CC BY

# Reform of the strategies of Challenges and Advantages of Implementation for Health Insurance in Saudi Arabia

**Nasser Saadi Dhaifallah Alghbewee[1], Mohammed Abdullah Alghamdi[2], Hamed Saeed Alasmari[3], Yasir Salah Alhuwayfi[4], Ibrahim Hassan H Alderhami[5], Yaqob Yousef Omar Bakreem[6], Salhah Yahya Alneami[7], Mohammed Taher Hussain Althuwaini[8], Alzeifi, Fatimah Mohsen Y[9], Alzuhayfi, Amirah Mohsen Y[9], Owaydi, Mousa Ibrahim F[9], Ahmad. Mohmaad. Alshareef Rabee[10], Nasser Meshal Thamer ALOtaibi[11]**

[1]Senior Specialist-Health Administration, Al YAMAMAH Hospital ,Riyadh Second Health Cluster, Saudi Arabia.
[2]Senior health administration specialist, AlBaha Health Cluster, Saudi Arabia.
[3]Management of health services and hospitals Riyadh, Medical referral center, Saudi Arabia.
[4]Medical Secretary Technician, Riyadh Medical referral center, Saudi Arabia.
[5]Duty manager, Maternity and Children hospital, Saudi Arabia.
[6]Health Services and Hospitals Management-Commitment Management in Jeddah, Saudi Arabia.
[7]Health informatics specialist, King saud medical city, Saudi Arabia.
[8]Technical Health Center Manager, Al-Marrah Health Center, Saudi Arabia.
[9]Technician-Medical secretary, Jazan Health Cluster, Saudi Arabia.
[10]Health Information Technician, Maternity and children. Hospital in mecca, Saudi Arabia.
[11]Health informatics, Dawadmi General Hospital, Saudi Arabia

**Abstract**

**Background**

Health insurance models being considered as part of health system reforms in Saudi Arabia the attributes of health funding models that support better control of diseases and perspectives on health insurance as a model from the perspective of patients, clinicians, and managers. Saudi Arabia's Vision 2030 has taken a center stage in the development of its healthcare sector through Implementation for Health Insurance in Saudi Arabia. Since the launch of the ambitious Vision 2030, identifying issues those need to address and steps taken towards provision of Health Insurance in Saudi Arabia. " Health Insurance programs generally aim at enhancing quality of care, promoting patient safety, equitability, accessibility and feasibility of healthcare services.

**Aim of this systematically review**: To assesses of the reform strategies of Challenges and Advantages of Implementation for Health Insurance in Saudi Arabia : A Systemic Review 2024.

**Method:** Online searching engines were using databases to identify relevant articles through the included electronic databases: Google Scholar, PubMed, and Saudi Digital Library (SDL), data extracted from published articles systematically analyzed for reform of the strategies of challenges and advantages of implementation for health insurance.

**Results:** The Kingdom of Saudi Arabia's (KSA) health- care system funded by oil earnings and is free at the point of delivery . Because of rising expenditures and rising oil market volatility, this system being increasingly stressed. Seven articles selected that compliant with the theme of this present systematic review. Among the seven reviewed articles, articles have explained the current financial methods of the healthcare system in Saudi Arabia; articles assess the prospective role of CHI in achieving Vision 2030 goals in the healthcare system.

**Conclusion**: Saudi Arabia is actually currently spending a higher proportion of its budget on health care expenses than most high-income countries. As well, the review attempts to identify the benefits and barriers of future implementation, and to work on eliminating hurdles during the National health Insurance- NHI future implementation and promote its benefits. The recommendations directed to governmental institutions and Insurance companies in Saudi Arabia.

**Keywords:** Reform, strategies, Challenges, Advantages, Implementation, Health Insurance, Saudi Arabia.

## Background:

Saudi Arabia's healthcare system characterized as a national healthcare system delivered by the government through a number of government institutions. Saudi Arabia's health-care funding comes primarily from government revenues, with oil accounting for 90% and other resources accounting for 10%. [1]. The Ministry of Health's budgetary allotment has risen steadily from 2.8 % of the national budget in 1970 to 18.0 % in 2018, totaling 147 billion Saudi Riyal (39 billion USD). [2] The Ministry of Health is the largest supplier of health

care, offering a wide range of services (more than 60 % of health services, rest provided by other governmental and non-governmental sectors) [3]. The Saudi Healthcare System is universal and 'free at the point of delivery,' funded solely by government money drawn primarily from oil (non-contributory) [4].
Previous literature reveals that health insurance reduces the cost of medication and hospitalization, which enables people to obtain better medical care during the treatment of various diseases. [5] Other studies, however, show that insurance does not significantly increase utilization of health services, especially in cases where the insured people would still obtain good medical care in the absence of the insurance.[6] However, the effects work better where the insured are the marginalized. [7] This strengthens the rationale for most countries establishing national health insurance schemes with an objective of assisting the poor to access good-quality healthcare. there was an inevitable need for health care reform to ensure the continuity of providing adequate health care services [8]. The decision-makers decided to transition towards the National Health Insurance model. [9]The first step taken by the passage of the Council of Cooperative Health Insurance Law in 1999, which established a mandatory health insurance scheme Cooperative Health Insurance (CHI) in 2002 for private sector employees, who were mostly, expatriates [10]. In the Kingdom of Saudi Arabia, healthcare largely funded by the government, and services delivered in government facilities are free [11]. The system has offered free healthcare to all Saudi nationals at publicly owned facilities run by government-employed administrators and healthcare personnel since its inception in the 1920s [12]. Many studies conducted to determine the benefits of NHI
Implementation. In Malaysia, National Health Insurance –NHI used to raise cash for health-care finance, improve access to health-care services, and attain the desired health status [13]
The scheme aimed to relieve the financial burden on the public sector by forcing private sector employers who form 67.9% of the workforce in Saudi Arabia to cover health care costs for their Saudi employees (22.3%) and non-Saudis (77.7%). This scheme will push the private sector employees to private health care providers to get their health services [14] By definition, health care services are the medical services provided by health care professionals to treat, protect or promote the health and well-being of the people; it includes hospital care (emergency care, outpatient clinics, admissions, diagnostic measures), primary health care services, physicians and clinical services, dental services; besides home health care, other residential health services prescribing drugs, durable and nondurable medical products [15]
The KSA provides free access to healthcare services through the MOH to both Saudis and non-Saudis working in the government sectors. Furthermore, the KSA provides free health services to the general public, which exorbitantly raises the cost of financing healthcare in the kingdom, exacerbated by the rapid population growth and increased prices of medical technology.[16] Public health provision in Saudi is of high quality; however, it has faced efficiency challenges due to the overwhelmingly large number of people that it caters for.[17] providing a further strain on the healthcare resource envelope.[18] In response, the Saudi government enacted the Cooperative Health Insurance Law. The law aimed at reducing pressure from public health services through forcing private companies to internalize the healthcare expenditures of their expatriate employees, with a compulsory insurance paid by the employers to increase usage of private health facilities.[19]

## Methodology

**Aim of the study:**

To assesses of the reform strategies of Challenges and Advantages of Implementation for Health Insurance in Saudi Arabia : A Systemic Review 2024

**Study design**:

Systematic reviews using Online searching engines were using databases to identify relevant articles through the included electronic databases: Google Scholar, PubMed, and Saudi Digital Library (SDL), data extracted from published articles were systematically analyzed for determining the insurance in Saudi Arabia to achieving higher level.

**Search strategy**:

This systematic review follows the online searching engines were used to identify relevant articles through the included electronic databases: Google Scholar, PubMed, and Saudi Digital Library (SDL). The search terms used were Health insurance, OR Health Insurance advantage, OR Health Insurance benefits, OR Health insurance challenges, AND Saudi Arabia, OR KSA, OR SA, AND Saudi Vision, OR Vision 2030. All searches were limited to the English language, to the year 2018, and after. The result of this search would used to offer a thorough overview of the Strategies of Challenges and Advantages of Implementation for Health Insurance in Saudi Arabia. The number of articles extracted for the research is evaluated based on Preferred Reporting Items for Systematic Reviews.

**Searches and Data Sources**

A comprehensive search was performed to obtain studies on the Challenges and Advantages of Implementation for Health Insurance in Saudi Arabia. The databases used in the search included ProQuest and Scopus, and the keywords used were ‘Strategies ’, ‘Challenges’, ‘Saudi Arabia’ , ‘Advantages’ , ‘Challenges’ ‘Implementation’ . These keywords were used to find articles with matching terms in their abstracts or titles. To discover the most

recent studies and literature on our review topic, the search was limited to articles published between 2020 and 2024.

**Inclusion criteria**

Studies were included if they met the following: Saudi articles, focusing on health insurance in Saudi Arabia, focusing on issues, Challenges and Advantages of Implementation for Health Insurance in Saudi Arabia, informative and original research articles, published in the last recent 4 years, published in 2018 or after, and in English
language.

**Exclusion Criteria**

Exclusion criteria were studies that not review of the abstract met the inclusion criteria, but on reading the full text were not RCTs or in which the outcomes of Saudi Health care System but not opportunities and Challenges.

**Data Extraction**

As this review relies heavily on a prior systematic review that included online articles, the findings could be affected by selection bias. However, efforts were made to collect the necessary information for the appropriate review, explanation, and interpretation of the available literature. Studies excluded if they investigated health insurance outside Saudi Arabia, review studies, studies not directly related to health insurance, and studies excluded if they published before 2018.

**The process of selecting the articles,** which are contained in this review.

Presents method used for selecting eligible studies for this review. In the first stage, Pro Quest and Scopus returned 200 articles. After duplicate articles and those published before 2018 removed, 80 remained. Non-peer-reviewed articles (70) and articles not mainly about health insurance Saudi Arabia, (20) then excluded. After excluding studies with sample sizes under 70 and response rates under 60%, seven articles were included in this review.

**Table1: Summary of Findings of reform of the strategies health insurance and Advantages of Implementation for health insurance in Saudi Arabia.**

| Author, Date, Country | Region | Study design | Study aim | Results |
|---|---|---|---|---|
| **Ezat et al (2022) [20]** | Kingdom of Saudi Arabia | A cross sectional Qualitative research | To examine qualitatively the advantages, challenges, and variables related to the implementation of the National Health Insurance (NHI) system in Saudi Arabia. | The most considerable issue in the KSA for the implementation of NHI is the lack of awareness in Saudi society, lack of rare specialties and genetic, lack of Technical staff, Lack of qualified cadres, poor understanding of minority population about insurance, and weak knowledge about the benefits of the healthcare facilities. The respondents highlighted that lack of qualified National practitioners, insurance awareness among Saudi citizens, price disparities, the number of insurance companies, and the emergence of legal authorities with lack of awareness are potential barriers in the insurance industry. The highlighted that people in KSA are lack of skills and knowledge to adopt the insurance policy. Therefore, it hindered the implementation of NHI in the KSA. The thematic analysis of the research objectives, the research divided the analysis into four sections including the benefits of NHI implementation, barriers of NHI implementation, the factors that influence and it affect the healthcare cost. **Conclusions** Health Insurance Qualitatively, to assess the benefits, barriers and factors associated with future implementation of a national health insurance (NHI) in Saudi Arabia. By |

| | | | | |
|---|---|---|---|---|
| | | | | considering the transcripts and the supporting articles, it examined that the implementation of NHI in the Saudi Arabia is the complicated process and management and ministries should work collaboratively to impose those policies in Saudi Arabia because lack of awareness among Saudi citizens, strong Islamic values that hindered them to Accept the policies actively in Saudi Arabia. Further, the NHI is purposive to manage the governmental cost to limit its expenses on the health care sector which is beneficial in raising the budget of the medical facilities and enhancing the social welfare for people to avail better opportunities in that region. On the other side, many key factors affected the performance of NHI implementation in the KSA due to the high alteration in the economic and social variables. |
| **Hazazi et al. (2022) [21]** | Saudi Arabia | Quantitative and Qualitative | Assesses the attributes of health funding models that support better control of no communicable diseases (NCDs) and perspectives on health insurance as a model from the perspective of patients, clinicians, and managers | Findings indicated concerns that the current health funding mechanism is financially unsustainable and, as a result, there will be a greater reliance on personal health insurance to support government spending on healthcare. Essential elements of any health insurance model to support effective NCD management identified from a review of the literature include the ensuring continuity of care and equity; funding chronic disease prevention interventions; prioritizing primary healthcare; and maintaining the principle of community rating to prevent insurers from discriminating against members.<br>**Conclusions**<br>The healthcare financing system in Saudi Arabia faces challenges common to many countries; increased costs due to demographic changes, inequity, an ageing population, an increase in NCDs, escalating costs of healthcare services, and increased public demand for improved healthcare are issues facing the public sector. There is concern that existing public revenue will not be able to support the increased demand under the existing largely government-funded approach. The proposed solution to this is to move to a largely private health insurance model, the details of which are unclear. |

| | | | | |
|---|---|---|---|---|
| **Althabaiti, et al (2024) [22]** | Saudi Arabia | National Transformation Program (NTP) in Saudi Arabia. | To address the potential and risks behind the National Transformation Program (NTP) in Saudi Arabia through the lens of the Value Transformation Framework | The insufficient studies have conducted on infrastructure and people. Following a thorough critical review of the literature utilizing the value transformation theoretical framework, the most cited concern was the sustainability and workforce of the healthcare system. Furthermore, limited information is available on how to assess the transformation, which remains an unaddressed research question, according to the literature, disagreements among researchers and arguments found on the use of best strategies for success in NTP . **Conclusions** The transformation journey in Saudi Arabia could meet several hurdles. The planning phase was critical. Furthermore, future research should incorporate expert consultation and more databases and search engines, such as Scopus and CINAHL and examine the impact of NTP from the point of view of medical college faculty members, policymakers, managers, and leaders |
| **Tobaiqy, et al (2023) [23]** | University of Jeddah (UJ) Saudi Arabia | Medical Center In University of Jeddah (UJ) | To assess the perceptions of staff working at the University of Jeddah (UJ) Medical Center on the possibility of finding new financing methods for the administration and privatization of the primary and specialized medical care services it provides | Believed that virtual clinics, using primary medical services (clinical examinations, laboratory, radiology), organizing scientific conferences and training courses, and offering consulting services to companies would be a potential benefit for the medical centers and an area of privatization of services. Of note, respondents believed that the Revenue Development Project would contribute to increasing the employees' income and motivating them. That privatizing health services would increase their effectiveness, quality, and public satisfaction while enabling the government to perform its constitutional obligations. **Conclusions** These studies were satisfied with the medical services provided by the Medical Center and the potential application of the Revenue Development Project. However, the majority also believed that the UJ Medical Center is still being prepared for the Revenue Development Project at the current time. Future work should focus on how responsibility is applied and upheld in environments where it has never been performed. |
| **Puteh et al (2022) [24]** | Saudi Arabia | Qualitative | To assess qualitatively the benefits, barriers and factors associated with implementation of a national | The most considerable issue in the KSA for the implementation of NHI is the lack of awareness in Saudi society, lack of rare specialtie and genetic, lack of technical staff, Lack of qualified cadres, poor understanding of minority population about insurance, and weak knowledge about the benefits of the healthcare |

| | | | | |
|---|---|---|---|---|
| | | | health insurance (NHI) in Saudi Arabia | facilities. The respondents highlighted that lack of qualified national practitioners, insurance awareness among Saudi citizens, price disparities, the number of insurance companies, and the emergence of legal authorities with lack of awareness are potential barriers in the insurance industry. The research in Qassim highlighted that people in KSA are lack of skills and knowledge to adopt the insurance policy. Therefore, it hindered the implementation of NHI in the KSA.<br>**Conclusions**<br>The qualitative analysis produced four themes; Benefits of NHI implementation in KSA, barriers of NHI implementation, reduction of government cost on healthcare, and factors associated with implementation of NHI in KSA. Benefits, Barriers, Factors Associated with Future Implementation of National Health Insurance Qualitatively, to assess the benefits, barriers and factors associated with future implementation of a national health insurance (NHI) in Saudi Arabia. By considering the transcripts and the supporting articles, it examined that the implementation of NHI in the Saudi Arabia is the complicated process and management and ministries should work collaboratively to impose those policies in Saudi Arabia because lack of awareness among Saudi citizens, strong Islamic values that hindered them to accept the policies actively in Saudi Arabia. |

| | | | | |
|---|---|---|---|---|
| **Al-Hanawi. et al (2021), [25]** | Saudi Arabia | Quantitative. Concentration indices and concentration curves. Moreover, the Wag staff approach was used to decompose the concentration | To investigate and decompose factors that are associated with inequalities in relative OOP health expenditure, estimated as the percentage of income spent on healthcare, in Saudi Arabia. | Decomposition of the factors that contribute to this inequality revealed heterogeneity. Specifically, factors that increase the burden amongst the poor included aged above 60 years, and low levels of education, whereas factors that increase the burden amongst the rich included male gender, below the age of 60 years, secondary and higher education, having health insurance coverage, and suffering from chronic illnesses. Importantly, these results demonstrate that poor people might be exposed to hazardous health spending. Therefore, efforts to curbing OOP health expenditure should be framed by taking into account the specific factors that drive the burden towards the poor, such as older age and lack of education, so as to safeguard the overall welfare of the poor.<br>**Conclusion**<br>Decomposition analysis of inequalities in OOP health expenditure as a percentage of income provides valuable information that could be useful for health policymakers. The results drawn from employing Wag staff decomposition methods on data obtained from respondents in the KSA showed that although the contribution of various socioeconomic factors to inequality in relative OOP health expenditure is heterogeneously distributed between the rich and the poor, OOP health expenditure generally resulting in a greater burden for the poor. as population growth, elevated rate of preventable injuries, disparities in Saudi Health care System. |
| **Alharbi (2022) [26]** | Saudi Arabia | Quantitative. | To explore the people's willingness to pay for a National Health Insurance system in Saudi Arabia. The study also aims to understand the factors affecting their willingness or unwillingness to pay National Health Insurance. | That majority of Saudi citizens were willing to pay a monthly contribution for the National Health Insurance (NHI), if implemented, in return for a sustainable and improved quality of public healthcare services. Tis finding is consistent with previous studies that examined people's willingness to pay for NHI in Jeddah city in Saudi Arabia. Our study provides evidence that citizens from other regions were also in favor of a NHI. The type of usual source of healthcare and satisfaction with the current healthcare services were found to have significant impact on the willingness to pay for NHI. People who usually used private health facilities were less willing to pay for an NHI. Tis were probably because they already had a private health insurance through their employer, so they did not see the need for a NHI. In Saudi Arabia, the employers in the private sector are required by law to provide their employees with health insurance. |

| | | | | |
|---|---|---|---|---|
| | | | | **Conclusions**<br>This study provided some evidence that more people were willing to pay for NHI than those who declined. The factors that appeared to influence the willingness to pay and the amount of monthly payment. Individuals who frequently used public health services and were very satisfied with these services were more willing to pay for NHI. Younger population, those with master's degree and from the central region were willing to pay more amount of money for NHI. |

## Results and discussion

The usability and outcome of health insurance in Saudi Arabia are based on Vision 2030. 7 articles were selected that compliant with the theme of this present systematic review (Table 1). Among the 7 reviewed articles, articles have explained the current financial methods of the healthcare system in Saudi Arabia; articles assess the prospective role of CHI in achieving Vision 2030 goals in the healthcare system. Different health insurances system was explained in different articles, articles highlight the strengths and weaknesses of health insurance. Finally, articles have provided recommendations for Saudi health insurance practices.

Significance of NHI implementation in the KSA From the evaluation of the responses, proposed that insurance policies in the medical facilities are worthy to create an impact in the society and progressive to manage the financial burden of individuals and government by distributing the services equally among the individuals. However, only were against the NHI because of the strong Islamic values, where people avoid such acts and policies. The major benefits that repeatedly highlighted in this case include the benefits for the national economy, reduction in poverty and diseases, improved health standards, financial support for poo income group, and develop high solidarity and equality in society as clearly indicated below. [27] These should properly addressed in scheme design and implementation Health Insurance across to ensure proper attainment of scheme objectives and promote effective and equitable health systems. An overview of the factors influencing implementation, uptake and sustainability of Health Insurance is presented [28]

Our systematic review provides a much more global perspective than the Saudi Arabia alone as well as attempts to identify all factors implementation, enrollment, of already implemented .

The target population in the program includes both Saudi and non-Saudi workers engaged in the private sector, including their dependents. In accordance with the policy, it is mandatory for employers to obtain health insurance for their workers and dependents. Except for emergency cases and hospitalization, insured workers are required to pay the agreed-upon deductible amount, as applicable.[24] One of the few nations in the world that offers its residents free access to healthcare is Saudi Arabia.[29] Healthcare for non-Saudi nationals is primarily provided by the private sector and is either covered by the employer or the individual. Hospitals and primary care clinics received significant funding over the past 10 years, and as a result, the total amount of money spent by the public on healthcare has increased.[23]

The Saudi Vision 2030 is an ambitious growth plan with the main objective of changing its economy by the year 2030. In order to achieve this goal, the country announced an interim development plan called the National Transformation Program (NTP) that sets out strategic objectives for all key sectors of the economy including health. Among other things, vision 2030 envisaged a reduction in public spending through the efficient use of resources and greater participation of private players in different spheres.[30]

Furthermore, we Strategies of Challenges and Advantages of Implementation for Health Insurance in Saudi Arabia Impact on Annual Cost of Healthcare Sector Government is extremely concerned about the cost and advantage situation in the nation because they are accountable to offer various benefits to the citizens along with investing in the developed projects to create income. In this manner, the government evaluated that NHI would be supportive of them in the KSA to save the cost for healthcare facilities in future or not. For this purpose, the research examined this factor with the interviews and supporting articles to assist the government and NHI based authorities to deal with the cost processes and budget for health insurance in the KSA

## Conclusion

There are a multitude of interrelated factors in the strategies of Challenges and Advantages of Implementation for Health Insurance in Saudi Arabia at the individual, interpersonal, community and systems levels that drive the implementation and sustainability of Health Insurance schemes. These should be properly addressed in scheme design and implementation and harmonized across the different levels to ensure attainment of scheme objectives. Future research efforts should be directed towards conducting well-designed primary studies with

particular attention to recruitment strategy, use of validated tools, and control for potential confounding variables. Furthermore, more research is needed on how Health Insurance schemes could complement the broader health financing system to progress to Health Insurance.

## References


1. Al-Nozha, O. M. (2024). Key aspects of the Saudi healthcare system reform and the potential impact on the main stakeholders: A qualitative study. *Journal of Taibah University Medical Sciences*, *19*(3), 598-610.
2. Fusco, N., Sils, B., Graff, J. S., Kistler, K., & Ruiz, K. (2023). Cost-sharing and adherence, clinical outcomes, health care utilization, and costs: a systematic literature review. *Journal of managed care & specialty pharmacy*, *29*(1), 4-16.
3. World Health Organization. (2018). *A vision for primary health care in the 21st century: towards universal health coverage and the Sustainable Development Goals* (No. WHO/HIS/SDS/2018.15). World Health Organization.
4. Che, T., Li, J., Li, J., Chen, X., & Liao, Z. (2024). Long-term care needs and hospitalization costs with long-term care insurance: a mixed-sectional study. *Frontiers in public health*, *12*, 1226884.
5. Agarwal, R., Gupta, A., & Fendrick, A. M. (2018). Value-based insurance design improves medication adherence without an increase in total health care spending. *Health Affairs*, *37*(7), 1057-1064.
6. Cho, H., Byun, J. H., Song, I., Kim, H. Y., Ha, Y. C., Kim, T. Y., ... & Jang, S. (2018). Effect of improved medication adherence on health care costs in osteoporosis patients. *Medicine*, *97*(30), e11470.
7. Monaco, S. (2024). SDG 3. Ensure healthy lives and promote well-being for all at all ages. In *Identity, territories, and sustainability: Challenges and opportunities for achieving the UN Sustainable Development Goals* (pp. 33-41). Emerald Publishing Limited.
8. Fan, H., Yan, Q., Coyte, P. C., & Yu, W. (2019). Does public health insurance coverage lead to better health outcomes? Evidence from Chinese adults. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, *56*, 0046958019842000.
9. Wu, Y., Goldman, D. P., Lopez, J., McKenzie, S., & Goldman, D. P. (2016). Impact of type 2 diabetes medication cost sharing on patient outcomes and health plan costs. *Am J Manag Care*, *22*(6), 433-440.
10. Bergquist, S., & de Vaan, M. (2022). Hospitalizations reduce health care utilization of household members. *Health Services Research*, *57*(6), 1274-1287.
11. Liao, S., Jang, S., Tharp, J. A., & Lester, N. A. (2023). Relationship between medication adherence for opioid use disorder and health care costs and health care events in a claims dataset. *Journal of substance use and addiction treatment*, *154*, 209139.
12. Levine, D. M., Ouchi, K., Blanchfield, B., Saenz, A., Burke, K., Paz, M., ... & Schnipper, J. L. (2020). Hospital-level care at home for acutely ill adults: a randomized controlled trial. *Annals of internal medicine*, *172*(2), 77-85..
13. Bressman, E., Long, J. A., Honig, K., Zee, J., McGlaughlin, N., Jointer, C., ... & Morgan, A. U. (2022). Evaluation of an automated text message–based program to reduce use of acute health care resources after hospital discharge. *JAMA network open*, *5*(10), e2238293.
14. Hazazi, A., Wilson, A., & Larkin, S. (2022, November). Reform of the health insurance funding model to improve the care of noncommunicable diseases patients in Saudi Arabia. In *Healthcare* (Vol. 10, No. 11, p. 2294). MDPI.
15. Sajjad, R., & Qureshi, M. O. (2020). An assessment of the healthcare services in the Kingdom of Saudi Arabia: an analysis of the old, current, and future systems. *International Journal of Healthcare Management*, *13*(sup1), 109-117.
16. Arens, K. (2023). *Healthcare Innovation: Challenges and Strategies for Developing a Financially Sustainable Health Insurance Product for the Senior Market in Collaboration with AdvanceCare* (Master's thesis, Universidade Catolica Portuguesa (Portugal)).
17. Parker, E. D., Lin, J., Mahoney, T., Ume, N., Yang, G., Gabbay, R. A., ... & Bannuru, R. R. (2024). Economic costs of diabetes in the US in 2022. *Diabetes care*, *47*(1), 26-43.
18. Bressman, E., Long, J. A., Honig, K., Zee, J., McGlaughlin, N., Jointer, C., ... & Morgan, A. U. (2022). Evaluation of an automated text message–based program to reduce use of acute health care resources after hospital discharge. *JAMA network open*, *5*(10), e2238293.
19. Carlson, S., & Llobrera, J. (2022). *SNAP is linked with improved health outcomes and lower health care costs* (pp. 1-20). Washington, DC, USA: Center on Budget and Policy Priorities.
20. Puteh, S. E. W., Aizuddin, A. N., & Al Salem, A. A. (2022). Feasibility of National Health Insurance for Saudi healthcare services: qualitative study. *Inf Sci Lett*, *11*(2), 427-437.
21. Hazazi, A., Wilson, A., & Larkin, S. (2022, November). Reform of the health insurance funding model to improve the care of noncommunicable diseases patients in Saudi Arabia. In *Healthcare* (Vol. 10, No. 11, p. 2294). MDPI.

22. Althabaiti, K. S., Khan, J. S., Hunsberger, M. S., & Ahmed, S. (2024). Factors Influencing Health Insurance Enrollment and Its Impact on Outpatient Service Utilization in Saudi Arabia: Insights from the National Saudi Family Health Survey. *medRxiv*, 2024-10.
23. Tobaiqy, M., Alrefai, A., Qashqary, M. E., Al Sulami, R., & Aldahery, S. T. (2023, September). Privatization of Medical Services and Revenue Development Project: A Cross-Sectional Survey of Staff Perceptions at the University of Jeddah Medical Center. In *Healthcare* (Vol. 11, No. 18, p. 2540). MDPI.
24. Puteh, S. E. W., Aizuddin, A. N., & Al Salem, A. A. (2022). Feasibility of National Health Insurance for Saudi healthcare services: qualitative study. *Inf Sci Lett*, *11*(2), 427-437.
25. Al-Hanawi, M. K. (2021). Decomposition of inequalities in out-of-pocket health expenditure burden in Saudi Arabia. *Social Science & Medicine*, *286*, 114322.
26. Alharbi, A. (2022). Willingness to pay for a National Health Insurance (NHI) in Saudi Arabia: a cross-sectional study. *BMC Public Health*, *22*(1), 951.
27. Mårild, K., Söderling, J., Bozorg, S. R., Everhov, Å. H., Lebwohl, B., Green, P. H., ... & Ludvigsson, J. F. (2020). Costs and use of health care in patients with celiac disease: a population-based longitudinal study. *Official journal of the American College of Gastroenterology| ACG*, *115*(8), 1253-1263.
28. Murphy, P. L. B., Khavjou, M. O., Giles, M. W. H., Holt, P. J. B., & Croft, P. J. B. (2015). Total and state-specific medical and absenteeism costs of COPD among adults aged 18 years in the United States for 2010 and projections through 2020. *Chest*, *147*(1), 31-45.
29. Kalluri, M., Lu-Song, J., Younus, S., Nabipoor, M., Richman-Eisenstat, J., Ohinmaa, A., & Bakal, J. A. (2020). Health care costs at the end of life for patients with idiopathic pulmonary fibrosis. Evaluation of a pilot multidisciplinary collaborative interstitial lung disease clinic. *Annals of the American Thoracic Society*, *17*(6), 706-713.
30. Wei, Y. J., Hsieh, C. F., Huang, Y. T., Huang, M. S., & Fang, T. J. (2020). The influence of integrated geriatric outpatient clinics on the health care utilization of older people. *BMC geriatrics*, *20*(1), 379.