

The Ageing Population in Healthcare; Role of Leadership Theories and Policies in the Modern Era

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Abstract— *Over the year's countries have experienced a rapid rise in ageing population. With increase in elderly population there has been a significant financial impact forced onto government healthcare institutions. Studies in the past have already stressed on this issue providing alternative solutions to deal with the ageing population. However, most studies have focused on healthcare governance and policy implementation aspects rather than the whole problem. This report focuses on providing solutions to healthcare institutions and management leaders on ways to tackle this problem using existing management and leadership practices incorporated with informatic tools.*

Index Terms— *Informatics, Leadership, Patient Management, PHC, UHC*

I. INTRODUCTION

Rapid rise in life expectancy over the past two decades has led to a demographic shift in most developing countries. In 2017, 962 million people were above 60 years, and this number is expected to increase further. An increase in overall elderly population can have several implications especially in developing countries. With nearly 80% of the elderly population suffering from one or many chronic illnesses, the labour workforce is depleted in several organizations as the elderly cannot match the energy levels of work demands. In the current context of COVID-19, elders are found to be the most vulnerable population due to the comorbidity factors involved in ageing population [1].

Several countries globally have identified this as a major burden as an ageing population tend to be less productive and unable to contribute towards economic growth. The healthcare system is affected mostly, due to this governments have implemented tax policies on pension plans to establish cash reserves to treat elderly [2]. However, this is a tentative solution that has been established over the years to ensure countries have resources to handle the demand for services. During the outbreak of COVID-19 this policy failed indicating the need for alternative solutions to manage the ageing population better, the governance models adapted by countries such as Italy and Spain are few examples of countries that failed [3].

The main aim of the report focuses on addressing main issues imposed by ageing population in the healthcare sector and how leaders can use existing leadership theories and styles to combat this issue using informatic and governance policies. The objectives of the study are to identify the type of leadership that suits healthcare management of ageing population, identify approaches followed by other countries and examine possibilities of how policy implementation has contributed towards good governance.

II. BACKGROUND OVERVIEW

Over the past two decades nearly 70% of the countries have seen a steady rise in ageing population, this is an indication that life expectancy among developing countries is showing an upward trend. However, this can cause a substantial impact towards the overall economy of the country, the recent outbreak of COVID-19 is one example where the health and well-being of elders have been prioritized globally to reduce the government expenses on healthcare [4].

According to findings from the Global Burden Disease Study carried out in 2013, global health is continuously improving over the years indicating improvements in healthcare services provided [5]. Several countries have adapted UHC mechanism in which free services have been provided by the government for all-age groups. However, the cost of providing healthcare services to elders have been identified as a major burden to these institutions due to the severity and nature of the diseases. In India, public healthcare organizations have been providing healthcare services specifically to elderly patients free-of-charge. As stated by WHO 1 in 4 people will be above 65 years in South-Asian countries, this is the identical problem experienced in India currently [6].

While the life expectancy keeps rising, cost of healthcare services also increases proportionally. As many studies have emphasized elderly aging workforce relies heavily on pension and retirement policies making it difficult for healthcare institutions to reimburse the costs for treatment [7]. There have been logistical concerns raised due to this as the revenue generated is insufficient to purchase essential resources required to treat the ageing population as majority of the costs are paid by the government and only a small share is collected from patients [8].

Additionally, the PAS used is still outdated and requires several changes to adapt to the current era. Studies conducted in the past have proposed, implementation of various health informatic tools could probably cut down the cost of managing the elderly patients. In India, majority of the public healthcare institutions have faced similar problems and using public healthcare institutions as a sample representation this assessment will provide solutions to tackle these challenges in the global framework.

III. CHALLENGES, LEADERSHIP AND POLICY DRIVEN SOLUTIONS

A. Challenges of Ageing Population

Citizens over 65 have been categorized under the elderly category where most of them are retired workers [9]. Scientifically it has been proven with increasing age people require more assistance getting through their day-to-day activities. Butler [10] stated that healthcare systems will be the affected due to the increasing ageing population, this statement is being justified in the current era where cost of treating elderly has risen significantly. In USA, 34% of the healthcare budget goes towards treating the elderly, as stated by Marik [11] this is an estimate whereas the real expenditures could be significantly higher.

The healthcare sector is divided into several components of which the PHC and patientcare services are severely affected due to ageing population. One of the common issues faced across the public health institutions is the frequency of medical checkups conducted on ageing population, while this improves quality of life it simultaneously increases expenses. A study carried out by Dall et al., [12] identified that majority of the elderly population have either one or many chronic illnesses. Due to this, patients will have to undergo several medical checkups which exerts an enormous financial burden on hospitals as most expenses are expected to be covered by the government. Medical checkups are both expensive and time-consuming services provided by the hospital, it requires both in/out patientcare services. However, some developing countries such as South Korea and Singapore have been able to benefit a lot from providing these checkups as it generates a substantial income.

The second main challenge identified by most institutions is palliative care for patients with life-threatening conditions. Elders with serious illnesses are in this unit of the hospital receiving treatment on a regular basis. However, studies in the past and current context of COVID-19 has indicated that healthcare workers try to avoid the palliative care units in hospitals due to demanding nature of the job [13]. Patients in this unit are generally depressed and feeling abandoned by families, leading to increasing suicidal thoughts and hallucinations. Negative thoughts and feelings expressed by patients has led to caretakers and nurses ignoring patients in this department resulting in discrimination and marginalization. Studies have shown that end-of-life support has least resources and staff allocated as several families do

not take responsibility of the costs involved. On the other hand, Zimmermann [14] states that palliative care has been considered as a part of “denial of death” as only patients suffering from serious conditions are taken into this unit.

The third major challenge highlighted by several studies is demand in health workforce. Current trends indicate that majority of the healthcare workforce is reliant on the providing services only to the most vulnerable population. Unfortunately, due to this the elderly population suffering from various diseases will be left behind having no support and adequate healthcare facilities. One of the key issues in providing staff for the elderly population is identifying right individuals for the job. As the workload involved is very demanding employees tend to refrain from dealing with elders resulting in extra burden on hospital to find alternatives. McGinnis and Moore [15] stated that less than 10% of staff are involved in treating elders as the cost of healthcare services provided are expensive and not supported by organizations. As demonstrated by German et al., [16], rather than looking at this as a burden, healthcare institutions can adapt and change the setup to support the elderly with adequate resources which will provide long-term financial support and stability to the organization.

Dein [17] stated that “health problems are illnesses described in terms of the social/psychological responses to the underlying disease”. The elderly population have always been identified as a core problem to the society and trends indicate the population is expected to increase across various healthcare institutions. However, if this problem is managed well using effective resources and workflow management, healthcare industries globally can build a business management (BPM) cycle which can provide profits to healthcare organizations.

B. Role of Leadership in Ageing Population

Ageing population is a global dilemma as stated above, organizations globally are undergoing a transition in workforce where new challenges have emerged in the past decade. Agarwal [18] stated that developing countries have to adapt “leadership strategies” to mitigate this concern, in the healthcare industry situational leadership has become the widely followed practice as priorities have changed due to the ongoing pandemic. However, the ageing population remains a bigger concern to tackle due to the socio-economic challenge imposed globally.

Leadership is one of the key drivers influencing changes to the organizational culture [19], this influences management practices, staff retention and patient turnover at hospitals. Transformational leadership has been a widely practiced type of management in several organizations as it is the most competent leadership practice that can be adapted by healthcare institutions. This style of leadership encourages employees to voice out their concerns and obtain collective feedback which can improve the overall workflow management. One of the key advantages using this model is the ability to influence employees to motivate each other and

work towards a common goal. As highlighted in several studies, handling the elderly can be stressful and tiring for employees, by adapting transformational leadership practices healthcare organizations can resolve this issue.

Training and development are key components in this type of leadership, healthcare sector is divided into several components of which majority of staff are only familiar with a few key operations. Tahir et al., [20] in his study highlighted training and development as an essential part of leadership to reduce overdependency of staff. To tackle this issue, top management of organizations can provide training to all employees on managing the ageing population. With more employees being trained to manage the elderly there are high chances of creating a healthy competition among staff which is beneficial for the organization. As stated by Page [21] putting workers in different working environment provides organizational with multiple options in managing resources and simultaneously improves patient satisfaction. In UK transformational leadership has been used over the years in the healthcare industry to facilitate continuous improvement of processes.

Another important aspect of leadership in healthcare sector is the ability to manage the diverse leaders in the organization, hospitals have 10-15 departments which is mainly managed by the top board. Intellectual stimulation and idealized influence are two key aspects of transformational leadership, both theories provide leader with options to improve operations in the organization. Idealized influence is currently being implemented globally where frontline workers have been given the priority to make decisions by establishing partnerships with top management. Departmental leadership can be implemented at unit levels of organization providing authority to senior staff to make decisions on ground-level handling patients. Although Lobas [22] identified departmental leadership is more suited to academic's researchers in recent studies this has been proven to be applicable in healthcare institutions.

Intellectual stimulation is an essential part of the problem-solving process of the organization as it makes the leader to critically think and be creative in solving problems (Jambawo, 2018). Bringing innovative suggestions into the healthcare setup provides organization with extra control over handling patients, recently conducted studies have indicated that hospitals use mobile games to improve the interaction between patients and workers. Providing incentives and discounts on medical bills for providing innovative ideas/solutions is implemented in developing countries. Kelly and Young [23] identified that providing incentives motivates patient to provide ideas to improve the workflow management however, it could also increase expectations among patients to obtain incentives for any suggested idea. Although transformational leadership has been followed by several organizations' other types of leadership such as transactional leadership is also commonly used in the healthcare sector

C. Health Informatics and its role in the Modern Era

The demand for healthcare services has been rising, countries globally have been identifying ways in which they can overcome this challenge by implementing various tools and methods. Studies have shown technology has been constantly improving the quality of healthcare by providing alternative solutions. However, in terms of providing support to the ageing population very limited resources have been utilized due to the sophisticated nature of technology. As stated by Kumar [24], "information is the foundation for policy-making, planning and accountability", this can be achieved by incorporating informatics into healthcare.

In order to ensure the elderly population is monitored on a regular basis hospital information system (HIS) needs to be adapted by institutions providing real-time administrative and clinical management updates. However, HIS has been predominantly used as a business architecture model rather than an information platform which has led to problems in managing the elderly. One of the main advantages of using this model is that patient demographic details can be mapped out simply. By doing this organizations can identify the frequency of visits and type of services required by the elderly which needs to be identified as priorities. Moreover, a registry of electronic patient records will be maintained on a regular basis which will reduce chances of medical errors. IOM report in early 2000's indicated nearly 44000-98000 deaths in the USA were caused by medical errors [25]. However, over the past 5 years due to the involvement of technology and adaptation of patient management systems this has been reduced.

Another major aspect of health informatics in recent years has been the adaptation of telemedicine. Telemedicine has been widely used during the times of pandemic where healthcare professionals have been monitoring and assessing patient conditions virtually. Chunara et al., [27] stated that despite telemedicine having limitations in reaching patients in rural areas it has been transforming healthcare services digitally. Findings from the past indicates that telemedicine is the ideal method to treat the ageing population as most of them are suffering from chronic illnesses. In the current era of technology, hospitals have their own applications and tracking system which feeds data into a patient administration system (PAS). Using PAS, doctors and nurses can remotely track patients where demographics and clinical findings will be updated into the patient master index (PMI). Hinze and Sewell [28] identified that hospitals have been maintaining PMI as a business tool rather than a management tool which has changed the dynamics of patient management over the years. The effectiveness of PAS is such that it provides the option of managing patients without requiring their presence, by using this mechanism hospitals can manage the elderly population with limited resources.

Big-data has been influential in decision-making processes in the management industry and identified as a catalyst that improves the business of the organization [29]. By using this, hospitals can develop their own model which will provide early diagnosis and insights of affected population and reduce costs of the treatment and services. Studies have shown that AI has assisted the elderly patients suffering from mental health disorders and providing automated drug prescriptions based on their symptoms. With a fully-digitalized patient management system, the possibilities for AI-based diagnosis can help countries globally to manage the burden of the elderly population [30]. However, organizations need to understand the implications and challenges that could emerge in the form of cyberattacks in implementing this.

D. Clinical Governance Strategies

According to World Bank nearly 10% of GDP is allocated towards the healthcare sector with an average expenditure of \$1000 per capita [32]. With constant rise in healthcare expenditures incurred over the years, organizations need to identify strategies to minimize the cost without compromising on quality. Good governance practices have been executed effectively over the years to tackle problems in several organizations. In healthcare sector clinical governance has been implemented in some countries, this model was implemented by NHS and then followed by other healthcare institutions globally to bring out effective management and leadership.

A good governance approach provides the organization with flexibility to promote evidence-based practices and continuously improve operations at organizational level it also provides a structural framework that allows employees to understand their responsibilities and remain accountable for their actions. As mentioned above, one of the key challenges is personal safety of elderly, using knowledge management and safety components of clinical governance the problems faced by ageing population can be minimized over time [33].

To implement these recommendations organizations need to design policies which are “actionable for policy-makers” [34]. The MIPAA action plan on ageing is one of the globally recognized policies approved by UN. MIPAA focuses on providing healthcare to the ageing population without discriminating them. Clinical management aspects of ageing population is one of the key components of this policy making it most idealistic model that could be implemented by hospitals. It has been noticed over the year’s hospitals have limited services provided to the elderly, MIPAA focuses on removing these barriers and providing healthcare coverage for all. The challenge of handling patients with chronic diseases can be tackled using the chronic care model (CCM) developed by Wagner this policy focuses on changing perceptions of healthcare workers towards helping the elderly. Incorporation of these two policies have been successful in tackling concerns of ageing population, countries who have

not implemented these policies have suffered drastically during COVID-19 outbreak resulting in improper patient management [35]. In Italy, overcrowding of hospitals resulted in elderly patients being isolated from obtaining their fundamental checkups. Most healthcare institutions adapt the MIPAA and CCM policies and lose focus on addressing the health informatics challenge. The privacy of patient information and confidentiality has been identified as a main challenge faced over the years, in US hospitals that do not comply with HIPAA regulations have been penalized in the past. HIPAA act ensures that the hospital information system (HIS) and patient master index (PMI) is maintained regularly. In the past, hospitals have been hiking prices during time of crisis to increase their profits, by implementing the HIPAA act this sudden price hikes can be controlled [36]. Governance and policy implementation are two essential components of organization’s success and sustainability. MIPAA and HIPAA acts have found to be successful in reducing healthcare expenses in several countries and has the possibility to provide organizations with long-term solutions to resolve this problem.

IV. CONCLUSION

The ongoing dilemma on ageing population will continue to exist globally with a steady rise in the elderly population. Demographical representation of this population in developing countries have become a major concern as the elderly have reached their retirement age and living off pension plans and incentives provided by the government [37]. In this report several studies conducted globally were assessed of which, the role of management, leadership, governance and health informatics were identified to be significantly correlating with the management of ageing population [38]. In order to prioritize the ageing population, policies and governance models were identified of which the MIPAA and HIPAA at present focus specifically on addressing this issue [39].

In summary, the problem of ageing can be resolved by adopting available policies which are designed specifically towards helping the elderly population. However, for this policy to be effective proper leadership and management is required to guide employees and make them understand their roles and responsibilities at organizational level [40].

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