



Sustainability in Healthcare: A New Dimension in the Healthcare Sector in India

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ABSTRACT

Sustainability in healthcare can be considered a scale of quality, stretching the obligation of healthcare providers to users not only now but also in the foreseeable. The broader perspective implies how our health service affects people and the environment, which has an impact on our community's health. As a result, a sustainable strategy will broaden the notion of value in healthcare to include environmental and social implications as well as economic burdens. This might help create a more sustainable health care system while also improving patient experiences by leveraging the growing quality improvement movement. Preliminary research suggests that the new approach of healthcare sustainability may stand to gain all stakeholders, including physicians, by encouraging them to engage in quality healthcare services, improve operative procedures, focus their efforts on elevated initiatives, and improve communication between healthcare professionals, as well as having a broader range of effects on service users, personnel, and communities. By thoroughly evaluating studies on papers on healthcare-related aspects in the context of sustainability, the research examines the degree of sustainable practices in healthcare. The research concentrates on a theoretical framework for sustainable practises in healthcare, which includes aspects of sustainable practises in healthcare, goals of sustainable practises in the healthcare industry, and approaches to effectively implement sustainability in healthcare, as well as the upcoming challenges with practicing sustainable healthcare. For this descriptive study, literature review on healthcare sustainability was consulted. This could help academics better comprehend the literature and encourage them to look at sustainability in healthcare from a broader and more holistic viewpoint in order to ensure service quality and long-term market competitiveness. There are four effects of the study. It provides researchers and professionals in the field of healthcare with an overview of how the idea of sustainability has evolved over the years. Second, the study analyzes the motivations behind the integration of sustainability in healthcare, as well as outside strategies for continuously enhancing the implementation of sustainability in healthcare, and finally, issues with the adoption of sustainability in healthcare.

Keywords: Sustainable Healthcare, Quality, Accreditation, Healthcare sector, Sustainability, Challenges

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INTRODUCTION

Although the term "sustainability" was first used in management studies to discuss how the business sector is contributing to environmental degradation, it is now used to refer to a variety of problems. Today, the term "sustainability" cannot be defined solely in terms of environmental well-being; rather, it must be broadened to include a variety of other factors such as consumer, worker, and societal well-being. For efficient resource management, continual service improvement, and economic viability, in the provision of service excellence for company sustainability, prominent business practises with components of sustainability are critical. Fundamentally expressed, sustainability is the ability to meet our current demands without compromising the potential of succeeding generations to do the same. Along with environmental assets, we also need social and financial resources. As a result, cornerstones make up sustainability: the economy, community, and the ecosystem. Informally, these concepts are referred to as wealth, humans, and nature. In a word, sustainability attempts to safeguard the natural environment, human health, and the sustainability of the planet while simultaneously fostering innovation and making sure that our way of life is not imperilled [1-5]. Commercial feasibility, environmental conservation, and economic justice are the three pillars of sustainability, according to the diagram on this page (refers to Figure 1).

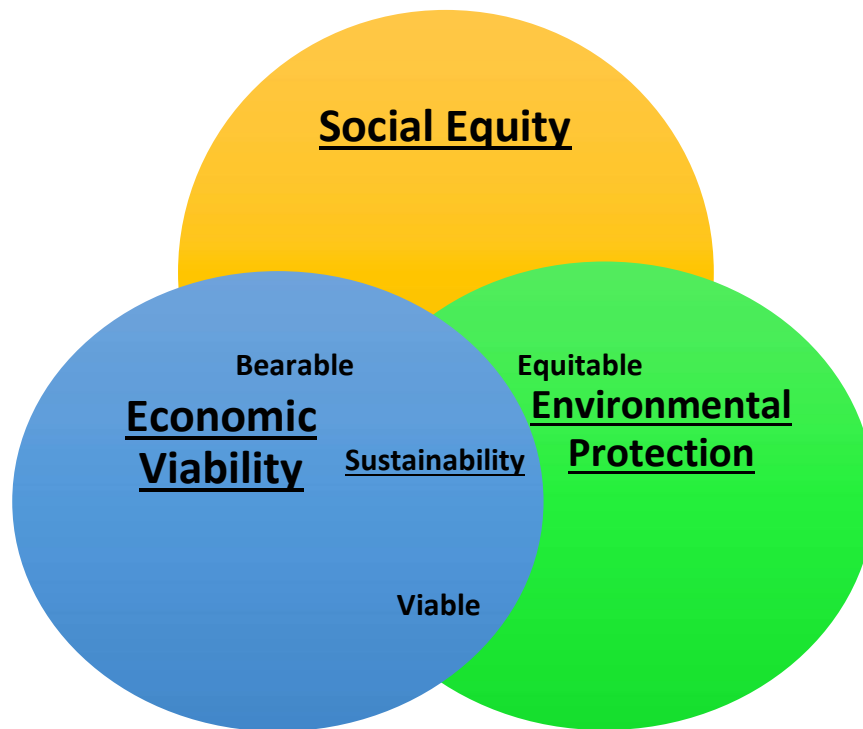


Figure 1: Three Pillars of Sustainability.

Nevertheless, the current research on healthcare sustainability is insufficiently organised to distinguish these implicit categories within sustainability-related challenges. An in-depth investigation of the structural foundation of the idea of sustainability is required to provide a clear explanation of what sustainability implies in healthcare. As a consequence, this study employs a content analysis to conduct a qualitative investigation of the sustainability issue in healthcare literature. The dimensions of green initiatives in healthcare, the types of sustainable practises, strategies for successfully implementing sustainability in the healthcare industry, as well as the difficulties associated with practising economic viability, were the focal points of the discussion and concern about sustainability in healthcare. This study only looked at articles in which the primary research goal was to learn more about healthcare [6-9].

DEFINITION OF SUSTAINABILITY

Person's consciousness of the influence of their activities, both commercial and non-commercial, on the ecosystem gave birth to the concept of "sustainability." Humans were largely unaware of the consequences of their opportunistic activities until large-scale implications such as global climate change, extreme weather, and global outrage emerged. Such results sparked a lively debate on the importance of taking precautionary environmental measures. Since then, the importance and relevance of sustainability in creating a sustainable world have been evaluated more methodically. The Burtland Report, published by the United Nations in 1987, is one of the first official articulations of sustainable development. The definition of sustainable development given in the paper is "development that satisfies present demands without limiting the ability of future successors to meet basic needs" [10]. This term not only communicated diverse meanings to different individuals, and also included a wide range of things under the name other than the essential meaning—action against environmental degradation—which was scaled down in the plethora of other comparable notions that were introduced. Although having a common name for similar things isn't inherently a bad thing. It might be challenging to determine whose sustainability is being discussed because the term "sustainability" is employed to cover a host of concerns, from environmental conservation to institutional stability. Two key definitions of sustainability in the context of the environment are "of, relating to, or representing a technique for obtaining or using a source in such a manner that the resource is neither diminished nor permanently destroyed." Furthermore, in response to the fact that these definitions are ambiguous and ineffective on a practical level, Swedish scientist Karl-Henrik Robert devised a more practice-oriented approach to sustainability that identifies the features of a sustainable future. An ideal civilization, he claims, would endeavour to decrease its contribution to; increased concentrations of chemicals from the Earth's crust; the increase in

societally produced substance concentrations Nature is being destroyed biologically; Person's willingness to meet their needs is being continuously harmed. The topic has also been thoroughly examined in the management context, which spans the fields of industry, advertising, and social sciences. These works primarily focus on the literal sense of 'sustainability,' which refers to a company's capacity to withstand for an extended period of time under a variety of conditions. The crucial point here is that the long-term viability of one organisation or system is irrelevant; what matters is the long-term viability of other organisations in the ecosystem. The European Union's definition, on the other hand, is more comprehensive in that it considers many aspects of sustainability, such as the economic, social, and environmental implications of all policies that are carefully assessed before a determination is taken [11]. As a result, the definition of sustainability encompasses not just situational and environmental stability, but also social considerations.

Definition of sustainability in healthcare

There is clear indication that the operations of a healthcare system have a substantial influence on the earth and put pressure on it. These include catastrophic and conventional waste generation, liquid waste and greenhouse gas emissions, as well as high resource utilization such as water and electricity. In reality, between 75 and 90 percent of waste generated in the health-care industry may represent a variety of negative impacts on the environment. Conversely, advances in healthcare technology have proven the ability to improve both environment and public health. Electronic e-health initiatives have improved health outcomes and access to care while also reducing emissions and saving money by reducing the demand for care. Various medical gadgets and innovations have also helped to reduce water consumption and wastewater generation, hence reducing carbon emissions. It implies the importance of concept of sustainability in healthcare. According to the World Health Organization (WHO), a sustainable health sector is one that improves, maintains, or restores health while minimising negative effects on the environment and utilising possibilities to revive and continue to get better it for the physical wellbeing and well-being of current and future generations [12].

In a context of healthcare, social sustainability refers to a hospital's or healthcare system's ability to increase a population's quality of life and well-being. Concentrating on the most critical hospital departments in order to perform critical services and have a greater impact on favourable health outcomes. Health care businesses may be confident that unwanted materials will not make their way into the environment by implementing a sustainability policy that guarantees trash is correctly gathered, separated, processed, and discarded of each and every time. A healthcare system's ecological, societal, and financial implications are examined in terms of sustainability. Increasing public awareness of the issue, advocating the government for ecologically friendly improvements, and enabling the healthcare workers to change culture and practise are all priorities right now. In the context of health advancement, the term "sustainability" can refer to the outcomes of treatments or the methods by which they are achieved—the programmes and organisations that carry out interventions. The goal of health promotion is to create treatment outcomes that are long-lasting [13].

Literature Review on Healthcare Sustainability

One set of studies centred on ecological sustainability to reduce the negative environmental effects of the healthcare operation and organisational stability to lower costs and make the service accessible to all [14], whereas other research concentrates on institutional stability to lower costs and make the service accessible to all [15]. The issue of environmental sustainability in healthcare in the Biohazardous material, according to Klangsin & Harding [20], has become one of the leading pollutants around the world, and is a critical factor in the spread of infections and the quality of air, water, and soil surrounding healthcare institutions. The potential threat linked with hospital waste management misconduct has sparked widespread public outrage in numerous societies [16]. In contrast, as healthcare businesses throughout the globe strive for better caliber, reducing operating costs, and enhanced customer trust, a commitment to management and customer care is becoming increasingly important in developing core skills. These papers is centred on waste management and pollution [17]. As a result, medical organisations must have a multi-directional focus in terms of the services they provide to the outdoor landscape, customers, employees, and communities. This would allow practitioners to use the 'sustainability paradigm' to examine a hospital's performance and properly evaluate it against society's existing standards. This would not only help us better comprehend the environmental issues surrounding healthcare operations, but it would also provide us with solution frameworks from other fields. In summary, this research found that existing sustainability research has primarily concentrated on environmental stability and organisational stability, both of which are primarily concerned with economic issues. There haven't been many campaigns to draw attention to other green initiatives in healthcare, and it may be possible to consider sustainability practises as a whole. As a consequence, in order to gain a deeper understanding of the expanding range of sustainable healthcare practises, we put our attention on the dimensions, types,

and strategies for successfully adopting sustainable in the healthcare sector, as well as the difficulties associated with doing so.

Sustainable Development Goals

The Sustainable Development Goals (SDGs) of the United Nations (also referred to as the Global Goals) are a collection of 17 goals and 169 targets that all UN Member States have committed to achieving by the year 2030. They outlined a vision of a future without poverty, starvation, or sickness. With 13 priorities encompassing a wide spectrum of WHO activity, SDG 3 "Ensure healthy lives and promote well-being for everyone at all ages" puts health at the forefront. Almost all of the next 16 goals are either directly related to health or will end up benefiting health if they are achieved. The Sustainable Development Goals (SDGs) aspire to be relevant to all countries – underprivileged, affluent, and middle-income – in order to increase prosperity while safeguarding the environment and dealing with climate change. They place a heavy emphasis on improving equity in order to satisfy the needs of women, children, and underserved people in general, ensuring that "no one is left behind." SDG 3: 'Make sure safe and healthful working conditions well-being for all at all ages' is a comprehensive target [18]. The SDG declaration emphasises that "we must attain universal health coverage (UHC) and access to quality health care" in order to meet the overall health target (refers to Figure 2).



Figure 2: Sustainable Development Goals.

Dimensions of Sustainable Practices in healthcare

According to research, incorporating sustainability in healthcare operations will improve healthcare's financial and performance outcomes [18]. It is critical to comprehend sustainability-based strategies in order to maximize the benefits of green innovation in a company. Based on our literature review of sustainability in the healthcare context, this study found that sustainability practises in hospitals can be classified into eight categories: ecosphere, consumer, manpower, institution, financial, informational, safety, and society (surroundings, customer, employee, and community). These categories can be used as a strategy to achieve sustainability goals to continuously improve quality and financial achievement (refers to Figure 3).

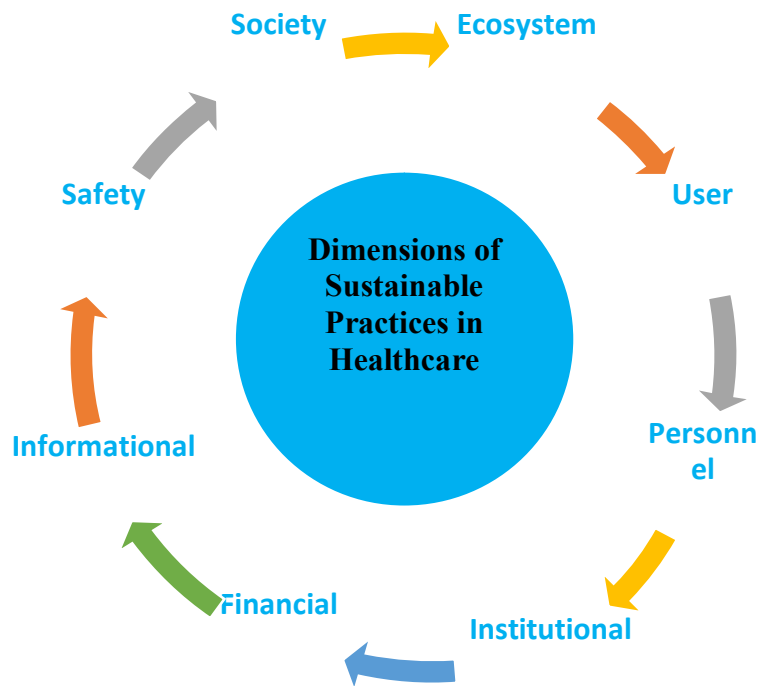


Figure 3: Dimensions of Sustainable Practices in Healthcare.

A) Sustainability with a focus on the Ecosystem

Protecting the environment is well-known in the healthcare market, and this strategy not only helps to reduce contamination by decreasing waste (e.g., reusing water and reducing the use of harmful chemicals) in procedures, but it also contributes to saving time and money [20]. Avoiding mercury, lowering the harshness of healthcare waste, and limiting the use of toxic substances are some of the measures in healthcare that contribute to environmental sustainability [21, 30]. Conversely, regeneration is being implemented to cut down on increased volumes and treatment costs [17]. In more recent years, the scope of environmental sustainability has been expanded to include sustainable design and construction practices in order to create really restorative surroundings [13, 15].

B) Sustainability with a focus on the user

Healthcare organizations have also recognized the necessity of providing high-quality care to clients, and as part of their sustainability policies, they strive to balance individual resources and needs [6]. Many healthcare businesses have now created a health information or e-health strategy, in addition to improved use of technology in healthcare to offer excellent services to patients [3]. Information technology can help health companies move forward sustainability by improved productivity, creating resources for sustainability, and transforming products into services (for example, integrating systems and sending vaccine due reminders) [22]. Patient happiness is one of the most important indicators of healthcare sustainability, since it is linked to enhanced services, lower medical bills, and meeting consumer aspirations [23].

C) Sustainability with a focus on the Personnel

In the healthcare world, sustainability relates not just to the institution's clinical care, but also to the organization's care for its personnel by establishing a healthy environment. Meeting the needs of evolving healthcare operations without jeopardizing the health and well-being of medical practitioners is what occupational sustainability in healthcare services entails [24]. As a result, fostering a safe and healthy workplace is a crucial factor that firms should consider in order to improve employee happiness. Furthermore, embedding sustainability in the occupational perspective of health professionals will help the company practice sustainability. This endeavour has the potential to create a wealth of practical information and skills the health professions embrace sustainability philosophy [25]. Certain healthcare facilities promote the continuation of antiquated practises and behaviours among healthcare personnel as part of their ongoing efforts to improve the quality of treatment provided by clinicians [26].

D) Sustainability with a focus on the Society

Some research has looked into the provision of care under the "home-based healthcare" programme as one effort toward viability in the contemporary global society [27-29]. This is because distant areas and its residents have limited access, poor healthcare, and neglect. The community's sustainability-based

services have been upgraded with the use of technology, such as tele-monitored and patient monitoring systems, but initially it was only limited to clinical decision support systems [2].

E) Sustainability with a focus on the Institution

The healthcare industry always faced a challenge of maintaining the quality of care, handling of biomedical waste with less environmental harms. The sustainable practices in healthcare enable the healthcare institutions to make the balance between all the aspects. The operational activities of healthcare need to be redesigned in such a way to create good institutional image with assurance of quality service delivery to patients so that overall development of the healthcare institute can be ensured.

F) Sustainability with a focus on the Financial

The management of financial costing in any healthcare organization is a typical task to be performed by any healthcare institution. Each department of hospitals including diagnostics, pharmaceuticals, store and purchase, dietary, emergency, CSSD, medical record, ICU, operation theatres and specialty units contain cost in form of physical facilities, ancillary services, equipment, machines, instruments, drugs, stationary and many more. With this addition, time is considered as a cost too. Hence the concept of sustainability refers to the long-term plans with a great economical viability to achieve the financial mile stones of healthcare entities.

G) Sustainability with a focus on the Informational

Healthcare sector can only function smoothly when the received information is accurate, concise, defined and delivered timely. The sustainable goals of healthcare rely on the data collected through out the diagnosis, treatment, and follow up care of the patient. This data is also required to generate the medical statistics which can be utilized to plan for healthcare schemes to deliver healthcare facilities to a mass population hence it is one of the most important dimensions of sustainable development.

H) Sustainability with a focus on the Safety

Patient safety is a the most concerned aspect of all time in healthcare. The sustainable approach enables the healthcare system to restructure the healthcare delivery with more focused intentions towards patient safety. Healthcare market is changing according to the need of patients where patients are now aware about their safety in healthcare organizations. Hence safe and secured hospital environment is the need of the hour.

Factors effecting Sustainability in healthcare

Sustainability in healthcare is influenced by a number of factors it includes parameters highlighted in Figure 4.

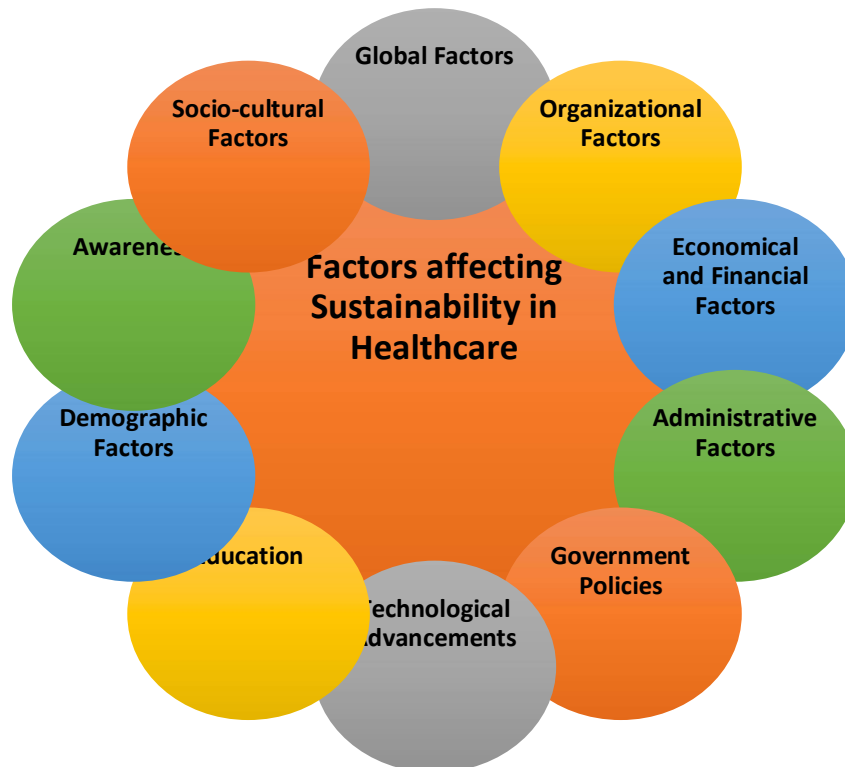


Figure 4: Factors affecting Sustainability in Healthcare

Strategies for implementing sustainability effectively in healthcare

Increasing resource costs, global warming, increasing understanding, and living standards are all likely to build pressure on healthcare to adopt sustainable practises. Several tactics and guidelines are provided in order to continuously install an institutional culture of sustainability in healthcare organizations (refers to Figure 5).

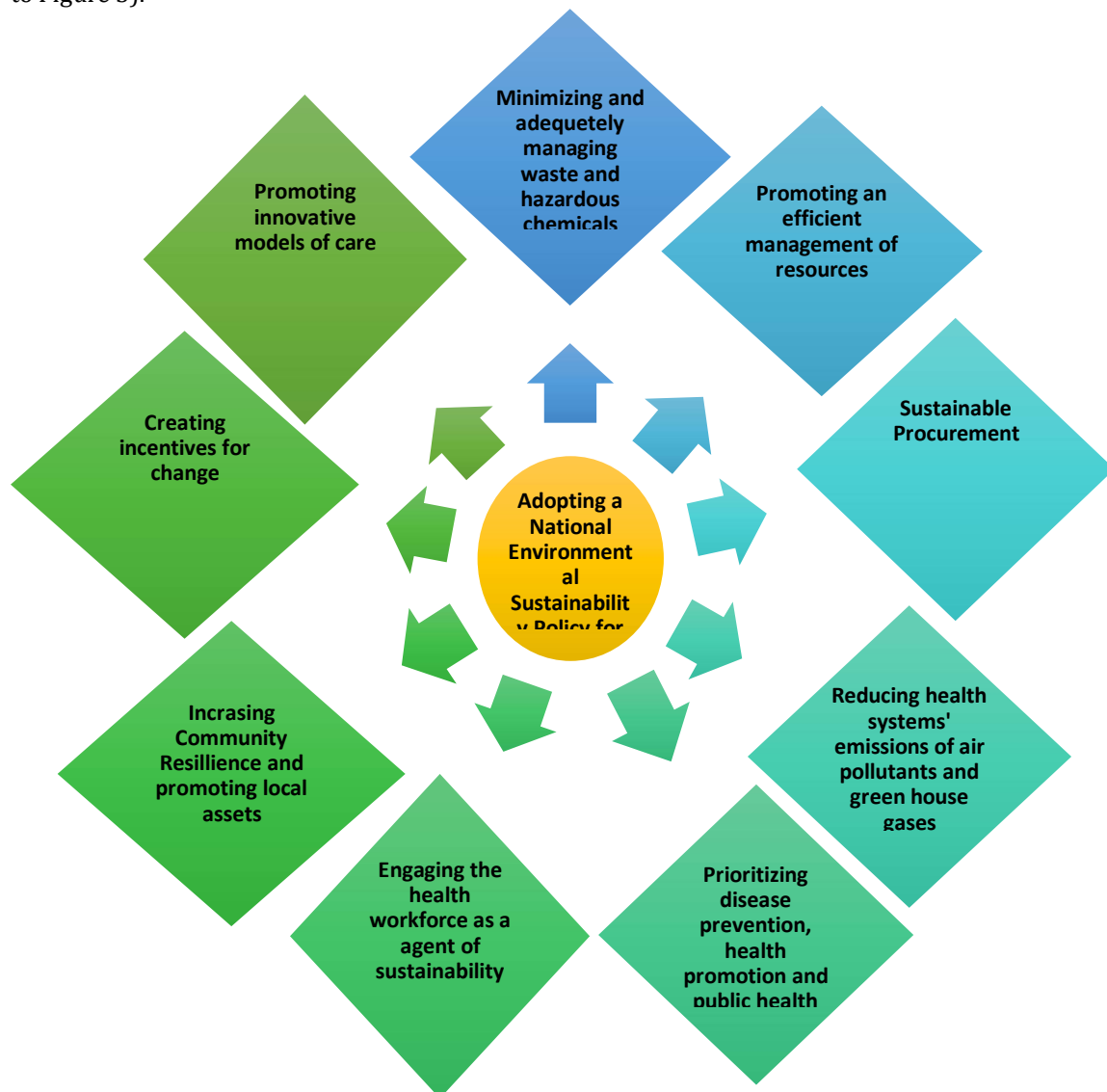


Figure 5: Adopting a National Environmental Sustainability Policy for Health System.

CONCLUSION

This paper presents an initial report from a review of pertinent literature on the sustainability of service quality formation in the healthcare sector focused on improving the quality of human life. Service excellence in the clinical setting is defined as a provider's ability to consistently meet and manage client preferences. The analysis shows a gap in the application of sustainable methods by healthcare management. The motivations of developing sustainability solutions, as well as solutions for sustaining them, are examined. This research backs up the researcher's claim that sustainable healthcare combines rising patient safety with low ecological impact (Jameton & McGuire, 2002). The research has four ramifications. For starters, it provides a historical overview of how the concept of sustainability has evolved in the healthcare industry over time. Second, the paper examines the motivations for implementing sustainability in healthcare, as well as third-party approaches for continuously improving sustainability implementation in healthcare, and last, issues with sustainability implementation in healthcare. Expanding the scope of sustainability in healthcare beyond environmental sustainability into human-based sustainability (e.g., client, staff, and society) for boosting operational effectiveness and high quality of service is one of the future proposals that we could quickly recognise. Future research could

broaden and compare other problems associated to healthcare sustainability formation from a more integrated and comprehensive standpoint.

REFERENCES

1. Arce-Corrales, M. E., Gomez-Alvarez, A., & Alvarez-Chavez, C. R. (2014). Chemical substances sources characterization in support of the health sector's sustainability and quality in Sonora, Mexico. *Journal of Cleaner Production*, 64, 457–463.
2. Barjis, J., Kolfshoten, G., & Maritz, J. (2013). A sustainable and affordable support system for rural healthcare delivery. *Decision Support Systems*, 56, 223–233.
3. Berwick, D. M., & Hackbarth, A. D. (2012). Eliminating waste in US health care. *Jama*, 307(14), 1513–1516.
4. Coiera, E., & Hovenga, E. J. S. (2007). Building a sustainable health system. *Yearbook of Medical Informatics*, 46, 11–18.
5. Chandra, H., Rinkoo, A. V., Verma, J. K., Kapoor, R., & Sharma, R. (2013). Supply chain management with cost-containment & financial sustainability in a tertiary care hospital. *Journal of Health & Human Services Administration*, Summer, 36(1), 3–23.
6. Doyle, C., Howe, C., Woodcock, T., Myron, R., Phekoo, K., McNicholas, C., & Bell, D. (2013). Making change last: applying the NHS institute for innovation and improvement sustainability model to healthcare improvement. *Implementation Science : IS*, 8(1), 127–137.
7. De Preux L , Rizmie D . Beyond financial efficiency to support environmental sustainability in economic evaluations . *Future Healthcare J* 2018 ; 5 : 103 – 7 .
8. Dunphy, J. L. (2013). Healthcare professionals' perspectives on environmental sustainability. *Nursing Ethics*, 21, 414–425.
9. Dunbar-Rees R. Paying for what matters most: the future of outcomes-based payments in healthcare . *Future Healthcare J* 2018 ; 5 : 98 – 102 .
10. Faezipour, M., & Ferreira, S. (2013). A system dynamics perspective of patient satisfaction in healthcare. *Procedia Computer Science*, 16, 148–156.
11. Faure, P., & Rizzo, P. N. (2003). Hospital and environment: waste disposal. In *Annales Pharmaceutiques Francaises*, 61(6), 373–377.
12. Forum for the Future, Centre for Sustainable Healthcare, NHS Institute for Innovation and Improvement . Sustainable System-Wide Commissioning – Guide for CCGs . NHS Institute for Innovation and Improvement , 2013 .
13. Higuchi, K. S., Downey, A., Davies, B., Bajnok, I., & Waggott, M. (2013). Using the NHS sustainability framework to understand the activities and resource implications of Canadian nursing guideline early adopters. *Journal of Clinical Nursing*, 22, 1707–1716.
14. Hudson, C. G., & Vissing, Y. M. (2013). Sustainability at the edge of chaos: Its limits and possibilities in public health. *BioMed Research International*, 1–7.
15. Jameton, A., & McGuire, C. (2002). Toward sustainable health-care services: principles, challenges, and a process. *International Journal of Sustainability in Higher Education*, 3(2), 113–127.
16. Kantabutra, S. (2011). Sustainable leadership in a Thai healthcare services provider. *International Journal of Health Care Quality Assurance*, 24(1), 67–80.
17. Khan S. The London mayor's views on sustainability. *Future Healthcare J* 2018 ; 5 : 84 .
18. Kim, S., & Osmond, P. (2013). Analyzing green building rating tools for healthcare buildings from the building user's perspective. *Indoor and Built Environment*, 23(5), 757–766.
19. Kinney, L. M. (2005). Sustainability, 23–27.
20. Klangsin, P., & Harding, A. K. (1998). Medical waste treatment and disposal methods used by hospitals in Oregon, Washington, and Idaho. *Journal of the Air & Waste Management Association*, 48(6), 516–526.
21. Mortimer F , Isherwood J , Kenward C , Pearce M , Vaux E . Sustainability in quality improvement: measuring impact, *Clin Med* 2018 ; 18 : 94 – 7 .
22. NHS Sustainable Development Unit. Goods and services carbon hotspots . SDU , 2012 . www.sduhealth.org.uk/documents/resources/Hotspot_full.pdf
23. Royal College of Physicians, how doctors can close the gap. Tackling the social determinants of health through culture change, advocacy and education, London: RC , 2010 .
24. Sustainable Development Unit . Carbon update for the health and care sector in England 2015 . Cambridge : SDU , 2016 .
25. Shipway D, Koizia L, Winterkorn N et al. Embedded geriatric surgical liaison is associated with reduced inpatient length of stay in older patients admitted for gastrointestinal surgery . *Future Healthcare J* 2018 ; 5 : 108 – 16 .
26. Tudor, T. L. (2007). Towards the development of a standardised measurement unit for healthcare waste generation. *Resources, Conservation and Recycling*, 50, 319–333.
27. World Health Organization . Closing the gap in a generation: health equity through action on the social determinants of health – final report . Geneva : WHO , 2008 .
28. World Health Organization and the Calouste Gulbenkian Foundation . Social determinants of mental health . Geneva : WHO , 2014 .
29. Vest, J. R., Champion, T. R., & Kaushal, R. (2013). Challenges, alternatives, and paths to sustainability for health information exchange efforts. *Journal of Medical Systems*, 37, 1–8.

30. Yang, C., Peijun, L., Lupi, C., Yangzhao, S., Diandou, X., Qian, F., & Shasha, F. (2009). Sustainable management measures for healthcare waste in China. *Waste Management*, 29(6), 1996–2004.

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