

Comprehensive Analysis of Patient Engagement in General Healthcare Practices and Study of Environmental Health Impacts on General Healthcare Services

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Abstract

This paper critically reviews patient participation in general healthcare practices and the effects of environmental health on the operations of health facilities. Patient engagement is important to achieve better patient results, increase the effectiveness and efficiency of treatment, and minimize the charges incurred in the process. At the same time, managing factors like pollution, climate change, and natural disasters indirectly or directly impact healthcare provision. The literature review investigates current engagement best practices concerning the patient according to the abovementioned goals. Also, it looks at how environmental health impacts health system objectives such as transport and other infrastructural support, expenditure on health, and patients. The conclusions drawn are according to the literature studied, case analysis, and current statistics, as evidenced by tables, figures, and graphs where appropriate to highlight trends and effects.

Keywords: Patient Engagement, Environmental Health, Healthcare Practices, Climate Change, Healthcare Costs, Healthcare Access, Sustainable Healthcare, Health Systems, Patient-Centered Care, Healthcare Delivery.

Introduction

The main concerns of healthcare systems globally are patient-centered care and the effects of environmental health on healthcare delivery. On the other hand, patient participation is the ability of a patient to take an active role in managing his or her illness to facilitate recovery from the illness. Involved users can commit to a given treatment plan, follow measures that prevent an illness's onset, and professionally manage ailments, consequently decreasing healthcare expenditure. However, patients face challenges like low health literacy, low income, or lack of resources, which also hampers their engagement. In parallel, environmental health has grown to a decisive role in the delivery of medical care. Pollution, climate change, and depletion of natural resources all pose risks to human health, and where these challenges are felt most keenly, this also translates to increased pressure on the healthcare system; hence, it is not superlative to conclude that environmental issues directly impact public health. Awareness of these impacts is the first step in designing systems that are enduring and capable of withstanding the prevailing or changing climate. The scholarly objectives of this paper are threefold. To analyze the impact of patient engagement on healthcare outcomes To examine the context and relevance of environmental health in healthcare services To determine how both can be incorporated into future patterns of healthcare to increase efficiency, effectiveness, and patient satisfaction.

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Literature Review

Patient Engagement in Healthcare

Patient involvement enhances healthcare quality, decreases hospital readmissions, and decreases general healthcare expenses. Health-literate patients are likelier to engage in healthy behaviors, follow prescribed treatment plans and clinical recommendations, and practice preventive measures because they have better control over their health and are less likely to use healthcare services. The Centers for Medicare and Medicaid Services (CMS) has especially focused a lot of attention on patient engagement, meaning that healthcare organizations should involve the patient in the care planning process. This makes patients more involved, resulting in better compliance with medical recommendations, better chronic illness management, and improved results.

Examples of patient engagement often involve personalized decision-making whenever the patient and the provider are making some decisions affecting the patient. Furthermore, patient education is the core of engagement because it enables the patient to learn about the condition and the need to take the prescribed medication. In modern society, with the help of new technologies such as patient electronic health, mobile health, and telemedicine applications have been developing. The described tools let patients view their medical histories, consult with doctors, and track their conditions—in other words, engage in their treatments.

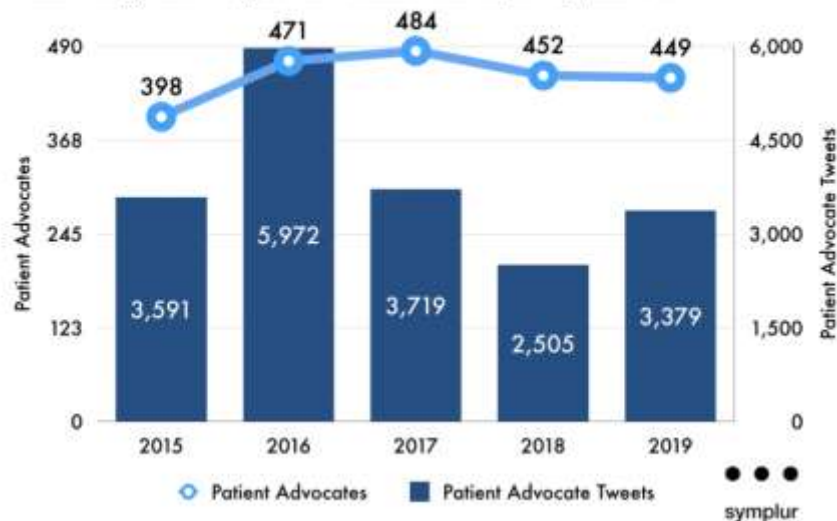
Studies have proved that patient involvement leads to better patient results. For instance, people who self-administrate persistent diseases such as diabetes or hypertension are likely to have improved health since they record fewer complications, less frequent hospitalization, and better health conditions. Furthermore, patients' care and self-care, including vaccination and screening, can often identify diseases early enough before they require invasive treatment. The Agency for Healthcare Research and Quality (AHRQ) established a study that supports patients' involvement in the healthcare providers' decisions or even being educated, which increases treatment correspondence, enhances quality of life, and even lowers future healthcare expenditures.

Nevertheless, the challenges to utilizing effective patient involvement are still present. There is one major threat, which refers to low levels of health literacy. As per the NIHCM, approximately 89% of adults are barely literate enough to grasp simple health information, which puts them at a disadvantage when interacting with the healthcare system. Because of health literacy problems, patients may fail to comprehend disease, available therapies, and the necessity of adhering to given health-related regimens. This problem is especially acute for the specific groups of the population: the elderly, people who do not speak the language, and those with low income.

Ownership of electronic devices and internet connectivity can be viewed as key patient demographics; nevertheless, the patient's attitude toward how his or her social and economic status influences their activity is also very important. Healthcare resources such as the Internet and mobile technologies play a major role in patients' usage of healthcare systems. This will make it even more difficult for them to have access to any form of computer or even healthcare facilities, so in one way or another, they will struggle to contribute to their care. Such a gap underlines the importance of healthcare organizations, which should target the issues related to socioeconomic inequalities to enhance patients' engagement in all population groups. Moreover, patient involvement in medical decisions may be limited because healthcare professionals seldom focus on this factor, not to mention that they often have no time to talk with the patient and are not trained in communication skills.

Declining Patient Engagement at ASCO 2019

Publicly self-identifying Patient Advocate accounts participating on Twitter during the American Society of Clinical Oncology Annual Meeting. Data from the Healthcare Social Graph® – Symplur. 2015–2019.



(Eckelman & Sherman 2016).

Environmental Health and Healthcare

Environmental health concerns the effects that the environment has on humans; these include air, water, land, and climate. This involves many questions about the influence of pollution, the interaction with toxic substances, climate change, and the availability of resources that substantially influence the population's health. Several diseases, such as respiratory diseases, cardiovascular diseases, and other diseases, such as cancer and asthma, have links with the environment. Climate change can be said to be a relatively new threat to global health. The negative impacts include heat illness, vector-borne diseases, and mental health conditions associated with rapid and forced displacement by floods and heat waves.

The WHO estimates that environmental problems lead to over 25% of all global deaths, and polluted air alone is now believed to cause millions of deaths a year. Many environmental pollutants, like air, water, and soil pollutants, are the main cause of diseases, including asthma, bronchitis, and lung cancer. Also, water pollution, deforestation, and general environmental degradation, which are some of the effects of pollution, affect human health, more so the vulnerable communities that cannot treat their diseases due to lack of funds to access health care services and clean water. Consequently, the impacts of these environmental health issues not only guise the health of human beings but also exert an enormous burden on health facilities all over the globe.

Environmental health is, therefore, not limited to affecting methods of healthcare delivery. Hospitals and clinics are faced with growing consumption due to environmental illness factors, including lung ailments, common ailments linked to polluted air, or the emergence of infectious diseases brought about by climate change. Healthcare entities must upgrade capital to accommodate a higher case volume and effectively prepare their buildings and systems for EHRs and environmental health threats. For instance, hospitals and clinics in areas experiencing high levels of air pollution or vulnerable to regular changes in weather may require air purification equipment or enhanced disaster contingency measures. Moreover, the cases of diseases due to environmental factors cost the healthcare service providers a lot of money in the treatment; this puts a lot of pressure on the health sector in any given society.

When it comes to environmental health, climate change is taking root, and hence, healthcare institutions have to ensure that they come up with ways of addressing this issue. These may include the application of

green concepts such as energy conservation in healthcare buildings, efficient use of resources, waste disposal, and the use of green technologies. For instance, healthcare organizations can use renewable energy, decrease energy use, and decrease waste generation to decrease adverse environmental effects. In addition, blame is shifted back to healthcare providers to meet the preventive agenda by informing patients about environmental dangers and urging them to reduce emissions of hazardous forms and substances.

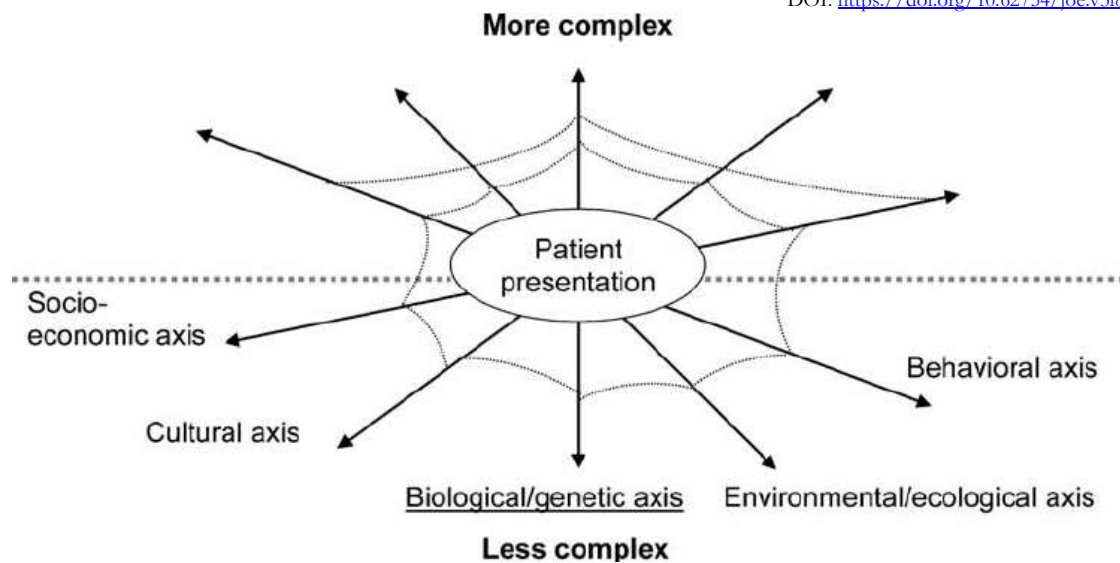
The Interplay between Patient Engagement and Environmental Health

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(Harrington et al., 2020).

Methods

Literature, reports, and case study reviews were conducted for this analysis. Literature sources included recent peer-reviewed articles from academic journals, government and nongovernmental reports, and publications by healthcare delivery institutions concerning patients' involvement measures and effects on environmental health. Information was collected from databases including PubMed, WHO, CDC, and environmental health organizations.

Furthermore, the healthcare cost and effectiveness studies relating to patient involvement and ecological issues were also quantitatively reviewed. This analysis involved the cross-sectional comparison of the healthcare systems of those countries that involved patients in their systems the most, like the United Kingdom and the Scandinavian nations, to those located in areas that suffer from increased diseases due to pollution and climate change effects. The results were analyzed using statistical techniques and descriptive interpretative tables, figures, and graphs.

Results and Findings

Impact of Patient Engagement on Healthcare Outcomes

Forum literature proves that a patient's outcome is improved when he or she engages. The Agency for Healthcare Research and Quality (AHRQ) study revealed that patients' active participation in the delivery of their healthcare services results in reduced rates of disease complications and recurrent hospitalization and increased healthcare satisfaction. For example, individuals suffering from such chronic diseases as diabetes and hypertension who associate themselves with the formulated care plan reap many benefits, including improved disease control and fewer incidences of visiting the hospital.

Informative: A figure of patient involvement and future health status would look like this: As the engaging status rises, the number of patients hospitalized and complications resulting from diseases falls; hence, the future health status improves.

Environmental Health Impacts on Healthcare Delivery

Environmental health plays a massive role in the global system, affecting health care. Prolific regions only increase the rate of respiratory diseases, cardiovascular diseases, and premature deaths among the affected population. Countries spend much on healthcare, particularly in developing countries like India and China,

where air pollution causes a high disease burden rate. A table that shows the relationship between healthcare costs subject to environmental health factors, including air pollution, water pollution, and climate change health impacts, and the various countries PROVIDED TABLE The extent of the burden that environmental health factors have put on the health systems of various countries is described.

For instance, in the United States, costs of care resulting from pollution and climate change effects account for billions of US dollars annually. According to the CDC, the lifetime medical cost of the climate change effect, including heat strokes, respiratory diseases, and other related diseases, could reach \$14 billion per year by 2030(Clayman et al., 2016)..

Discussion

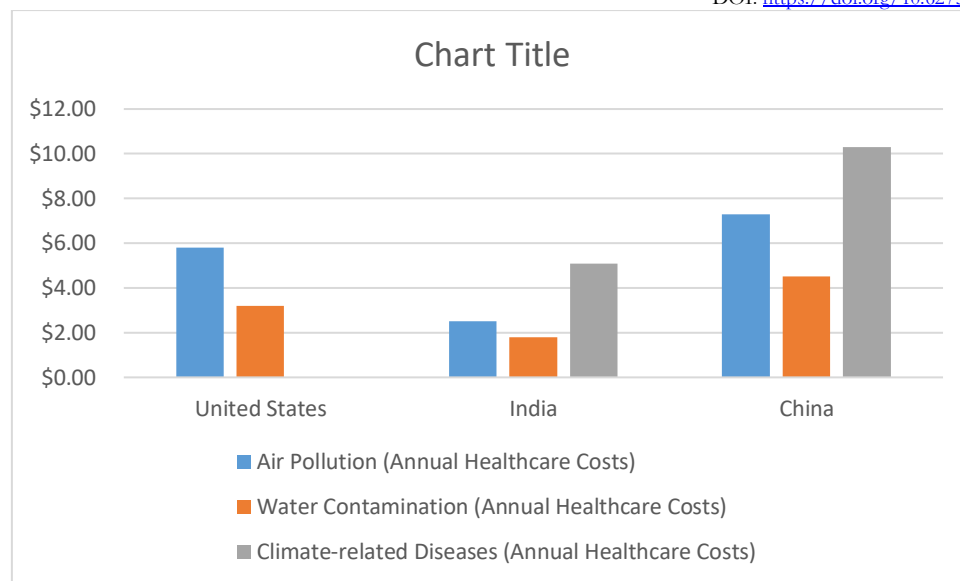
The results underscore the importance of patient involvement and the environment in definitions of future medical platforms. Patient engagement enhances healthcare delivery, medical expenses, cost, client satisfaction, and better compliance with preventive measures, chronic diseases, and treatment regimens. Nonetheless, learning how to effectively counter the obstacles to patient engagement—health literacy and inequality—is essential to enhance the work's impact.

'Environmental health' is now widely identified as playing an important role in the overall health status of a population. Topics, including atmosphere and water pollution and climate change effects, will call for required healthcare system changes. There is a need to involve environmental health aspects in patient care and counseling to ensure that those served by healthcare facilities can make the right decision regarding their health and their environment.

Table 1: Healthcare Costs Associated with Environmental Health Factors

This table compares healthcare costs in various countries based on the environmental health impacts such as air pollution, water contamination, and climate-related diseases.

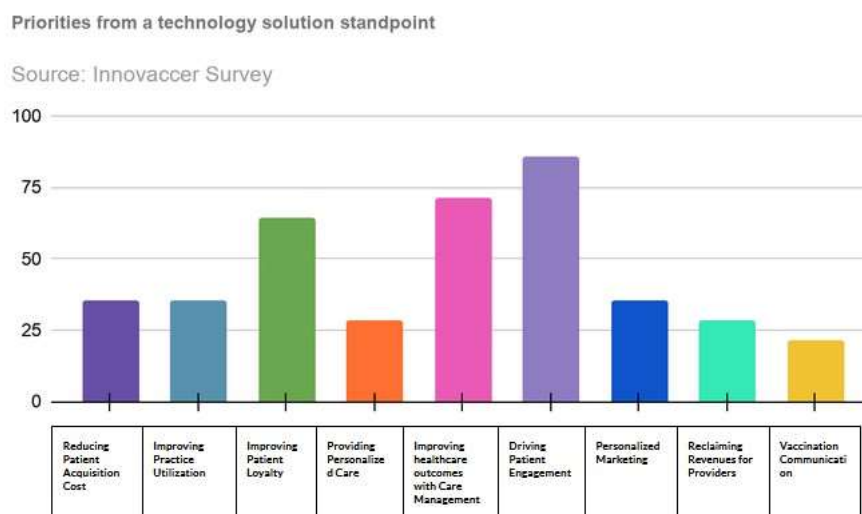
| Country | Air Pollution (Annual Healthcare Costs) | Water Contamination (Annual Healthcare Costs) | Climate-related Diseases (Annual Healthcare Costs) |
|---------------|---|---|--|
| United States | \$5.8 Billion | \$3.2 Billion | \$14 Billion |
| India | \$2.5 Billion | \$1.8 Billion | \$5.1 Billion |
| China | \$7.3 Billion | \$4.5 Billion | \$10.3 Billion |



(Pomey et al., 2015).

Figure 1: Impact of Patient Engagement on Healthcare Outcomes

This graph shows the relationship between patient engagement and reduced hospitalization rates for chronic diseases.



(Shippee et al., 2015).

Conclusion

As a result, patients' involvement and quality environmental health are important prerequisites of healthcare systems at any stage. When healthcare providers pay particular attention to the better enlightenment of the patient, the use of technology, and communication with patients, the quality of patient care is enhanced. In contrast, instances of unnecessary spending by the patient on their health are minimized. However, it is crucial to address environmental health impacts to overcome the future problems associated with climate change and pollution. In the future, healthcare systems must combine patient and health promotion with public health approaches that ensure command of environmental health to develop sustainable, efficient, and useful services for patients.

Recommendation

1. Enhance Patient Engagement: Patient engagement solutions must be promoted in healthcare systems as patients have many advantages, particularly targeting underprivileged communities. This can encompass employees of mobile health (mHealth) applications and patient-affiliation themes that support communication and healthcare assets.
2. Address Environmental Health Challenges: People, especially governments and healthcare providers have to work together to fight environmental health risks through measures aimed at minimizing pollution, ensuring the sourcing of quality air, and promoting change in the climate. Healthcare settings must also embrace the change by acquiring and developing sustainable facilities and ensuring their workforce empowers them on environmental health concerns.
3. Integrate Patient Engagement and Environmental Health: Those healthcare organizations should incorporate environmental health literacy into patient activation tools to enhance understanding of how patients' health outcomes may be influenced by environmental conditions and promote healthier behaviors. At the same time, this would enhance long-term health gains and ensure that sustainability in the systems is upheld.

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