to create better health. In contrast to pathogenesis, salutogenesis unleashes potential by encouraging actions to improve through the development of new capacities that help to move people forward toward desired goals and possibilities, as has been seen by students with better academic and health outcomes and working professionals with higher productivity.[5,44–49] The for-profit nature that underpins much of the U.S. healthcare system would seem at odds with salutogenic outcome measures. However, the innovation required for such a transformation would reward those organizations that are best able to improve individual and societal well-being. Similar to the disruptive technologies in the music industry that spurred transformation (Walkman to iPod and iTunes, movie rental, stores with DVD's to Kiosks to streaming), the transformed healthcare system, with salutogenesis at its core, will lower the costs of the system while improving the end-users' experience. It is in a nation's best interest to have a healthcare system where wellness and quality of life are the first priorities, and profit must be made within that paradigm. As Anotonovsky[4(p12)] explained, "no one contends that museums pay off in cash," as he inferred investments in such institutions create a more profitable life for all. Evidence suggests the likely outcome is improved satisfaction of workers, patients, and profits.[49] Through this required transformation, it must be understood, profits cannot be made using the same approach, and salutogenesis provides a scientific basis to guide and

develop new profitable health promotion efforts that also provide benefits for everyone and everything.

PUBLIC POLICY CONSIDERATIONS

Public health policy emphasizes a pathogenic model. The Affordable Care Act (ACA) includes covered services for preventive care. Such services focus on early detection and prevention of disease. The Medicare Act requires covered services to be "reasonable and necessary for the diagnosis or treatment of an illness or injury, or to improve the functioning of a malformed body member." Specifically excluded as "not medically necessary" is "maintenance care," which is defined as follows: "a treatment plan that seeks to prevent disease, promote health and prolong and enhance the quality of life, or maintain or prevent deterioration of a chronic condition."[50] Despite such limitations, a growing body of evidence suggests that salutogenic lifestyle strategies may reduce healthcare costs and improve quality of life.

In a study of 84,941 nurses with a 16-year follow-up, the authors concluded that 91% of the cases of type 2 diabetes in this cohort could be attributed to habits and forms of behavior that did not conform to the low-risk pattern.[51] Hyman et al.[52] reported results of the EPIC study involving 23,000 subjects, which examined how adherence to four simple behaviors (diet, exercise, BMI less than or equal to 30, and not smoking) affected health. Results showed that if participants adhered to these behaviors, 93% of diabetes, 81% of heart attacks, 50% of strokes, and 36% of all cancers were prevented. Salutogenic strategies should be incorporated into public health practice to not only prevent problems but also make life better. The objective of such integration is to do precisely what Medicare excludes: a plan that seeks to promote health, prolong and enhance the quality of life, and prevent disease.

THE TRANSFORMATION

The changes required to move from pathogenesis to salutogenesis appear daunting without the recognition that business has already engaged in a similar transformation with its quality improvement efforts. Adaptation of quality management methods for business provides a guide for health promotion. Counter to the tenets of traditional practices, quality experts demonstrated how better quality resulted in lower costs than could be realized from scaling with more production. Lower costs were realized because of improved processes, less rework, fewer mistakes, and fewer delays. Although costs lowered, better processes produced the more valuable outcome of better products and services that increased sales, market share, productivity, and profits. These methods, when applied correctly, also meant businesses were better environmental stewards, which benefitted everyone and everything.[14,15,18,53–56]

Those who adopted quality management methods in business faced similar challenges as those of health professionals seeking to use salutogenesis. Business had the shortsighted philosophy that simply producing more products while fixing or preventing defects could produce a sustainable market.[13–15,54] Adoption of salutogenesis for health means overcoming the widespread belief that simply eliminating, avoiding, and preventing disease will create better outcomes. Currently health promoters rely on health risk appraisals, exams, and screens to identify problems that can be treated or eradicated. In business, prior to the use of quality management methods, inspectors would check and rework faulty products at the end of the assembly line before they were shipped or evaluate customer experiences after they were delivered. Inspections used in business like identification of diseases or risk factors in health are always too late, problems have already been experienced.[14]

Applying methods used to adopt quality management in business to health promotion for the adoption of salutogenesis provides a map to follow that may produce similar benefits. Quality management methods were able to transform business practices by introducing a new starting point. The starting point with quality methods is the desired characteristic of better quality than currently possible, which is analogous to the salutogenesis starting point of an idealized outcome of improved health. Improved health in this sense means things such as improved mental clarity and capacity, expanded supportive social network, and developed strengths.[57] Quality management methods also advocated use of process measures to assess the process creating the product or service to determine how to continually improve it.[58] In other words, like salutogenesis, quality management methods were primarily about how to create improved outcomes from better methods that could not be realized with current methods that focused primarily on fixing what was wrong. Research overwhelmingly documents how generative quality management methods and measures led to better outcomes at lower costs.[14,59,60]

Transforming health promotion efforts toward the use of salutogenesis shares characteristics associated with the business quality management transformation. Both quality management methods and salutogenesis must be prospective to determine the process through which a better state of health or quality can be created. Like the use of quality management methods in business, using salutogenesis as a theoretical basis for health helps shift the focus from retrospective work that attempts to determine what causes problems, specifically disease or infirmity, to prospective work that determines what processes are needed to produce the desired outcome of physical, mental, and social well-being or positive health.[5,34]

STARTING THE CHANGE

Many inherent methods used in the business transformation to quality management are adaptable for the transformation in health promotion. The understanding that improvements should be ongoing, that all areas are connected and contribute to the end product or service, and that simplification of any process through the elimination of unneeded complexity are all quality management methods that should be used by health promotion.[13]

Use of quality management methods such as appreciation of the system, interconnectedness, and constancy of purpose toward improvement beyond the absence of problems could

improve health promotion.[14] Problems and difficulties exist, and eliminating them seems like a moral imperative. However, development of enhanced capabilities and potentials is vital and essential, because even if problems are gone, the capacity to achieve a better outcome must still be developed. Intention, adherence, and performance gains can be realized by strategies that develop capabilities and potential rather than through vigilance and avoidance of difficulties.[61] In other words, the essential transformation for health promotion can use the business strategies that enhance capabilities to create a better tomorrow. In doing so, salutogenically based health promotion programs will provide benefits beyond the absence of disease that also enhance our capacity to traverse unexpected difficulties that do occur.

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