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Review

How can Saudi Arabia reform its public hospital payment models? A narrative review

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ABSTRACT

Background: The cost of Saudi healthcare continues to rise at an alarming rate, putting the sustainability of the public healthcare system into question. Data have shown that hospital and healthcare providers' services represent the bulk of this rising cost, which makes the calls to reform the Saudi healthcare system more focused on payment models than at any time before.

Objective: The aim of this paper is to review various identified payment models that can be used to contain costs and improve the quality of the care provided.

Method: A literature review of articles addressing the issues of cost containment and improving the quality of healthcare by reforming the current Saudi healthcare payment policy were identified through the Ovid[®], Medline, and Google[®] Scholar search engines.

Results and Conclusions: Many research articles and literature reviews have identified and discussed different models of healthcare payments. Some articles have focused on one payment model, while others have discussed different payment models that have been identified. There is an urgent need to reform the current system of healthcare payments to improve the quality of healthcare and maintain funding for universal healthcare coverage in the future. Future healthcare payment reforms should consider restructuring the current healthcare system, which is largely fragmented by providing incentives to different governmental healthcare sectors, in order to transform it into a more organized and coordinated system. Thus far, there is not a single payment model that can, by itself, reduce healthcare costs and improve healthcare quality. Future healthcare reforms should use a mixture of different payment models to pay hospitals and physicians.

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1. Introduction

Government healthcare expenditures in Saudi Arabia continue to rise at a stunning rate. The allocated budget for health and social development has increased from SAR 27 billion (\$7.2 billion), 9.2% of the total Saudi government budget in 2005, to SAR 159 billion (\$42.4 billion), 15.4% of the total Saudi government budget in 2019 (Ministry of finance, 2020). Furthermore, the Saudi Ministry of Health (MOH), which is the largest public healthcare provider in the Kingdom, covering for more than 60% of the inpatient care (Walston et al., 2008), has seen its budget increase more than 300% in 13 years, from SAR 22.8 billion (\$6.08 billion) in 2006 to SAR 75.4 billion (\$20.11 billion) in 2019 (Ministry of Health, 2020). The cost of medical care is growing faster than the economy, which is currently suffering from a recession, mainly due to the drop in crude oil prices and the negative effects of Coronavirus Disease 2019 (COVID-19) on the world economy (Nicola et al., 2020). This makes calls to reform the healthcare system more urgent than at any time before, in order to contain costs and improve quality (Al-Hanawi et al., 2018). All of the components of public healthcare spending in Saudi Arabia are rising at an alarming rate. Therefore, it is necessary to reform the healthcare system to contain costs and reduce spending, or at least, slow the rate of increase in healthcare spending. This paper focuses on healthcare spending on hospital and healthcare professional/clinical services, since they represent more than 59% of the total MOH budget (Ministry of Health, 2020; Almalki et al., 2011). Most researchers believe the main reason for the rising cost of healthcare in the two most important components (hospitals and healthcare professionals/clinical services) is the payment model used to compensate hospitals and healthcare professionals, which is called the salary model ((Ministry of Health, 2020; Al-Hanawi et al., 2018; Almalki et al., 2011).

The fee- for -service method of payment, which is one of the most commonly used models to compensate hospitals and physicians, basically entails reimbursement by an insurance company for every specific medical service or procedure performed for a patient by hospitals or healthcare providers (Demchak, 2007; Mechanic, 2004). This method of payment seems simple and it has some advantages, but it creates incentives for physicians to see more patients and order more high-tech and costly diagnostic procedures for their patients, which are highly reimbursed. Hence, physicians ignore simple and sometimes equally effective procedures just because they are poorly reimbursed and time consuming (Mechanic and Altman, 2009). This payment model is largely used by private health insurance plans to compensate hospitals and healthcare providers for their services in Saudi Arabia (Walston et al., 2008). However, the vast majority of public hospitals pay their healthcare professionals using a salary payment model (Almalki et al., 2011; Walston et al., 2008). Although the salary payment model has a lower impact on healthcare budgets in different healthcare systems, compared to the fee-for-service model, it may lead to less through-put of patients per healthcare professional (Simoens and Giuffrida, 2004). Thus, policy makers see the need to reform the current payment method and create a new payment model that has certain characteristics to contain costs and

improve quality in line with the Saudi vision 2030 (Al-Hanawi et al., 2018; Alshuwaikhat and Mohammed, 2017; Ginsburg, 2009; Miller, 2011). The new model of healthcare payment or compensation should have the following characteristics (Miller, 2011; Mechanic and Altman, 2009):

1. Provide safe, effective, and accessible care;
2. Provide efficient delivery of healthcare to reduce waste, if not eliminate it;
3. Make payments based on recognized quality of care;
4. Take into consideration the time, cost, and complexity of treating each patient;
5. Reduce incentives for physicians to order diagnostic procedures that are costly and not highly effective; and
6. Increase and promote accountability and appropriateness of care.

The adoption of different and new payment models for healthcare providers and inpatient services was deemed impossible just five years ago prior to the launch of the Saudi economic vision 2030. However, the new vision has made the restructuring of the whole public healthcare system in Saudi Arabia possible. The Ministry of Health will assume regulatory and reimbursement roles rather than being a provider of healthcare, and the work has already begun to improve both the quality of delivered healthcare and spending efficiency (Rahman and Al-Borie, 2020). Therefore, the aim of this paper is to answer the following question:

How should we reform the payment model that the government uses to compensate hospitals and healthcare professionals in order to contain costs and improve quality?

2. Methods

Ovid®, Medline, and Google® Scholar were searched for relevant articles that addressed the issue of hospital and physicians payment models and discussed the advantages and disadvantages of different payment models. The following search terms were used: “Healthcare payment reform,” “Healthcare payment model,” “Fee for service,” “Payment for performance,” “Payment for coordination,” “Accountable care organization,” “ Episode or bundled payment,” “ Ideal payment model for healthcare,” and “Healthcare reform.” These search terms were used separately or combined with AND. The search was limited to articles in the “English language” published in “2000–2019.”

3. Results and discussion

The cost of spending for services by hospitals and healthcare providers' is rising dramatically (Ministry of finance, 2020; Walston et al., 2008; Ministry of Health, 2020). Although the average annual rate of increase in MOH employee compensation decreased from 14% between 2007 and 2012 to 4.3% between 2012 and 2018, it is still increasing at an unjustifiably high rate without yielding tangible improvements in health outcomes (Khalique, 2012; Du and Lu, 2016). According to the Bloomberg index,

which assesses life expectancy, healthcare spending per capita, and relative spending as a percentage of the Gross Domestic Product (GDP) in 55 different healthcare systems throughout the world, the efficiency of the Saudi healthcare system has dropped in rank from 17 in 2009 to 38 in 2014 (Rahman and Alsharqi, 2019). This fact made many health policy makers and researchers think about alternative payment models other than the notorious, conventional fee-for-service payment model, to cut costs and improve quality (Demchak, 2007; Mechanic and Altman, 2009).

Thus far, most of attempts to reform healthcare payment policies by government agencies (e.g., the Saudi health council) have merely been recommendations that are still under deliberation and have not been enacted (Rahman and Alsharqi, 2019). As the costs of hospital services and healthcare employee salaries are growing annually at an average rate of 4%, which far exceeds Saudi Arabia's rate of economic growth, health policy researchers have been skeptic about the sustainability of universal government healthcare coverage for citizens. Therefore, they are trying to find a solution to the rising cost of healthcare, especially the hospital/physician component of this vital sector, without unduly affecting healthcare access or quality (Al-Hanawi et al., 2018; Rahman and Alsharqi, 2019). Researchers have identified several other payment models for hospitals and physicians that are being applied in several OECD (Organization for Economic Cooperation and Development) countries (Demchak, 2007; Wubulihassimu et al., 2016).

3.1. Fee-for-Service (FFS)

This is a conventional payment method, in which for example, Medicare in the United States (U.S.) pays providers for services they provide to Medicare enrollees (Baker, 1997). In this payment model, the health insurance plan pays physicians and hospitals based on the number of services they provide to insureds (Miller, 2011; Silversmith, 2011; Brown, 2008). However, this creates incentives for healthcare providers to provide more services to patients, regardless of the need for these services, solely to maximize their profits and compensate for losses (Miller, 2011; Mechanic and Altman, 2009). These incentives must be adjusted within the healthcare system's goals (Rudmik et al., 2014). In addition, it does not take quality of care into consideration. Hence, when using a fee-for-service system, it is important to determine what attributes of healthcare quality should be measured because there are various definitions of "quality" among healthcare providers and payers (Rudmik et al., 2014).

The FFS payment model pays hospitals and healthcare providers based on the number of services they order or provide, and it usually does not consider the outcome of therapy (Miller, 2011; Ginsburg, 2009). This calls attention to the important question of whether these services are appropriate for the patients (Rudmik et al., 2014). Furthermore, the FFS model penalizes those physicians and hospitals who try to avoid doing unnecessary diagnostic procedures or treatments that have poor outcomes, because the model pays them less since payments are based on the number of services provided (Mechanic and Altman, 2009). This payment model is one of the main drivers of the rising cost of healthcare, and health policy researchers have proposed calibrating Medicare's fee-for-service payment model by having a fixed payment for each service provided. Yet, this would not actually solve the problem, since physicians would still be reimbursed based on the number of services provided and not on the quality of care provided (Mechanic and Altman, 2009). In addition, some powerful interest groups have opposed such a proposition (Mechanic and Altman, 2009; Ginsburg, 2009). The fee-for-service model is a good option only if the goal of the healthcare system is to increase the amount of care provided and patient satisfaction, and to decrease the tendency to select low risk patients (Rudmik et al., 2014).

3.2. Salary or wage payment model

The salary based model is the most widely used model to compensate healthcare providers in Saudi Arabia (Almalki et al., 2011). It is defined as a model that offers a fixed income per a specified period of time (e.g., a week, month, or year) to healthcare providers (McClellan, 2011). The advantage of this payment model over the traditional FFS model is that it eliminates incentives to healthcare providers and hospitals to order or provide more services, which could be inappropriate, for the sake of generating more income (Ryan et al., 2015). However, critics of this model argue that salaried healthcare providers may have a tendency to refer uncomplicated but time-consuming cases to specialists, resulting in higher costs (Robinson, 2001). Furthermore, the quality of the provided care and the productivity of the healthcare providers are usually not incorporated into this model. Nevertheless, this model is believed to help attract healthcare providers to work in healthcare institutions that serve underserved and disenfranchised communities, such as peripheral regions of Saudi Arabia (Almalki et al., 2011; Ryan et al., 2015).

3.3. Global payment

The most common form of this payment model is capitation, which involves a single payment for a predefined set of clinical services for each insured per time period, whether or not these services are utilized (Silversmith, 2011). This payment model is largely based on the number of patients for whom a hospital or a healthcare provider is providing care (Berwick, 1996). Therefore, if a healthcare institution or provider can provide services to a patient or a group of patients at less cost than the allocated sum of money, they will make a profit; otherwise, they will lose money (Frakt and Mayes, 2012). By shifting the financial risk from the healthcare payer (e.g., MOH or a private insurance plan) to the healthcare institutions and healthcare providers, the capitation payment method gives healthcare payers greater certainty when setting their budgets (Frakt and Mayes, 2012). However, some health policy makers are concerned that this payment model may encourage physicians or hospitals to delay or avoid doing needed clinical procedures for their patients to increase their profit margin by the end of the fiscal year (Rudmik et al., 2014). To address their concern, some insurance programs that use this payment model to pay for their enrollees (e.g., Blue Cross, Blue Shield of Massachusetts) have incorporated quality of care as an important component of the model (Mechanic and Altman, 2009; Silversmith, 2011). To do this, they use tools to assess the quality of care provided to their enrollees by hospitals or physicians and reward them with bonuses if they achieve certain therapeutic goals or quality of care scores (Mechanic and Altman, 2009). Although capitation has slowed the rate of healthcare expenditures by the Medicare insurance program in the U.S. since the 1990s (Guterman et al., 1996), expenditures have continued to grow at a rate higher than the annual rate of GDP growth (Gold, 1999). Moreover, hospitals and healthcare providers do not like this system because it limits their autonomy and it does not take inflation in the price of medical services and commodities into account (Mechanic, 2004).

3.4. Payment for performance

The name of this payment model is appealing as it addresses an issue that is overlooked by the fee-for-service payment model, which is the performance or the quality of the provided care (Catalyst, 2018). The Payment for Performance (P4P) model has led to improvements in various health outcomes among different patient populations, such as heart failure, diabetes, and asthma,

and it has increased the rates of immunization and social equity (Mannion and Davies, 2008). However, the success of any P4P program is predicated on the quality and outcomes framework that is used to assess the performance of the healthcare institutions and healthcare providers (Roland and Campbell, 2014). Moreover, the outcomes that are evaluated must be clearly and objectively defined, whether they are clinical (e.g., glycated hemoglobin [HbA1c]), organizational (e.g., electronic documentation of patient information, medication management, education, or training), or patient-centered (e.g., patient satisfaction with care) to avoid unintended adverse consequences (Roland and Campbell, 2014; Eijkenaar et al., 2013; Roland, 2012; Leydon et al., 2011).

Although P4P has been adopted by a good number of both public and private payers, only a few of these programs have been evaluated (Mechanic and Altman, 2009; Roland and Campbell, 2014). Those few P4P programs that have been evaluated have shown inconsistent results (Mechanic and Altman, 2009; Roland and Campbell, 2014). Overall, they have shown little return or gain in quality for the money spent, and improvements in quality have been more apparent among healthcare providers or institutions with high baseline performance (Mechanic and Altman, 2009; Rosenthal, 2008). This payment model also encourages physicians to deliver under-used services, such as patient counseling, instead of giving them incentives to ration the provision of costly and over-used services with limited health outcomes, which limits its ability to reduce spending (Roland and Campbell, 2014; Rosenthal, 2008). Additionally, there is a lack of consensus regarding outcome measures that can be used to assess the performance of different healthcare providers and institutions (e.g., **Shall we reward healthcare institutions and providers based on services provided to improve health outcomes or for actual improvement in health outcomes?**). Furthermore, the implementation of P4P to compensate primary healthcare providers in the United Kingdom has led some providers to “cherry pick” their patients to avoid negative evaluations and to focus on providing services that can be measured to receive higher compensation from the National Health Service (NHS) (Roland and Campbell, 2014). Thus, some health policy researchers tend to think of P4P as an integral component that can be added to the fee-for-service payment or other payment models (Silversmith, 2011; Roland and Campbell, 2014; Rosenthal, 2008).

3.5. Payment for episodes of care

This payment method deals with each episode of care as a single payment, so it is also known as a bundled payment for an episode, which means that a procedure like a total knee replacement, which includes a group of physicians, rehabilitation specialists, clinical services, and even hospitals, is treated as a single entity (Hughes et al., 2017; Froimson et al., 2013). This entity can be an organized group of physicians or a network of different healthcare providers or hospitals (Mechanic RE, Altman, 2009). Every specific service must be accounted for and included in the bundle price to determine a fair price and avoid the failure of this payment model (Demchak, 2007). One of the characteristics of the bundled payment is the stability of prices for bundled medical services over a reasonable period of time, especially in healthcare providers' fees (Froimson et al., 2013). This has led to a significant cost saving in some instances, such as the case of joint replacement surgery for Medicare beneficiaries in the United States (Navathe et al., 2017). Moreover, the bundled payment model can be modified to enable healthcare institutions or providers to add more services that were not originally included in the bundled payment scheme for some patients if they believe that such services were needed; however, the added services are reimbursed separately, mostly based on the traditional FFS model (Hughes et al., 2017). The implementa-

tion of this model requires close coordination between the different providers of healthcare (e.g., healthcare providers, clinics, and hospitals) and the payers (e.g., a public or commercial health insurance plan) (Hussey et al., 2011). Therefore, improvements have been noticed in the coordination of care and the efficiency of different healthcare systems that have adopted this model (e.g., higher adherence rates to evidence-based treatment guidelines, avoidance of unnecessary medical and/or diagnostic procedures to maximize their earnings, and better quality of care) (de Bakker et al., 2012; Antonova et al., 2015). Moreover, there is growing evidence that suggests shorter lengths of stay among patients who have undergone different types of surgery (e.g., cardiac valve, spinal fusion, and joint replacement) without affecting the rates of readmission to healthcare institutions that were compensated using bundled payments (Jubelt et al., 2016).

Although the bundled payment for healthcare services has several advantages over other healthcare payment methods, these advantages can be viewed as barriers and challenges to implementing the model to reimburse different healthcare institutions and providers (Hussey et al., 2011; Ridgely et al., 2014). In addition, some health policy researchers are concerned that physicians or hospitals that adopt this method will avoid performing certain procedures that would be beneficial for their patients to contain their costs and increase their profits, or that they may avoid taking sicker patients who require more care (Mechanic and Altman, 2009; Bailit and Hughes, 2011).

3.6. Shared savings payment model

This payment model has been advocated by several health policy researchers and governmental agencies, i.e., Medicare, as a way to reform U.S. healthcare and contain costs (Bailit and Hughes, 2011). The fundamental concept on which this payment model is based is very simple; hospitals or physicians provides care for patients with less than expected costs and Medicare, as an example, reward these hospitals or physicians with a part of the savings created by the lower than expected costs of care provided to their enrollees (Bailit and Hughes, 2011; McWilliams, 2016). Although many health policy researchers see the shared savings payment model as a step in the right direction to contain costs and create Accountable Health Organizations (ACO), others question the novelty and the sustainability of this payment model (Ronning, 2010; Douven et al., 2015). The critics of this payment model list several fundamental problems with the structure of the model (Douven et al., 2015). First, it is another form of payment for performance and does not include any fundamental change in the current payment system that Medicare uses to reimburse physicians and hospitals (Weissman et al., 2012; Berenson, 2010). In addition, primary care services like email or phone consultations with physicians would not be paid for, so there would be additional losses for clinicians without further compensation (Berenson, 2010). Second, it does not guarantee that the risk taken by healthcare providers to achieve these savings will be accounted for (Berenson, 2010; Ouayogodé et al., 2017). Actually, many programs that have proven their ability to reduce the cost of providing care required an upfront investment, both financially and labor-wise, from the beginning, and it is not yet clear who would bear the burden of that cost (Berenson, 2010). Third, it seems to some health policy researchers that physicians with poor performance would gain the most from this payment model since they are responsible for most of the waste in healthcare spending. While those with excellent performance would not be penalized as they are in the fee-for-service model, they would not receive as much rewards as those with poor baseline performance (Berenson, 2010). Fourth, the income or revenue of healthcare providers would be reduced because they would only receive the part of the savings that was

originally created by them; hence, this payment model has a logical flaw (Mechanic and Altman, 2009; Berenson, 2010). Fifth, this payment approach is unsustainable even if some costs are contained, simply because there is no real change in the underlying structure of the current payment system (Berenson, 2010; Berenson et al., 2009). Furthermore, assuming that savings are obtained and shared, and costs are reduced to a certain extent; can health providers continue to struggle and strive to reduce the costs given the continuous change in patient populations and treatment guidelines (Berenson, 2010; Ouayogodé et al., 2017; Berenson et al., 2009)?

3.7. How should we reform healthcare Payments?

Any future healthcare payment reform in the Kingdom of Saudi Arabia should have three main components. First, it should have a well-established mechanism to reduce healthcare spending by controlling unnecessary utilization (Demchak, 2007; Ginsburg, 2009; Miller, 2011; Mechanic and Altman, 2009). Second, it should encourage healthcare providers to give high quality care by giving incentives for those who comply with the quality standards established as part of any future healthcare payment reform (Miller, 2011). Third, it should support health providers' integration and coordination (Miller, 2011). Unfortunately, there is not any payment model so far that is perfect and can be applied on a large scale, given the status quo of the Saudi healthcare system (Brown, 2008). As discussed above, each payment model has some advantages and disadvantages, and to implement genuine payment reform we should start by restructuring our healthcare system (Al-Hanawi, 2018; Almalki et al., 2011).

4. Conclusion

Any future payment reform will face several political, financial, and technical obstacles. Many health policy makers do not see any real change in the structure of the Saudi healthcare system unless a big governmental entity like the MOH, with a sizable market share, is involved (Walston et al., 2008). Although there are some well-organized healthcare institutions, such as the King Faisal Specialist Hospital and Research Center, the majority of the public healthcare organizations have fragmented structures and lack good coordination, which makes it very difficult to change from a salary or wage model to another payment model, or even modify the salary payment model (Al-Hanawi et al., 2018; Almalki et al., 2011). Also, any payment reform should take place in several steps or phases to reduce the transitional cost associated with changing or modifying the payment system for healthcare institutions (Ministry of Health, 2020; Walston et al., 2008; Ministry of Finance, 2020). Public healthcare institutions should be given incentives to expedite the process of transformation to better organized and coordinated groups (Dusheiko et al., 2006). This can be achieved by utilizing advances in information technology tools to create organized and coordinated healthcare delivery (Miller, 2011). The presence of such organized healthcare provider organizations or networks will reduce any future cost that will be incurred by any attempt to reform the public healthcare payment policy. The creation of a national center to assess the cost effectiveness of certain medical and diagnostic procedures or medications should be considered; such center could be a part of the Center of Spending Efficiency (CSE). A good number of health policy researchers believe that the establishment of such a center would have a positive effect on containing the cost of healthcare (Ginsburg, 2009). So far, there is not any single healthcare payment model that can assure fair compensation for all clinical services and high quality of services provided (Silversmith, 2011). Finally, an assortment of different

payment models should be used in any future healthcare payment reform to improve quality and contain costs.

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