Evaluating Healthcare Infrastructure in Ahmednagar District

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Abstract:

Ahmednagar district is located in the state of Maharashtra, India, and has a population of approximately 4.5 million as per the 2011 census. The district covers an area of 17,048 square kilometers and is bounded by the districts of Aurangabad, Jalgaon, Dhule, Pune, and Solapur. Ahmednagar district is primarily an agricultural district, with major crops including sugarcane, cotton, and grapes. In terms of healthcare infrastructure, Ahmednagar district has several government hospitals that provide medical services to the population. The Ahmednagar Civil Hospital is a major government hospital in the district, providing medical services to the population. In addition to the civil hospital, there are several rural hospitals, Primary Health Centers (PHCs), and Community Health Centers (CHCs) in the district. These healthcare facilities provide basic and specialized medical services to the population, including those in rural areas. Some of the other government hospitals in the district include the Newasa Rural Hospital, Pathardi Rural Hospital, Shevgaon Rural Hospital, and Shrirampur Rural Hospital.

Keywords: Sustainable development, healthcare, Government Hospital etc.

Introduction:

Sustainable development is a crucial aspect of healthcare, as it ensures the long-term viability of healthcare services while minimizing their environmental impact. Government hospitals, being a significant provider of healthcare services, play a vital role in promoting sustainable development practices. Ahmednagar district, located in the state of Maharashtra, India, has a well-established network of government hospitals. However, there is a need to assess the sustainability practices in these hospitals to identify areas for improvement.

The healthcare infrastructure landscape is increasingly embracing sustainability as a core component of its strategic frameworks, reflecting a broader shift towards green practices in various industries. One key trend is the integration of renewable energy sources into healthcare facilities, which not only reduces operational costs in the long run but also enhances the resilience of healthcare systems against climate-related disruptions. Additionally, there is a growing emphasis on telemedicine and digital health solutions, which allow for more flexible patient care while minimizing the environmental impact of traditional healthcare delivery methods. Furthermore, innovative business models, such as value-based care, are gaining traction as they prioritize patient outcomes and cost efficiency, encouraging healthcare providers to adopt practices that are both economically sustainable and environmentally responsible. These trends collectively signal a commitment to creating a more sustainable future for healthcare, aligning with global efforts to address climate change and improve public health outcomes (Rathod et al., 2024).

Healthcare infrastructure is a critical component of India's journey towards becoming a Viksit Bharat, or developed nation. Recent trends indicate a significant investment in expanding

healthcare facilities, particularly in rural and underserved areas, ensuring that quality medical services are accessible to all citizens. Additionally, the integration of technology in healthcare delivery, such as telemedicine and health informatics, is transforming patient care, enhancing efficiency, and improving outcomes. Furthermore, there is a growing emphasis on preventive healthcare and wellness initiatives, driven by government policies and public awareness campaigns, which aim to reduce the burden of disease and promote healthier lifestyles among the population. Together, these trends are setting the foundation for a robust healthcare ecosystem that supports the broader goals of socioeconomic development in India (Harale & Pawar, 2024).

Healthcare infrastructure plays a critical role in ensuring that communities have access to essential medical services, significantly impacting public health and well-being. Organizations engaged in Corporate Social Responsibility (CSR) are increasingly recognizing the importance of investing in healthcare infrastructure as a means to contribute positively to society. By committing resources to build and enhance healthcare facilities, improve healthcare access, and support health initiatives in underserved areas, corporations not only fulfill their ethical obligations but also foster a healthier workforce and community, ultimately leading to sustainable business growth and enhanced corporate reputation (Kamat & Pawar, 2024).

Objectives:

The primary objective of this study is to investigate the sustainable development practices in government hospitals of Ahmednagar district. The specific objectives are:

1. To assess the current state of sustainability practices in government hospitals.
2. To identify the challenges faced by government hospitals in implementing sustainable development practices.
3. To explore the opportunities for improving sustainability practices in government hospitals.

Definitions of Health -

A) World Health Organization - "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

B) Mudaliar A. Lakshmanaswami - "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity and welfare implies the provision of conditions necessary for the attainment of this state."

Expenditure on Health:

Table No. 1.1 has analysed about the trend in public health expenditure in Maharashtra budget over the period from 2009-10 to 2019-20. It is as follows:

Table No. 1: Expenditure on Health (Values in crore rupees)

Years	Expenditure	Percentage	Increasing/ Decreasing
2009-10	22384.65	5.1	-
2010-11	27083.37	6.1	4698.72
2011-12	30033.64	6.8	2950.27
2012-13	34022.59	7.7	3988.96
2013-14	38340.05	8.7	4317.46
2014-15	39791.51	9	1451.46
2015-16	42981.66	9.7	3190.15
2016-17	45410.46	10.3	2428.8
2017-18	48582.93	11	3172.47
2018-19	51286.47	11.6	2703.54
2019-20	62572.68	14	11286.21
Total	**442490**	**100**	**40188.03**

Source: https://beams.mahakosh.gov.in/Beams5/BudgeMVC/MISRPT/MIST1.jsp

Table No. 1.1 has depicts about the trend in public health expenditure in Maharashtra over the period from 2009-10 to 2019-20. According to the budget provision of the Government of Maharashtra's health expenditure has consistently increased over the ten-year period from 2009-10 to 2019-20. According to the budget provisions, the state spent a total of Rs. 89,834.70 crore on health during this period. Starting with Rs. 3,498.94 crore (3.9%) in 2009-10, the expenditure gradually rose to Rs. 4,166.72 crore (4.6%) in 2011, Rs. 4,889.12 crore (5.4%) in 2011-12, & Rs. 5,810.52 crore (6.5%) in 2012-13. This upward trend continued, reaching Rs. 6,750.04 crore (7.5%) in 2013-14, Rs. 8,331.10 crore (9.3%) in 2014-15, Rs. 9,362.93 crore (10.4%) in 2015-16, & Rs. 10,038.76 crore (11.2%) in 2016-17. The subsequent years saw further increases: Rs. 11,352.13 crore (12.6%) in 2017-18, Rs. 12,063.59 crore (13.4%) in 2018-19, & finally, Rs. 13,570.83 crore (15.1%) in 2019-20. This last figure represents the highest percentage increase over the period in ten year.

Overall, Maharashtra's total health expenditure increased by Rs. 10,071.88 crores over the ten-year period, demonstrating the government's commitment to prioritizing healthcare.

Expenditure spent on Health as part of GSDP:

Table No. 1.2 shows the Maharashtra state government's expenditure spent on Health as a part of Gross State Domestic Product (GSDP), It is as follows:

Table No. 1.2 : Expenditure spent on Health as part of GSDP (Values in crore rupees)

Years	Expenditure	GSDP	Health/GSDP Percentage
2009-10	3498.94	855751	0.41
2010-11	4166.72	1049150	0.40
2011-12	4889.12	1280369	0.38
2012-13	5810.52	1459629	0.40
2013-14	6750.04	1649647	0.41
2014-15	8331.10	1779138	0.47
2015-16	9362.93	1966225	0.48
2016-17	10038.76	2198185	0.46
2017-18	11352.13	2352782	0.48
2018-19	12063.59	2528854	0.48
2019-20	**13570.83**	**2657371**	**0.51**

Source: https://beams.mahakosh.gov.in/Beams5/BudgeMVC/MISRPT/MIST1.jsp

The Maharashtra state government's expenditure on Health as a part of Gross State Domestic Product (GSDP) has been consistently significant over the ten years in 2009-10 to 2019-20. In 2009-10, the government allocated Rs. 3498.94 crore towards Health, accounting for 0.41% of GSDP. The following year, 2010-11, saw a marginal decrease in percentage terms, with Rs. 4166.72 crore spent on Health, representing 0.40% of the GSDP. The 2011-12 recorded Rs. 4889.12 crore on Health expenditure, which accounted for 0.38% of the GSDP. In 2012-13, the government spent Rs. 5810.52 crore on Health, accounting for 0.40% of GSDP. This expenditure increased to Rs. 6750.04 crore in 2013-14, representing 0.41% of the total GSDP. Over the next few years, Health expenditure continued to rise, with Rs. 8331.10 crore spent in 2014-15 0.47% of GSDP, in 2015-16 the government spent Rs. 9362.93 crore 0.48% of GSDP & in 2016-17 spent Rs. 10038.76 crore 0.46% of GSDP. In 2017-18, the government spent Rs. 11352.13 crore on Health, accounting for 0.48% of GSDP. Notably, in 2019-20, Education expenditure surged to Rs. 12063.59 crore, representing 0.48% of GSDP. This increase demonstrates the government's commitment to enhancing Health.

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Healthcare Services in Ahmednagar District:

Table No. 1.3 shows, the Healthcare Services in Ahmednagar District, It is as follows:

Table No. 1.3: Healthcare Services in Ahmednagar District (2021-22)

Talukas	Hospital's	Clinic/ Dispensaries	Primary Health Center's	Sub-Center's	Doctor's	Nurses
Akole	04	05	11	71	37	108
Sangamaner	02	01	10	66	78	102
Kopargaon	01	01	06	32	14	31
Rahata	03	02	06	30	23	65
Shrirampur	01	02	06	30	14	35
Newasa	02	01	09	42	25	64
Shewgaon	02	01	07	37	13	22
Pathardi	01	01	06	35	22	48
Nagar	03	10	16	43	98	314
Rahuri	03	01	06	40	28	136
Parner	02	01	07	42	50	59
Shrigonda	01	01	07	39	17	54
Karjat	01	01	05	35	14	34
Jamkhed	01	01	03	23	11	33
Total	27	28	105	565	444	1105

Source: Socio-Economic Survey of Ahmednagar district. 2021-22.

Medical services are provided in the district through state government, local organizations and private individuals. Ahmednagar district provides various types of medical services to the people of the district through 27 Hospitals, 28 Dispensaries, 105 primary health centers, 565 sub-centres, this service includes 444 doctors and 1105 nurses.

Ahmednagar district has 684 private hospitals, 2098 clinics, 403 maternity hospitals and the number of beds in them is 16393 in the year 2021-22. Various types of medical services are provided to the people of the district. The total number of children born in the district in the year 2021-22 is 72752, out of which the total number of children born in rural areas is 67209 and the number of children born in urban areas is 5543. Also the total number of deaths is 17795 out of which the number of child deaths is 543 and the number of infant deaths is 155. In Ahmednagar district in the year 2021-22 the number of antenatal check-up is 106547 and the number of women who died during delivery is 12 and the number of infant deaths is 107comesThere are a total of 166 Family Welfare Centers in the district through which male sterilization, vaginal sterilization, sterilisation, and other methods are performed.

Needs of Healthcare Services:

Here are the needs of healthcare services in human beings:

1. **Prevention of Diseases:** Healthcare services help prevent diseases, reducing the risk of complications and improving overall health outcomes.
2. **Treatment of Illnesses:** Healthcare services provide treatment for illnesses, injuries, and chronic conditions, helping individuals recover and regain their health.
3. **Promoting Healthy Lifestyle:** Healthcare services provide guidance on healthy lifestyle choices, such as nutrition, exercise, and stress management, helping individuals maintain optimal health.
4. **Early Detection and Diagnosis:** Healthcare services enable early detection and diagnosis of diseases, allowing for timely treatment and improving health outcomes.

5. **Management of Chronic Conditions:** Healthcare services help manage chronic conditions, such as diabetes, hypertension, and asthma, reducing the risk of complications and improving quality of life.

6. **Mental Health Support:** Healthcare services provide mental health support, helping individuals cope with mental health issues, such as anxiety, depression, and trauma.

7. **Rehabilitation and Recovery:** Healthcare services provide rehabilitation and recovery support, helping individuals regain their strength and mobility after illnesses or injuries.

8. **Health Education and Awareness:** Healthcare services educate individuals about healthy habits, disease prevention, and early detection, empowering them to take control of their health.

9. **Support for Vulnerable Populations:** Healthcare services provide critical support for vulnerable populations, such as children, pregnant women, and the elderly, who may require specialized care.

10. **Improving Quality of Life:** Healthcare services improve overall quality of life, enabling individuals to live healthier, happier, and more productive lives.

Challenges Faced by Government Hospitals:
Here are the challenges faced by government hospitals in Ahmednagar district in implementing sustainable development practices

1. **Financial constraints:** Government hospitals in Ahmednagar district often struggle with limited budgets, hindering their ability to invest in sustainable development initiatives.

2. **Infrastructure inadequacies:** Outdated hospital buildings and inadequate infrastructure can hinder the implementation of sustainable development practices.

3. **Skilled staff shortages:** Government hospitals in Ahmednagar district may face challenges in recruiting and retaining skilled healthcare professionals and administrative staff.

4. **Knowledge gaps:** Healthcare professionals and hospital staff may require training and education to understand the importance and benefits of sustainable development practices.

5. **Inefficient waste management:** Inadequate waste management systems can lead to environmental pollution and health hazards.

6. **Energy inefficiencies:** Outdated infrastructure and inadequate energy management practices can result in high energy consumption and increased greenhouse gas emissions.

7. **Limited technological advancements:** Government hospitals in Ahmednagar district may not have access to modern technologies, hindering their ability to improve healthcare services and reduce environmental impact.

8. **Administrative barriers:** Bureaucratic hurdles and slow decision-making processes can hinder the implementation of sustainable development practices.

9. **Community engagement challenges:** Government hospitals may face difficulties in engaging with the local community to raise awareness about sustainable development practices.

10. **Data and monitoring limitations:** Inadequate data collection and monitoring systems can make it challenging for government hospitals to track their environmental impact and identify areas for improvement.

Opportunities for improving sustainable development practices in government hospitals of Ahmednagar district:

1. **Renewable Energy Integration:** Government hospitals can explore the use of renewable energy sources like solar, wind, or biogas to reduce their dependence on fossil fuels and lower their carbon footprint.

2. **Energy-Efficient Infrastructure:** Upgrading hospital infrastructure with energy-efficient lighting, HVAC systems, and medical equipment can significantly reduce energy consumption.

3. **Water Conservation:** Implementing rainwater harvesting systems, greywater reuse, and water-efficient fixtures can help reduce water consumption and alleviate the burden on local water resources.

4. **Waste Management:** Implementing effective waste segregation, recycling, and disposal practices can minimize the environmental impact of hospital waste.

5. **Sustainable Procurement:** Government hospitals can adopt sustainable procurement practices by purchasing eco-friendly products, reducing packaging waste, and promoting local suppliers.

6. **Staff Training and Awareness:** Providing regular training and awareness programs for hospital staff on sustainable development practices can foster a culture of sustainability within the hospital.

7. **Community Engagement:** Engaging with local communities through awareness programs, health camps, and other initiatives can help promote sustainable development practices and improve health outcomes.

8. **Public-Private Partnerships:** Collaborating with private sector organizations can provide access to funding, expertise, and innovative solutions for sustainable development practices.

9. **Green Hospital Initiatives:** Implementing green hospital initiatives, such as green roofs, gardens, and green spaces, can improve air quality, reduce stress, and promote overall well-being.

10. **Monitoring and Evaluation:** Establishing a monitoring and evaluation framework can help track progress, identify areas for improvement, and ensure that sustainable development practices are integrated into hospital operations.

Summary:

Healthcare services are essential for maintaining and improving the health and well-being of individuals and communities. These services encompass preventive care, such as vaccinations and health education, curative care, including diagnosis and treatment of illnesses and injuries, rehabilitative care, like physical and occupational therapy, and palliative care, which focuses on end-of-life care and pain management. Access to quality healthcare services is vital for improving health outcomes, reducing health disparities, and promoting overall well-being.

References:

1) U. S. Rathod, S. A. Thomas, F. S. Maruti, P. Balasaheb Kadam, H. L. Jadhav and M. Jamal Bdair, "Reinforcement Learning for Sustainable Business Model Development in Social Entrepreneurship," 2024 Second International Conference Computational and Characterization Techniques in Engineering & Sciences (IC3TES), Lucknow, India, 2024, pp. 1-5, doi: 10.1109/IC3TES62412.2024.10877619.

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2) Kamat, M. A., & Pawar, G. G. (2024). An analytical study of Corporate Social Responsibility activity of Proctor & Gamble Hygiene & Health Care Limited. *VIKSIT BHARAT@ 2047*, 75. https://www.researchgate.net/publication/379226625_An_analytical_study_of_Corporate_Social_Responsibility_activity_of_Proctor_Gamble_Hygiene_Health_Care_Limited

3) Harale, G. D., & Pawar, G. G. (Eds.). (2024). Viksit Bharat @2047: Challenges and Opportunities (1st ed., Vol. 1) [Online]. Rayat Shikshan Sanstha's, Abasaheb Marathe Arts and New Commerce, Science College, Rajapur Dist. Ratnagiri. https://www.researchgate.net/publication/378610404_Viksit_Bharat_2047_Challenges_and_Opportunities

4) WHO (1986), Ottawa Charter for Health Promotion. World Health Organization, Geneva. Page No. 1

5) Mudaliar A. Lakshmanaswami (1959). Health and Welfare. Indian Journal of Public Health, 3(2), Page No. 53-60.

6) Reddy K. Srinath (2010), "The Bhore Committee Report (1946): A Landmark in Indian Healthcare", National Medical Journal of India, Vol. 23, Issue 3. Page No. 155-158.

7) Joseph William Bhore (Chairman) (1946), "Health Survey and Planning Committee Report", Government of India. Page No. 10-15, 27-30.

8) Rao S. S. (2013), "The Bhore Committee Report: A Critical Analysis" Journal of Health Management, Vol. 15, Issue 3. Page No. 12-15.

9) A. Lakshmanaswami Mudaliar (Chairman) (1962), "Health Services in India: Report of the Committee on Health Services", Government of India, Page No. 12-20, 57-65.

10) Source: Socio-Economic Survey of Ahmednagar district. (2021-22)

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