

FUTURISTIC TRENDS IN PHARMACY & NURSING

Book series ID: IIP_V2_2022_BS_16_05

TITLE: SUSTAINABILITY IN HEALTH AND HEALTH CARE PROVISION

Author: Dr.RAJARAJESWARI.A , Professor, Vinayaka Mission's College of Nursing, Puducherry

INTRODUCTION:

Every human right has to be live in the healthy world. Health is the integral part of the human well being which produces all needs materials, social, cultural, political, educational, work and personal desires etc., Sustainability and health are the two strict values we could not separate it. Because we have to give our attention to proper use of available resources and increase the manpower to enhance the viability of health care system. Concentrate more and more related to financial, economic, political and social aspects of sustainability. The health care organization to be creating meaningful value for the population served. Universal Health care is popular political agenda for the developing countries to meet the demands and promote the welfare services for the population. Unique health care insurance are initiated and more target for the low and vulnerable population. . Health care system leaders set very clear and compelling the sustainable objectives and invest more for the health care organization

Health care sustainability emphasized more related to build a safe, less carbon health system through the use of effective metrics. We consider the growing need for better reporting of the environmental impacts of health care like quality improvement and performance reporting.

SUSTAINABILITY:

Sustainability means meeting our own needs without compromising the ability of future generation to meet their own needs. **(1987 UN conference)**

It involves accountability, planning and foresight at every level and every places. Even every hospital began their green movement with the ambition and goal of recycling to reduce waste.

The WHO defines a sustainable health care system as a system that improves, maintains or restores health, while minimizing negative impacts on the environment and leveraging opportunities to restore and improve it to the benefit of the health and well – being of current and future generations.

Sustainability is a key concern for many hospital administrators but implementing green practices while still running an efficient, patient focused facility is a challenge. It is important for more than what it does to help the environment. It can also help hospitals run more efficiently. Hospitals and health networks says that sustainability can reduce costs, reduce risks, and promote a positive public perceptions.

Sustainability is not just environmentalism. Embedded in most definitions of sustainability we also find concerns for social equality and economic development.

Sustainability is a relatively new idea, the movement as a whole has roots in social justice, conservationism, internationalism and other past movements with rich histories.

A 2019 estimate places health care's global carbon foot print at 4.4 percent of the world's total greenhouse gas emissions, whereas health expenditure accounts for some 10 percent of global economic output.

Sustainability is the process of living within the limit of available physical, natural and social resources in ways that allow the living systems in which humans are embedded to thrive in perpetuity.

NEED OF SUSTAINABILITY:

The sustainability focused on understanding the natural resources and less wastefully. Sustainability highlighted the recycling and being energy efficient. But sustainability is both more challenging and more rewarding. It comes down some kind of future we are leaving for the next generation. Sustainability as a more value and we have to understand the individuals and organizations that demonstrate and maintain their value in their policies, everyday activities and behaviour. Every individual have played a major role in developing our current environmental and social circumstances. The people living today can give solution and adopt the situation.

Sustainability requires change. It pertains equally to conservation and creativity. To accept the creativity and conservation and this adapt to changing world.

Sustainability is a holistic approach that considers ecological, social and economic dimensions, recognizing that all must be considered together to find lasting prosperity.

Sustainability refers to the ability to maintain or support a process continuously over time in business and policy contexts; sustainability seeks to prevent the depletion of natural or physical resources, so that they will remain available for the longterm.

Sustainability is important for many reasons including: Environmental quality – In order to have healthy communities, we need clean air, natural resources and a nontoxic environment.

PILLARS OF SUSTAINABILITY:

The Pillars of sustainability focused on

- Environment
- Society
- Economy

Environment:

Ecological integrity is maintained that all the earth's environmental system are kept in balance while natural resources consumed by the humans and they have to **replenish** themselves.

Economic:

Global needs independence and they require, financial and other needs which they demands it. This system makes everyone to be active and secure their sources of livelihood.

Social:

Every Universal human rights and basic needs are attainable by all people, who have access and accept the resources in order to securely keep their families and communities healthy. Always Healthy communities created a future world and it emphasis personal, labour and cultural rights are respected and all people are protected from discrimination.

IMPORTANCE OF SUSTAINABILITY

Sustainability is important because it helps to upgrade their health and quality of life. It support that mission by striving to better the environmental health and quality of life as well as contribution to the community welfare.

- **Improve the environment the environmental quality:** Healthy communities means it gives natural air, natural resources and a nontoxic environment.
- **Improve the growth:** We need the energy, water and space. Sustainability has the goal to use our resources efficiently to benefit our world and community.
- **Improve the health care:** Sustainability and health care are tangled related since the quality of our environment affects public health. For example many health issues are directly related to Air and water quality.

Sustainability enhance the quality of our lives, protects our eco system and preserves natural resources for future generation. In the corporate world sustainability is associated with an organizations holistic approach, taking into account everything from manufacturing to logistics to customer service. Going green and sustainable is not only beneficial for the organization; it also maximizes the benefits from an environmental focus in the long term.

- Ensures a future for all
- Reduced energy usage
- A healthy habitat for all
- Societal impact

1. Ensures a future to all:

Regardless of human demands their desires everyone need the answer of the future demands generation and sustain the world as green planet. Our system produce the choices the long term goals and it impacts on future generation.

Practicing sustainability give to choose the ethical way of natural resources and bring these to be a good and better livable future to everyone. If we impoverish the resources of the earth, future generation will be diminish.

2. Reduced energy usage:

Sustainability will practices the reduction of the long term energy costs. It provides the good system and maintain equitable, diverse, connected and democratic and provide opportunity for good quality of life. Proper usage and energy consumption is gives more positive things and it helps them become more efficient overall.

3. A Healthy habitat for all

Every human life a healthy life and our society give good water and good air and quality life. Healthy practices like balanced diet, yoga, exercise, proper health checkup and prevention of diseases. Sustainable in health promotes real difference in future society. It reduces the toxin environment and carbon foot print society. It assures the safe natural, environment. Every world has to benefited and rights to get clean and healthy environment.

4. Societal impact:

Encouraging the conservation natural resources deeply penetrates not only your company standards and brand, but also employees and their families, if you make sustainability important in your business; you are bridging a deeply important conversions to the forefront of consumerism. The societal impact can reach far and wide.

HOW TO BE SUSTAINABLE:

Universal health care system enhance the proper natural world and it concentrate about the total health care cost and investment in human capital for health. Every humans are actively participate in their health activities and more stable and still enjoyable. Choosing to live a sustainable lifestyle does not mean you will have to give things up or reduce your quality of life at all. In fact you will feel more fulfilled and happy knowing your contributing to a better world.

Choose sustainable billing options:

Every person paid for the health care system through maintains the equality. Regular proper private and public administration help the health sector in the secured way and building the proper blocks of health care system in the aspects of professional competence, evidence based technologies and treatments, interprofessional collaboration and organization of process of care. This makes the human life easier and is better for the environment.

Use sustainable products:

It is very difficult to maintain the equality, diverse and connected give democratic in all the ways. Sustainability motivates the thinking about environmental issues. Social institutions that stakeholders and treat them equitably cannot contribute to enduring economic welfare and ecological health.

Make transportation adjustments:

Use the proper automobiles and avoid automobiles unnecessary and atleast for the minimal distances. It gives less the carbon emissions use less fuel and use minimal transport with proper

vehicles. It demands the powerful transportation and use of low economic people also. Either it is public and private transportation but focus on the good ecosystem.

Choose sustainable food and beverages:

The government initiate the more programme for the productivity of the natural foods and give resources to the farmers and policies gives the way to resolve the environmental issues. Govt assures the healthy soil, healthy agriculture and improve the human life. Training the young people for the reduction of impact over these issues and give green purchasing through the proper health care organization.

Choose reusable products:

The health care worker involve in giving awareness about the recycling the waste and reusable products. People also understand the need of reusable paperbag, grocery bags and products. This world is not only for the human beings it also for the all the living organs. .

Cut down on plastic:

Every year, thousands of sea turtles, seabirds and other marine mammals die because of plastic. Bag the use of plastics in the organization and publics and use only degradable products.

Recycle:

Recycling is important to improve the society. It can be followed by the health care industries and other organization and avoid wasting of all the products and secure recycle bin in the house and working areas.

GOALS OF SUSTAINABILITY:

- Providing healthier world for creatures that inhabit earth's landmasses
- Providing healthier environments for critter that live in our water ways and oceans.
- Securing better quality of air.
- Maintaining climate change
- Decreasing poverty and world hunger.
- Improving the education standards and produce better economic growth.

BUILDING A SUSTAINABLE FUTURE:

The environment demands more and more and change is still requires and the policy makers can understand the conservation efforts and adopting the acceptance of change. The change starts from the individual, through the society and the organization. The world becomes the free ecosystems. It is the responsibility of individual and administrator and present generation to save the natural and protect it

EXAMPLE OF SUSTAINABILITY:

Renewable energy:

The society gives wind, solar and geothermal energy are becoming increasingly common to all the people across the country and now individuals and corporations are choosing renewable energy.

Renewable energy sources are sustainable, environmentally friendly, better for public health use in the proper ways. Renewables gives an inexhaustible energy supply unlike fossil fuels that are not only damaging but finite.

Green Spaces:

Green spaces enhance the quality air in the rural as well as in the urban areas. The proper ecosystem initiate and maintained will the improve productivity of the soil and keep the quality of water and free from the pollutants and give proper soil for the food beverages. Reduce the spoil of land for the transportation.

Water Treatment:

Improve the ground water level through the increase the number of plants in the individual houses and working areas. Water purification and use it for the food purposes and free from the wastes. The recycling of the industrial waste and use it for the minimal usage. Analysis of the water level and use based on the need and desire. Nature has given more ways to save the water. So save it.

Crop Rotation:

The nature of the soil produces and maintains the proper crop based on the climate and seasons. The Government initiate the maintain the soil and avoid soil infertility. If the Crop rotation reduces the risk of nitrate, improve soil structure and reduces green house gas emissions, soil erosion and water pollution.

WHAT WILL HAPPEN IF WE DON'T LIVE SUSTAINABLY:

If not able to improve our quality of life or earth ecosystems it inheritant the soil fertility. The planet will produce more heat and damage the complete ecosystem. If we don't learn to live sustainably, some of the effects will be:

- More dumping popping up everywhere
- More animals died out to deforestation and pollution
- Increase of more respiratory problems
- Harsher weather (drier and hotter summers, colder and harsher, winters more tropical storms)
- Sea level are Rising
- Worsening living conditions for lower – income communities, as there is more trash, worse air and so on.
- Reducing the soil quality and likely to get the improper nutritional quality of food
- Increase more green natural give proper ecosystem.

HOW CAN SUSTAINABILITY IMPROVE HEALTH:

Most importantly sustainable healthcare systems enhances general health by participating and producing more way of healthier, more resilient communities and eliminating the poor institutional practices and that yield pollution, waste and resource exhaustion.

Sustainable living is based on four main pillars, as follows minimizing waste, limiting the use of earth's natural resources, the wise use of the environment and ensuring quality working/living environments. Sustainability in healthcare is the new drift all across the globe. In fact, there is now a LEED certification being developed

HEALTH CARE PERFORMANCE AND QUALITY IMPROVEMENT:

Although performance measurement and reporting in health care may cover various aspects of health services. Recent decades there has been an explosion in the use and reporting of measures of clinical and service quality. Two principle approaches to the use of performance and quality measures in improving health care have been identified using quality indicators as summative measures of performance for purposes of external accountability or using them as formative mechanisms to support internal processes of quality improvement.

TWO GOALS:

Promoting accountability and improving health system performance

Performance and quality measurement serves many stakeholders with different needs: government, regulators, funders, purchasing organizations, provider organizations, physicians, patients and citizens.

The objectives for reporting on health care performance and quality have included accountability and transparency (to the public, health care funders and regulators) supporting improvement within organizations, aligning the objectives of stakeholders and norming desired behaviours and priorities supporting and spurring improvement through provision of comparative or benchmarking data across organizations and incentivizing improvement and value through linking payment to performance.

Reporting performance measures may lead to change and improvement through four different pathways:

1. Change - in which suppliers use information to improve their own performance
2. Selection – where buyers or purchasers switch providers based on information
3. Pay – for performance where providers are financially rewarded for superior measured performance.
4. Reputational damage – or naming and shaming poor performers.

Measurement and reporting are two distinct activities: not everything that is measured should necessarily be reported.

Performance and quality information is a public good that will not evolve spontaneously without active stewardship and guidance by governments and that requires careful investment and attention

System level performance measurement requires a clear conceptual framework that not only covers all major domains of the health system but also aligns with its objectives, integrates with its information technology systems and data collection infrastructure captures high – priority but hard to measure areas and is designed for international comparability.

Carbon footprint of different aspects of health services ranging from International and national health care system in all levels, the uses of anesthetic gases in the hospital is more demand and more consumable. More broadly a recent study of the global environmental footprint of health care for the first time estimated world wide greenhouse gas emissions, particulate matter, NO₂ and SO₂ emissions, malaria risk nitrogen to water population and the use of scarce water by national health systems.

Availability of technical measures should not be confused with their sustainability for use as performance reporting betterments A health care sustainability metric needs to fulfill functions analogous to those laid out above for health care quality measures if it is to be useful, which many technically exact measures might not be capable of supporting meaningfully..

HEALTH CARE SUSTAINABILITY REPORTING :

Consistency and comparability : The largely public health care systems show great promise, not least because common and consistent standards for data and reporting can be enforcing centrally. Yet nonmandatory approaches (such as corporate social responsibility reporting or healthier hospital) can also deliver substantial benefits, especially if stakeholders come together to work toward using consistent and comparable standards and measures. The world health organization has played an important role in harmonizing data standards and classifications in key measurement infrastructure, most notably the international classification of diseases and the system of national health accounts.

Measurement challenges: The rapid growth in health care quality and performance measurement has been possible because of burgeoning digital health care data. Vast quantities of data from health care records, patient administration systems, and clinical data registries are now available. Life cycle assessment techniques (the mainstay for undertaking detailed assessment of environmental impacts at the service or product level) are demanding in terms of expertise and are relatively expensive. Building management systems, and pharmacy systems all represent sources for automated environmental reporting data but their full use will require careful, systematic investment in design, standardization and verification. System leaders and policy makers need to work together to achieve and invest in this standardization.

Avoiding perverse outcomes:

Health care systems have proved themselves more than capable of hitting the target but missing the point. The potential for unintended consequences exists in all aspects of health care improvement. It is important to include hard to measure health care priority areas, ensuring that measurement

focuses on greenhouse gas emissions and on other environmental impacts such as pharmaceutical pollutants.

Political context: It constraints of ideology, climate denialism and obfuscation affect many nation's public policies. Despite significant achievements by several states and territories the authors encountered unwillingness at the federal level to incorporate sustainability during the design and negotiation of the current health performance.

PRINCIPLES:

To reduce demand for health services: Factors such as aging and population growth have created an enormous demand and this has slowed progress toward mitigating the carbon footprint emanating from health care.

- Match supply and demand
- Ensure care is appropriate and avoid any unnecessary investigations or treatments
- Reduce emissions from the supply of healthcare services
- Clear tactical goals for healthcare sustainability – perhaps by following: the NHS Net zero approach.
- Devise, adopt and implement internationally standardized metrics
- Aim for quality improvements, performance and accountability.

HEALTH CARE PROVISION:

To develop sustainable health care system, the developing countries are chosen the understand the priorities of health care services and improving the technological evaluation. Technological results give more economic but it more effective in producing the results for the further treatment.

The sustainability meeting the current needs of the health care and determine the future demand also and sustainability refers not only the long term survival or specific practice and maintain all needed relationship.

Increase the hospital facilities for the target population. Reduction in the treatment and spending the reasonable incentives and encourage for the health insurance.

Health care system will improve while eliminating the lack of information, cost effectiveness and accessibility.

It focused on economic and political sustainability, More than expected spending with less than expected life expectancy and concentrate about the complete health care system and its cost. Understand about the crisis and critical situation, defining priorities in the allocation of resources and facing the issues will give you the long term sustainability.

Increase the research activities will enhance the enterprise and analysis the processes, competence and organized institutions.

Both the policy makers and administrators and managers involve in the collection of data information. Social sustainability is essential for defining it mostly maintain the capacity to support life in quantity and variety. It also concern with equality, diversity, democracy and interconnectdness.

Universal care needed to everyone and disparities in service utilization and access across socio economic classes tend to decreaser although the health status . Social sustainabilty requiries different approaches and focussess attention more on the developing services.

Universa health care sytem enhance and reforms the more active policies to sustain the health care with the high level representatives, health care federal agencies, through the proper education, labour, justice and housing. Health care managers, professionals, technology producers and responsible citizen help in sustainable eco system.

First responsible for advising on or ensuring a fair allocation of health care resources and those charged with upholding the right to health, need to recognize broader and more recent interpretations of each approach. Priority setting is not only about a utilitarian drive to maximize health benefits across the population, nor is the right to health about securing every individuals access to health care regardless of cost.

Second, when substantive and procedural principles for ensuring fair allocation of resources devoted to health have been decided through a transparent and participatory process, states should institutionalise priority setting. This could include an institution for assessment of new and health technologies an advisory committee for wider questions of allocative efficiency and fairness and action on the social, economic and political determinants of health.

Third, when an acceptable interpretation of the content of the right to health under national law has been clarified finance ministers should review their budgets, considering the state's obligations under the right.

WHERE WE WILL BE IN 2023:

- Baseling environemental metrics will be on a downward trajectory towards the reduction targets that will be established as part of the departments emission reduction pledge.
- Health service chief executive officers will regularly report enviromental performance to their boards.
- At least 5% of hospital electricoty will be sourced from on – site renewable energy.
- Patients, staff and visitors will understand how they can improve the environmental performance of their hospitial.
- New public hospitals and capital upgrades wil routinely include sustainability best practice.
- Food waste will be minimized, with residual organic waste diverted from landfill where it is economically feasibe to do so.
- More materias will be recycled and waste to landfill per patient treated will have reduced.
- Metropolitan and large regional hospitals will have sustainable travel plans.

CONCLUSION:

The response of healthcare systems to the COVID – 19 pandemic has demonstrated that rapid transformational change is achievable if the intent is there. Approaching health and sustainability from a duality perspective could alter the roles and responsibilities of everyone. New and innovative solutions may be enhanced by facilitating dialogue with citizens on values, objectives and means. Allowing citizens to engage in and play a role in how to integrate health and sustainability may be a new vehicle for addressing wicked and complex problems.

REFERENCES:

JOURNAL

- Tauseef Ahmad Mir, Manvendra Singh. Indian Healthcare sector and the sustainable development. International Journal of current research and review. February 2022;14(3): 43-47.
- Andrew Jameton. Toward sustainable health – care services, principles, challenges and a process. International journal of sustainability in higher education. June 2022;3(2) 118 – 127.
- Martin Hensher and Forbers McGain. Health care sustainability metrics Building a safer, low – carbon health system. Health Affairs. December 2020; 39(12): 2081 – 2087.
- Andrea Badkin & Shawn Hakimi. Sustainable by design: a systemic review of factors for health promotion program sustainability. BMC public Health.2020; 20:964. 1-16.
- Wing Commander Ed Nicol. Sustainability in health care: efficiency effectiveness, economics and the environment. Future Health care journal. 2018; 5(2): 81.
- Clarie Harries, Sally Green, Wayne Ramsey, Kelly allen and Richard King. Sustainability in Health care allocating resources effectively(SHARE) 1 : Introducing a series of papers reporting an investigation of disinvestment in a local health care setting. BMC health services. 2017; 17: 323.1-13.
- Maria Carmen Carnero. Assessment of Environmental sustainability in Health care organizations. Sustainability. 2015;7: 8270 – 8291.
- Lycourgos Liaropoulous and Ilias Goranitis. Health care financing and the sustainability of health systems. International journal for equity in health. 2015. 14: 80.1-4.
- Bente KJ, Ergard, Birgit Land, Kirsten Bransholm pedersen. Health and Sustainability. January 2013. 29(3): 1-11
- Coding M Macdonald N. Sustainability of health promotion for people with learning disabilities. Art & science research. February 2011. 25(22) 42.
- Hal swerissen & Beth R Crisp. The sustainability of health promotion interventions for different levels of social organization. Health promotion International. 2004; 19(1): 123- 130.
- Ingvar theo olsen. Sustainability of health care: a frame work for analysis. Health policy and planning. 1988; 13(3): 287 – 295.

BOOK :

- Environmental sustainability strategy 2018 – 19 to 2022 – 2023. 1-10

- Rustam Sengupta. Sustainable and inclusive innovations in health care delivery. GiZ India& CII – ITC centre of Excellence for sustainable development. 1-81.
- David Edward Marcinko, Hope Rachel Hetico. Hospitals & Health Care Organizations. CRC press publications. 2013; 1-410.
- Deloitte. Sustainable strategies for Healthy India. All India Management of Association. June 2013; 1-20.
- TheLancet. Planetary health care: a framework for sustainable health systems. February 2021; 5: 1-4.
- Roberta L.Carroll. Risk Management Handbook for Health care organizations. Jossey Bass publication. 2009. 1- 675.
- Fran Thorn. Health. Sustainability principles.2011; 1- 2.
- Sustainability Performance report. VHBA Environmental sustainability strategy 2018 – 2019 to 2022 to 2023. Victorian Health Building Authority. February 2021. 1- 32.
- Valeria A brown,John Grootjans, Jan Ritchie, Mardie Townsend & Glenda Verrinder. Sustainability and health. 2013. 1-94.