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## Financial Aspect and Healthcare outcomes: Lessons Learned from COVID-19

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### Abstract

The main purpose of this review paper is to clarify the relationship between care cost, service quality, patient satisfaction, patient loyalty, and medication adherence. In addition, we tried to explore the impact of financial crisis on healthcare services.

*Keywords: care cost; accrual quality; healthcare services*

### Introduction

The COVID-19 outbreak sparked a healthcare disaster in China and is still causing devastation throughout the world. Overall, healthcare usage fell, particularly during the post-festival period in 2020. The epidemic had a stronger impact on healthcare usage in places with a higher COVID-19 risk, those with harsher lockdown measures, and those in the western area (Zhang et al., 2020). The World Health Organization (WHO) announced that it is critical to make every effort to ensure safety and to evaluate the impact of the pandemic on health care systems and society (World Health Organization, 2020). Hospitals and care facilities overwhelmed with COVID patients making it difficult for other patients with acute or chronic ailments to access standard care.

The business of healthcare is becoming increasingly risky in terms of quality of provided healthcare services due to the recent spread of COVID pandemic that has caused a global economic shut down. The dynamics of the competitive healthcare marketplace had enforced healthcare organizations to profoundly alter the way they attract and retain their customers to stay financially and operationally sustainable. Due to spread of COVID-19, the World Health Organization (WHO) highlighted that more in-depth analyses on healthcare services in hospitals should also be conducted on a periodic basis. Besides, most countries need significantly strengthened surveillance capacities of healthcare services to rapidly identify and care for cases of COVID-19, trace and quarantine their contacts, and monitor disease trends over time (Burrer et al., 2020; World Health Organization, 2020).

Care costs refer to the financial expenses associated with medical operations, drugs, consultations, hospitalizations, and other related expenses. Understanding and managing the variables that drive healthcare costs is critical for affordable access to care, the financial sustainability of healthcare systems, and ultimately better service delivery and improved outcomes for patients. The insights derived from understanding the impact of care costs on patient expectations may also assist healthcare practitioners, researchers, and politicians in making smarter decisions. The intertwining of healthcare expenditures and healthcare outcomes has become an increasingly significant issue for patients and healthcare providers. Healthcare institutions in developed countries are increasingly implementing different strategies and frameworks to improve service quality.

By boosting patient-centered care models, improving patient-doctor communication and information sharing, ensuring efficient billing and insurance processing, and cultivating a culture of sustainable improvement. Moreover, the high cost of healthcare services worsens the problem in developing countries, making it unaffordable for many individuals and families. To address these concerns, concerted

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efforts are required to improve medical facilities, increase resource allocation, and ensure equal access to cost-effective, high-quality care services for all citizens. In terms of accessibility, quality, and affordability, healthcare services in developing and developed countries differ significantly. Healthcare systems in developed countries are often more resilient, with improved advanced infrastructure and better access to medical technologies.

In contrast, developing countries frequently face limited healthcare resources and insufficient infrastructure. Due to financial constraints and limited resources, developing countries may encounter obstacles in adopting and implementing new technology in healthcare, affecting the accessibility of the most advanced medical treatment and diagnostic instruments. In Syria, healthcare providers strive to provide high-quality services for patients in private and public hospitals. However, ongoing monitoring, assessment, and improvement of service quality indicators are required. Measuring patient experiences, obtaining feedback, and incorporating patient perspectives into quality improvement activities are all part of this. Medical institutions may exceed patient expectations, improve patient outcomes, and develop an excellence culture by placing service quality at the heart of healthcare delivery.

### **Impact of Financial Crisis on Healthcare Services**

The financial and economic crisis that began in the United States in 2008 shows the beginning of a systemic crisis, a recession in the non-financial sector in the United States, and a worldwide economic downturn. The amount of financial instability in the banking industry has increased over time, as has the financial strain on households. During the crisis, many people lost their health insurance (Kotz, 2009). During the economic crisis in 2008, changes in working time, real wages, financial assets, mortgage debt, and mental health, taken together, explain the impact of the crisis on some behaviours (such as food consumption), but most other behaviours appear to have been mostly influenced by price rises (Ásgeirsdóttir et al., 2014). Similarly, the emergence of the COVID pandemic led to an unprecedented need to change human behaviour across the whole population in a very short period of time (Lunn et al., 2020). The devastating economic impact of COVID-19 has a negative impact on the world economy and on all industries, including healthcare (Kraus et al., 2020; Ludvigson et al., 2020).

During financial shortfalls at hospitals and when quality is imperfectly observed by patient, financially constrained healthcare providers have incentives to lower their product quality to increase cash flows in the short run (Adelino et al., 2018). Global financial markets have also been responsive to the fluctuations and overall stock indices. There is strong evidence that the economic crisis has led to reductions in the use of routine medical care (Chatterji & Li, 2020; Lusardi et al., 2010). It is fundamentally an empirical issue whether medical care grows or declines in the face of the economic crisis. The limited resources have a significant influence on the use of regular medical treatment (Lusardi et al., 2010). Strong financial success is linked to a better patient-reported experience of treatment, which is the most important factor in determining quality and safety. Therefore, hospitals with a strong financial position are better equipped to sustain highly efficient systems and offer continual resources for quality improvement. Hospitals in financial difficulties have worsening patient experiences, higher readmission rates, and a higher likelihood of poor patient quality and safety outcomes. Financially stable hospitals provide a better patient experience, have lower readmission rates, and have a lower risk of poor patient quality and safety outcomes for both medical and surgical patients (Akinleye et al., 2019).

Previous research reveals that if a hospital's financial situation deteriorates, various areas of patient care may be jeopardised (Weissman et al., 2013; Bazzoli et al., 2007). Individuals minimise their use of medical care during economic crises, according to studies from developing countries (Musgrove, 1987; Waters et al., 2003; B. M. Yang et al., 2001). However, some studies highlighted that healthcare conditions may improve rather than deteriorate during economic downturns (Ruhm et al., 2000). Hospitals are under a lot of pressure to save expenses while still delivering high-quality care. Empirical studies exploring the relationship between a hospital's financial situation and the quality and safety of patient treatment, however, the results still mixed (Akinleye et al., 2019; Weissman et al., 2013; Bazzoli et al., 2007). Therefore, there is a need to investigate further the influence of financial crisis such as COVID-19 on care cost and its relationship with healthcare outcomes.

### **Relationship between Service Quality, Patient Satisfaction, and Patient Loyalty**

Observing actions and opinions of customers to derive conclusions about quality is an indirect approach of gathering information. Hospitals are basically evaluated and ranked based on the quality of medical care provided by managerial, professional, and technical personnel (Donabedian, 1966). Service provider tend to be more flexible in tolerating service delivery to fit the specific demands of their customers (Youngdahl & Kellogg, 1997). Before attempting to analyse the quality of care, it is vital to agree on what

factors make that care quality. There is a need to better understand the nature of the interpersonal interaction between physician and patient, to learn how to define and quantify its characteristics, and to evaluate how they contribute to the patient's health and welfare. To arrive at really personalised quality assessments, it is necessary to first understand about patient preferences. Furthermore, there is a need to examine the duties of the healthcare professions to patients and society (Donabedian, 1988). For health care marketers, defining and assessing service quality has been a huge difficulty. The potential use of a comprehensive service quality measuring scale SERVQUAL in a hospital service context is empirically examined (Babakus & Mangold, 1992). A few researchers have modified the SERVQUAL scale by adding some dimensions (Deshwal et al., 2014; Meesala & Paul, 2018; Tomes & Peng Ng, 1995). Grönroos model (Grönroos, 1984) proposed that service quality comprises two discrete modules, the technical dimension (quality of what is delivered, e.g., effectiveness of clinical procedures of a hospital), and the functional dimension (how the service is delivered).

Both the public and private healthcare sectors should continue to monitor the demand for, supply of, and utilisation of medical technologies and establish integrated delivery systems. Some healthcare providers are investing heavily in developing or acquiring new care services in order to remain competitive or qualify for network selection as a full-service provider. It is essential for the government to gather data and assess the impact of these system changes on trends in the supply and use of medical technology in collaboration with the private sector (Bryce & Cline, 1998). Technical and functional quality have different effects on customer satisfaction and loyalty. It also differed between a low and high contact service. Technical quality was required for a low-contact service to first achieve satisfaction, and subsequently functional quality was required to promote loyalty beyond pleasure. In the event of a high-contact service, the opposite is true. Managers can use satisfaction and loyalty data to determine if technical or functional quality improvement is the most critical necessity for their companies at any given point in their service operations (Mittal & Lassar, 1998). In addition, patient survival and several aspects of functional status are improved when treatment intensity is increased (Picone et al., 2003). Patient satisfaction is one objective of care and evaluation of patient satisfaction has become an important factor in estimating health services in developing and developed countries (Baker, 1990). Numerous models have been tested in an attempt to define and comprehend how to assess patient perceptions of healthcare quality (Sitzia & Wood, 1997).

Customer preference and willingness to recommend the service to other consumers are influenced by perceived service quality (de Ruyter et al., 1998). In facility/equipment-based sectors, tangible elements tend to be more significant in comparison to the other variables of service equality, but responsiveness appears to be more important in people-based industries. Retaining a current client is less expensive than acquiring a new one. Service managers should focus on customer perception of performance rather than the gap between perceived performance and previous expectation. Service managers should not only increase service quality but also identify and manage issues connected to customer satisfaction. This may motivate service managers to spend more on boosting customer satisfaction and increasing the consumer's intention to repurchase the service (Lee et al., 2000).

### **Relationship between Care Cost and Healthcare Outcomes**

The growth in health costs is unsustainable and endangers the health of the economy as a whole. Current attempts to cut health-care costs and improve quality need a greater understanding of the cost-quality connection. The cost of medical treatment differs between low-average and high-quality hospitals (Glance et al., 2010). In comparison to the importance placed on service quality research in service marketing, far less study has been done on the impact of pricing perceptions and their impact on customer retention. Given that price and quality are two aspects of value perceptions, there has been remarkably little research on the influence of price perceptions on behavioural intentions. Varki and Colgate found that there is a positive impact of price perception on customer satisfaction and behavioural intent (Varki & Colgate, 2001).

Recent studies indicated that there is a gap in assessing patient's perception regarding care cost (Alumran et al., 2020; Javed et al., 2019; Jennings et al., 2015). Rose et al. (Rose et al., 2004) indicated that technical quality is the most significant determinant of service quality for the both hospitals. However, the care cost dimension is insignificant in affecting quality perception especially for private hospital. Rhman et al. (Rahman & Osmangani, 2015) found that patients are concerned about internal impacting factors, functional quality and care cost. Patients will think that the cost of care (financial element) is acceptable if they accept high-quality medical services, and their satisfaction with private hospitals will improve as a result (Guo et al., 2020). Some consumers will pick a higher-priced brand over a lower-priced one when there is substantial doubt about the service quality level between two service providers. This implies that these customers judge quality based on pricing (Tull et al., 1964). When the price is the only information

provided, customers are more inclined to purchase an expensive goods. Price becomes less significant when customers gain more knowledge (brand, shop image, and other qualitative aspects) (Bowbrick, 1980). Complainers may not remember exactly what they paid but they will remember if they did not like the service (Jones et al., 2002). To eliminate risk of spending too much and to get the best offer some consumers are highly price conscious, so they look for advices from friends and relatives. Therefore, consumers are more likely to complain if they are not satisfied with the service or the service provider failed to give the value, they thought that they would receive (Gursoy et al., 2007).

The relationship between the service quality and cost is influenced by the type of patients and the characteristics of hospitals selected for the analysis (Fleming, 1991). A marginal cost differs over the range of quality and depends on the initial level of quality (Donabedian, 1985). River and Glover (Rivers & Glover, 2008) proposed a model to identify factors that have significant influence on patient satisfaction while keeping high quality of service at lower care cost in a competitive atmosphere. The clarity of information about treatment, a good doctor-patient relationship and cost of medical treatment are significant determinants of patient satisfaction (Mazzei et al., 2009). After service objectives have been accomplished, pricing (service cost) becomes a big consideration (McGinns, 1990). Healthcare provider should find alternative ways to treat their patients using medical advanced technology. Besides, healthcare services should be acceptable to both consumers and healthcare professionals while also being delivered at a significantly lower cost than if the same level of service had been provided by conventional means (Trott & Blignault, 1998). Service provider tend to be more flexible in tolerating service delivery to fit the specific demands of their customers. In addition, customers incur both monetary and non-monetary expenditures in order to maximise their chances of satisfaction and recover from the impacts of poor quality (Youngdahl & Kellogg, 1997). Consumers perceive that paying a higher-price results in a higher return in quality only in certain service categories and not in others. Sometimes, customers come to link price with quality in particular product categories. As customers grow more knowledgeable about competition options and costs, as well as better equipped with information, service providers must be especially mindful of the need to price "fairly" (Sinha & Batra, 1999).

Switching cost plays a significant role only when customer-perceived value or customer satisfaction is higher than the average value (Z. Yang & Peterson, 2004). Customer preference and willingness to recommend the service to other consumers are influenced by perceived service quality. The impact of perceived service quality on loyalty is different for low and high switching cost industries. Consumers are less sensitive to price increases in services when their perceived service quality is higher (de Ruyter et al., 1998). Andreassen (1998) indicated that because many patients have psychological barriers to changing physicians, exit costs are seen to be substantial. Price perception has evolved into a criterion for customers when making purchases and repurchases. Many academics have related customers' willingness to switch firms to their judgments of perceived consumer pricing (Sinha & Batra, 1999). Price and service quality are the most important predictors of consumer switching intentions. Furthermore, switching costs effectively moderate the influence of service quality on switching intention. When customers believe the price of the product or service is too high, they may consider moving to another firm. Consumers will continue to utilise the company's products and services if the price perceived by them is in line with the benefits they receive. In other words, a high perceived consumer price will have a positive influence on switching intention. In order to prevent consumer switching intentions, managers should examine pricing and service quality on a frequent basis (Zakiy, 2019).

Medical facilities are under a lot of pressure to improve their quality and lower their expenses. Besides, responsiveness is a common source of satisfaction and a substantial source of discontent, it has been highlighted as a critical factor of quality (Wachter et al., 1998). Ridley and Morris utilized cost-effectiveness analysis to investigate whether intensive care is great value for money for the National Health Service in the United Kingdom (Ridley & Morris, 2007). With an increasingly complicated financial system, everyone should plan their financial actions ahead of time since individuals may encounter a variety of financial constraints at various stages in their lives (Ali et al., 2015). In today's market, there are several challenges to providing greater service at a lower cost of operating. Simple tactics such as pinpointing causes of failure, assessing time or cost at different stages, and streamlining procedures can all help (Piercy & Rich, 2009). Among the major problems being debated is the influence of costs on the activities of health care institutions. The improved technical quality of the services, staff behaviour, and infrastructure renovations were not adequate to compensate for the extra financial hurdles generated by the increasing cost of services. Some nurses' interpersonal abilities served to compensate for the negative impacts of the high prices and even helped to improve the level of usage of some healthcare facilities (Haddad & Fournier, 1995). There is considerable evidence that the expense of healthcare treatment, particularly for some mental health disorders such as dementia care, will surge in the future years (Braun et al., 2020). Healthcare



providers should make it obvious to doctors and patients that cost/quality trade-offs are not only reasonable, but also essential and ethical (Eddy, 1997).

Lack of health insurance is a key barrier to accessing adequate health treatments, and it is directly linked to poor functioning, increased morbidity and mortality, a lack of continuity of care, and growing health care expenditures. High satisfaction with the quality of health care obtained and with care experiences leads to lower cost expenditures (Coddington & Sands, 2008). Because of growing concerns about the affordability of healthcare, there is a great interest in understanding the relationship between medical care quality and care cost. Although expanding insurance coverage is an important step in healthcare reform, and this change must also address the underlying issues of quality and cost. The restructuring of the healthcare delivery system needs leadership, dedication, and resources. Healthcare reform can be achieved by building a performance measurement strategy and integrating healthcare service quality into decisions about monetary and non-monetary benefits (O'Kane et al., 2008).

Continuous monitoring of incentive programmes is essential for determining the effectiveness of financial incentives and any unexpected consequences for the quality of treatment. Therefore, there is a need to guide financial incentive deployment and examine their cost-effectiveness. There is a significant link between the payment system for healthcare professionals, healthcare system behaviour, and performance on quality measures (Petersen et al., 2006). Pricing is one of the most important aspects of any marketing effort. However, decreasing costs is not always a successful strategy for increasing consumer loyalty or a company's revenues in the long run (Kim, 2019). Service managers should place a high value on operations that are effective in lowering the cost of different benefits, such as increasing purchase intent, customer loyalty, and increased market share. A successful marketing approach of suitable pricing setting and WOM may have a favourable impact on customers' intent to return. In their assessments, customers consider the trade-off between quality and price. There is a significant relationship between service quality, pricing, and revisit intention (Liu & Lee, 2016). One study found that there is no impact of perceived price fairness on customer's loyalty (Hwang & Hyun, 2014). Jeaheng et al. found that there is no direct influence of perceived price on customer satisfaction, however, it has a significant impact on customer trust (Jeaheng et al., 2020).

### **Relationship between Care Cost and Medication Adherence**

Medication compliance has become a very important topic in terms of efficacy, care costs, and patient safety since the clinical regimens are useless if patients do not comply with their doctor's advice. Patients with a greater non-compliance rate have a higher incidence of morbidity as well as social and cognitive impairments that make it difficult for them to take medicine correctly. Poor medication compliance has been described as the most common source of nonresponse to clinical treatment. Besides, patients who comply with medical professional's advices have better healthcare outcomes than patients who do not, even though when taking a placebo (Murphy & Coster, 1997). Kennedy et al. (Kennedy-Martin et al., 2017) highlighted that non adherence to the medication increases the costs of health care. Based on health belief model, patients have to perceive no major obstacles and difficulties such as financial burdens that hindering them from medication adherence (Rosenstock, 1974).

During medical treatment process, the intervention by medical professional should provide more clarification and explanation regarding the danger and negative impact of sickness such as financial consequences (Rosenstock, 1974). During medical treatment process, the intervention by medical professional should provide more clarification and explanation regarding the danger and negative impact of sickness such as financial consequences (Rosenstock, 1974). Previous studies (Buysman et al., 2015; Cheng et al., 2013) showed that healthcare cost of adherent patients had been increased in comparison to non-adherent patients. Kripalani et al. (Kripalani et al., 2008) illustrated that to improve adherence to medication it is required to decrease medication cost. In the healthcare field, lack of patient compliance to medical recommendations and treatments has long been a serious and challenging problem that has a negative influence on patients' health and increases the overall healthcare costs (Wu et al., 2021).

### **Care cost in Arabic countries**

Arabic countries are still facing considerable challenges in the healthcare sector and suffering from lack of healthcare research as well as weak investment in scientific research, in comparison to countries with developed economies. While healthcare reform has sometimes been less enthusiastically handled in a number of nations in the Arab world than economic reform, extensive healthcare changes have begun owing to the COVID expansion. Healthcare is becoming more widely recognised as a reliable determinant of economic progress. Due to spread of COVID, there is a growing interest to find the underlying determinants

of healthcare outcome in both developed and developing countries. World health organization called attention to the high proportion of healthcare spending paid out of pocket in most developing countries. For example, out-of-pocket expenditure as per cent of total health expenditure in some Arabic countries: Egypt (58.0%), Iraq (36.5%), Jordan (23.5%), Lebanon (34.3%) and Syria (53.9%). Furthermore, in developing countries, the governments' expenditure on healthcare as per cent of general government expenditure is low.

For example: in Egypt (5.5%), Iraq (6.0%), Jordan (13.5%), Lebanon (10.7%) and Syria (5.3%) (World Health organization, 2015). Alumran et al. (Alumran et al., 2020) indicated that patient's financial concerns need to be investigated that has impact on the improvement of the overall quality of health care services at Saudi Arabia's healthcare system. In Syria, patients who take multiple medications may suffer from a financial burden, especially in these days where there is a drop in spending due to a recession and fluctuation in Syrian economy. Furthermore, currently most of the Syrian people face financial pressure, so it is difficult to adjust budget and lifestyle by increasing expense and decreasing income (Alnafrah & Mouselli, 2020; Jahan & Jespersen, 2016; Marzouk, 2018). In order to determine how COVID influenced the utilisation of medical care in Syria, the financial aspect of healthcare services should also be investigated. The Syrian government is attempting to pull the country out of a deep economic crisis while also reforming the country's healthcare system

### Conclusion, Suggestions and Limitations

Private healthcare sector has better practical funding strategies than in public sector, therefore, private healthcare providers have the ability to attract more patients by providing better services compared with their counterparts. However, the economic growth is associated with rising costs for health services; on the other hand, economic recession has opposite effects. Therefore, it is important of combining the reform in healthcare provision with new mechanisms for the allocation of health care resources. Empirical studies have also reported a positive connection between income and health. Ettner (Ettner, 1996) highlighted that increasing income improves both mental and physical health, whereas Lantz et al. (Lantz et al., 2001) found that both high income and education are linked to better health. As a result, increased financial resources and organisational efforts might result in substantial gains in healthcare outcomes such as service quality, patient satisfaction, patient loyalty, and medication adherence. Customers' purchasing decisions are influenced by a lack of knowledge about some of the possibilities and a high level of confusion regarding the characteristics of the services that the customer is aware of. When there is a high level of ambiguity in the purchasing decision, consumers rely significantly on price as a predictor of quality (Tull et al., 1964).

In order to improve consumer financial well-being, consumer financial education programmes should encourage consumers to avoid risky financial behaviour, engage in desirable financial behaviour, and create financial self-efficacy (Xiao et al., 2014). Consumer price consciousness is a significant reason why consumers prefer choosing private sector. Furthermore, perceived price-quality association has a significant effect on private label purchase in risky categories (Sinha & Batra, 1999).

The impact of healthcare service quality on demand, healthcare treatment selection, and care costs are fundamental concerns for policymakers in developing countries. Higher-priced choices, such as private-sector medical therapy, are likely to give higher-quality healthcare. If healthcare providers do not regulate service quality, the influence of care cost on choice will be a mix of negative price effects and positive quality effects.

The combined effect of pricing and healthcare service quality on decision making is an important topic of the research. When deciding between different types of healthcare services that are provided by different hospitals, the cost and quality of service must be considered. The type of care and the selected healthcare providers imply the health technology and quality of care, which influences the total cost of treatment. As a result, the improvement in health condition is dependent on the service selected. Healthcare providers should establish a high-performance management system to cut costs and enhance quality. Medical decisions are influenced by quality of care and care cost, as well as the relationship between quality and cost (Donabedian, 1983). Patients who take multiple medications may suffer from a financial burden, especially in these days, where there is a drop in spending due to a recession and fluctuation in economy. Furthermore, currently most of the people face financial pressure, so it is difficult to adjust budget and lifestyle by increasing expense and decreasing income (Alnafrah & Mouselli, 2020; Jahan & Jespersen, 2016; Marzouk, 2018).

In addition, healthcare providers in developing countries should be aware that unemployment and poverty are linked to poor health and place additional burden on medical services. In order to improve healthcare outcomes, they should also analyse cost escalation and consider competitive pricing of medical

treatment while taking inflation into consideration. Besides, patients, especially in developing countries, should be charged for healthcare according to their ability to pay to improve their compliance behaviour towards medical treatment. The obvious way of doing this is by funding healthcare from a progressive taxation system or through a social insurance system

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