# Financial Management System in Pharmacy Practice: A New Initiative Project in Saudi Arabia

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ABSTRACT

Objectives: Financial pharmacy operations are integral in pharmacy management. It is necessary for strategic planning and aligns with Saudi Vision 2030. This theme aims to illustrate financial services in pharmacy operations as a new initiative in Saudi Arabia. Methods: Local and international accounting and finance organizations are driving this new project. It has been developed based on global business models, guidelines for pharmacy projects, and new guidelines for project operators. A project management expert designs this initiative. This effort will consist of several phases, from the initial stage through the planning, execution, monitoring, and control phases. Results: A pharmacy operation has a clear vision, mission, and financial goals. This service has many benefits, including increased profitability, effective financial management, and better patient care. In addition, a description of the risk management model ensures project continuity. We also discussed monitoring and controlling services. Finally, the analysis considers the transition to a production project up to the project's final phase. Conclusion: Pharmacy Operations Finance is a new initiative that should be part of the Saudi Vision 2030 Pharmacy Strategic Plan. Pharmacy finance requires a clear vision, guidelines, and longterm partnerships with financial institutions. In addition, financial aspects in pharmacy operations are critical to developing a proper pharmacist career plan focused on patient care, optimal profitability, and effective financial management.

Keywords: Financial, Pharmacy, Services, Initiative, Saudi Arabia.

# **INTRODUCTION**

The pharmacy service 1985 emphasized various services such as inpatient and outpatient pharmacy and financial services.<sup>1-6</sup> Despite the financial services discussed in the early 1990s, the detail focused on later was missed.<sup>1-3,7</sup> The justification for not being included during recent years was not clear. Clinical pharmacy services started very small but expanded dramatically during those days.<sup>3,6,8-32</sup> From 1985s to 2034s, almost more than thirty years, the financial sciences have been increasing rapidly, and currently, the financials become electronic features.<sup>3,6,8-32</sup> In the previous decade, most studies were simple without in-depth detail. The authors are unfamiliar with any in-depth research detail on financial services in pharmaceutical services.4,33-37 The current review aims to illustrate the financial assistance in pharmaceutical care as a new initiative in Saudi Arabia.

# **MATERIALS AND METHODS**

It is a new initiative project derived through international and national accounting and financial organizations, including the Saudi Central Bank, Capital Market Authority, Saudi Organization for Certified Public Accountants (SOCPA), American Institute of Certified Public Accountants (AICPA), American Accounting Association (AAA), The International Auditing and Assurance Standards Board (IAASB), The International Accounting Education Standards Board (IAESB), The International Ethics Standards Board (IESBA), The International Public Sector Accounting Standards Board (IPSASB)<sup>38-45</sup> and other works of literature.<sup>1-5,7,36,37,46-56</sup> The task force team of accounting in the pharmacy services formulated consisted of the author's expertise in pharmacy administration and accoutered practitioner. The committee unitized and drove the international and local literature from the accounting organization's guidelines and experiences. It was written by utilizing the global business model, pharmacy project guidelines, and project management institution guidelines of a new project.<sup>57-60</sup> Various project management professionals use tools to conduct the project. The project included multiple sections, such as the initial phase, the planning phase, the execution phase, and the monitoring and controlling phase.

### Initiative phase

#### Assessment needs

Each pharmaceutical care business should record all purchases and expenditures. That is called accountability or an accounting system.2,7,46,47,49 The accounting system is used for record-keeping and needs financial-related tools to analyze the accounting records.4,33,37,61,62 The analysis consists of each purchasing-related issue to ask the owner if the pharmacy business needs the materials and if the materials are at the appropriate cost. Each material the pharmacy business owner should utilize will otherwise lose money. The financial services must increase sales and profits by reviewing the accounting records. Various tools can be applied for analysts of accounting records, which can refer to another reference for more detail.4,37 The financial system must analyze the outcome of accounting records such as budget statements or balance sheets, income statements, and cash flow statements-the financial services must analyze all

previous statements to show the financial picture as positive or negative. The financial services need to know how much is required to expand the pharmacy business. Financial services need to find the best ways of money investment inside the current pharmacy business or outside it.

#### SWOT analysis

SWOT analysis is a standard tool for any new project analysis. The acronym SWOT stands for strengths, weaknesses, opportunities, and threats. The project's strengths include establishing Financial Pharmacy Practice, preventing hospital or community pharmacies from financial errors, Efficient financial processes, Compliance with Financial Regulations, and supporting many pharmacy activities and some Financial Pharmacy services Resources. The weak points require that the computer technology of Financial in Pharmacy services is absent for most predominantly healthcare facilities, Limited resources for training, and Limited financial analysis and forecasting capabilities. The opportunities align with Saudi Vision 2030,<sup>63-65</sup> the healthcare organization's Financial in Pharmacy program, and Increase sales and profits by expanding services and products. The threat point is the nonexistence of Financial in Pharmacy services and the unavailability of an administration planner.

#### Market Analysis

Accounting and financial management are two disciplines of one coin.<sup>48</sup> Any pharmacy business emphasizing the private sector will find financial services. However, most pharmaceutical care services at government facilities rarely find the accounting system and financial services. Thus, the financial assistance will be missed with missing the accounting system. However, most financial services will be available at private pharmaceutical care facilities.

### Planning phase

#### Scope of the project

The project focuses on pharmacy financial services. That includes planning, organizing, managing, and controlling financial resources with a variety of program facets such as pharmacy financial plan or budgeting, pharmacy financial analysis, revenue management, cost management, crisis management, competency and quality assurance of financial services as well as education and training for pharmacy staff and health care in practice.

#### Vision, Missions, Goals

The vision of the program or the project is to provide the best and highest quality pharmaceutical care financial services. The project aims to implement financial policies and procedures in pharmacy practice. The project's objectives are to increase financial services knowledge, tools, and skills. To increase profits and adherence to the financial standards in pharmaceutical care services. To educate and train the pharmaceutical care staff about financial systems in pharmacy facilities. To optimize product sales, manage and control costs and related issues, and optimize the pharmacy's financial performance and activities. Besides, they are implementing the electronic financial system with applications at pharmacy institutions, improving patient quality of life and increasing communication with pharmacies while avoiding unnecessary and additional costs on pharmacy and healthcare organizations.

#### Project description

The following policies and procedures have been implemented for each pharmacy department, associated distribution, and other healthcare professionals.

- The financial pharmacy in-house service must be implemented in the appropriate type of hospital or retail pharmacy organization.
- The pharmacy financial services committee must consist of the pharmacy director, the heads of each pharmacy department, pharmacy quality control, professional financial experts, and clinical pharmacists.

- The Pharmacy Financial Services Committee implements and updates the Pharmacy Financial Services Standards at least annually.
- The committee should provide education and training on pharmacy financial services to all pharmacy managers and related staff.
- Pharmacy Financial Services policies and procedures should be distributed across the healthcare areas of the organization.
- All pharmacists must record income, expenses, and other transactions through an electronic pharmacy financial system.
- All sales, including prescriptions, over-the-counter drugs, and health products, must be updated in line with the pharmacy's financial system.
- All financial statements, including income, cash flow, and financial statements, should be published regularly, and copies should be sent to all pharmacy managers.
- The Pharmacy Services Finance Committee should regularly revise financial reports and send recommendations to all pharmacy managers and senior management.
- Pharmaceutical care Services should measure the clinical outcomes of pharmacy financial services.
- Pharmaceutical care services need to calculate the economic performance of financial services in pharmacy services.

#### Plan cost management

The administration team should establish an economical budget for each new project, including the cost of Financial Pharmacy services education and instructional guides for pharmacists and support personnel, administration team meetings, and updated resources. The budget should be monitored until the project is completed and run.

### **Executing phase**

#### Management team

Professionals in project management took several steps. The executing phase was one of the foundation's steps. It had a team that led the project from the start until the operating systems were switched at the healthcare organization. The team comprised several individuals, including representatives from pharmacy administration, clinical pharmacist, distributive pharmacist, pharmacy informatics, pharmacy technician, medication safety officer, pharmacy risk management, financial personnel, and pharmacy quality management. The team is responsible for implementing and monitoring the new services and regularly updating key performance indicators. Additionally, the team should educate and train pharmacy staff and health care about the new pharmacy security and fire safety services and track the project's clinical and economic outcomes.

#### Education and training

Any newly founded program or project necessitates specific training and coaching for certain individuals. The education and training required for all pharmacy technicians, pharmacists, and clinical pharmacists. In addition to healthcare providers, healthcare facility administrators are required. The management team should provide orientation training for all pharmacy staff and healthcare professionals about the program or project. The orientation emphasis for all new workforce pharmacy staff and healthcare providers had been newly joining the financial in Pharmacy services. Any updates for the financial system or regulation should be provided. All education and training programs should based on financial institutions and regulations.<sup>1-3,53,53,7,43-45,47,49,54,56,61,66,67</sup>

### Monitoring and controlling phase

#### Project total quality management

Numerous tools are used to manage the total quantity with a new Financial in-pharmacy services project during the implementation phase and to reflect the impact. Among them were the balance-scored cards. The monitoring tools were divided into four sections: customer satisfaction, finance, internal processes, education, and innovation. Financial in Pharmacy services assessment was an example of an internal process. The outcome of Financial Pharmacy services may reflect the education and competency of clinical pharmacists, distributive pharmacists, and pharmacy technicians employed by the company as one of the pharmacy financial education types. The financial quality with process improvement and financial Standardization. Besides, Financial regulation and compliance calculate the cost avoidance of Financial Pharmacy services in the healthcare system. Besides, Pharmacy financial operations' Key Performance Indicators (KPIs), such as Inventory turnover, Return on investments, and Operating cost to sales, are used to measure and track pharmacy financial system performances. The fourth type was the customer type, which assessed patient satisfaction with the pharmacy financial system, including pharmaceutical product quality and price and customer services provided by clinical pharmacists, pharmacists, and pharmacy technicians employed by Financial in Pharmacy services. 3,36,37,42,61,68-70

### **Risk Management**

Numerous risks are considered, including those related to the schedule, scope, budget, personnel, technical, and quality risks. The project is primarily exposed to personnel, budget, technical, and quality risks.71,72 Personal threats adequately threatened the project due to a lack of trained Financial in Pharmacy services and support personnel. The budget risks such as inventory management (overstocking or understocking), Billing and Refund Risk, and prices underestimated or overestimated risks, and it does not cover all pharmacy staff education and training risks. Additionally, there is a technical risk that may be exposed. The technical aspect is limited to electronic resources or a computer system that is not user-friendly in pharmacy practice. Finally, the project may face quality risks due to the absence of Financial Pharmacy services tools, inexperienced personnel, and non-compliance with laws related to financial management. The pharmacist can manage quality through Regular Audits and Monitoring of Financial Transactions.<sup>4,37,61</sup> All risk management needs to set plans for all types of risk pharmaceuticals, financial threads, economic downturns, and natural disasters. All risks are to be covered by health insurance and regular updating and monitoring of financial risk in pharmacy practice.<sup>4</sup>

#### Closing of the project

All hospital and community pharmacies should have the Financial in Pharmacy services for all public and private healthcare organizations. That ensures high-quality services from Financial Pharmacy services, prevents Financial Pharmacy services errors that result in disturbances and incidents, and alleviates economic strain on the pharmacy and healthcare systems in Saudi Arabia, including hospitals and primary healthcare centers. The project should be continued at Financial in Pharmacy services on a pharmacy-by-pharmacy basis, with oversight provided by relevant committees. Financial Pharmacy services should be updated regularly, and activities should be expanded in the future. The annual Financial in Pharmacy services and pharmacy personnel meeting in Saudi Arabia, including clinical pharmacists, distributor pharmacists, and pharmacy technicians, is highly recommended.

# **CONFLICT OF INTEREST**

The authors declare that there is no conflict of interest.

# **CONSENT FOR PUBLICATIONS**

Informed consent was obtained from all the participants.

# **ETHICAL APPROVAL**

This research was exempted from research and ethical committee or an institutional review board (IRB) approval.

https://www.hhs.gov/ohrp/regulations-and-policy/decisioncharts-2018/index.html

# ABBREVIATIONS

**KSA:** Kingdom of Saudi Arabia; **SOCPA:** Saudi Organization for Certified Public Accountants; **AICPA:** American Institute of Certified Public Accountants; **AAA:** American Accounting Association; **IAASB:** The International Auditing and Assurance Standards Board; **IAESB:** The International Accounting Education Standards Board; **IESBA:** The International Ethics Standards Board; **IPSASB:** The International Public Sector Accounting Standards Board; **KPI:** Key Performance Indicator.

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# REFERENCES

- Thielke TS, Charlson JT, Heckethorn D. Determining drug dispensing costs for use in cost-accounting systems. Am J Hosp Pharm. 1988;45:844-7.
- Gouveia WA, Anderson ER, Decker EL, Backer K. Design and implementation of a cost-accounting system in hospital pharmacy. Am J Hosp Pharm. 1988; 45(3):613-20.
- Vinson BE. Adjustments of distributive and clinical pharmacy services to financial constraints. Am J Hosp Pharm. 1988;45:847-51.
- Saikami D. Financial risk management of pharmacy benefits. American Journal of Health-System Pharmacy. 1997;54(19):2207-12.
- Suver JD, Cooper JC. Principles and methods of managerial cost-accounting systems. Am J Hosp Pharm. 1988;45(1):146-52.
- Crawford SY. ASHP national survey of hospital-based pharmaceutical services-1990. Am J Hosp Pharm [Internet]. 1990;47(12):2665-95. Available from: https://academic.oup.com/ajhp/article/47/12/2665/5181789
- 7. J. Richard Wuest SS. Pharmacy Use of the Shared Hospital Accounting System. Am J Hosp Pharm. 1975;32:846-9.
- Cr SY, Wvford /. ARTICLE ASHP national survey of hospital-based pharmaceutical services-1990 [Internet]. 1990. Available from: https://academic.oup.com/ajhp/ article/47/12/2665/5181789
- Santell JP. ASHP national survey of hospital-based pharmaceutical services -1994. American Journal of Health-System Pharmacy [Internet]. 1995; 52(11):1179-98.Availablefrom:https://academic.oup.com/ajhp/article/52/11/1179/ 5093550
- 10. Pedersen CA, Schneider PJ, Scheckelhoff Craig A Pedersen DJ, Andry J, Belle-baum K, Bussard B, et al. ASHP National Survey of Pharmacy Practice in Hospital Settings: Monitoring and Patient education-2003 The assistance of the Section of Pharmacy Practice Managers Executive Committee, the staff of ASHP, and the pharmacy directors who participated in the survey is acknowledged. Am J Health-Syst Pharm.
- Knapp KK, Okamoto MP, Black BL. ASHP survey of ambulatory care pharmacy practice in health systems - 2004. American Journal of Health-System Pharmacy. 2005;62(3):274-84.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. Ashp National survey of pharmacy practice in hospital settings: Prescribing and transcribing—2004. American Journal of Health-system Pharmacy [Internet]. 2005;62(4):378-90. Available from: https://insights.ovid.com/american-health-system-pharmacy/ajhp/2005/02/150/ ashp-national-survey-pharmacy-practice-hospital/16/00043627
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Dispensing and administration - 2005. Vol. 63, American Journal of Health-System Pharmacy. American Society of Health-Systems Pharmacy; 2006:327-45.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Dispensing and administration - 2008. American Journal of Health-System Pharmacy. 2009;66(10):926-46.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Monitoring and patient education - 2009. Vol. 67, American Journal of Health-System Pharmacy. American Society of Health-Systems Pharmacy; 2010:542-58.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Monitoring and patient education - 2003. Vol. 61, American Journal of Health-System Pharmacy. 2004:457-71.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP National Survey of Pharmacy Practice in hospital settings: Monitoring and patient education-2006.

#### Alomi, et al.: Financial Management System in Pharmacy Practice: A New Initiative Project in Saudi Arabia

American Journal of Health-System Pharmacy. 2007;64(5):507-20.

- Pedersen CA, Schneider PJ, Santell JP, Kelly EJ. ASHP National Survey of Pharmacy Practice in Acute Care Settings: Monitoring, patient education, and wellness-2000. American Journal of Health-System Pharmacy. 2000;57(23):2171-87.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP National Survey of Pharmacy Practice in hospital settings: Monitoring and patient education-2015. American Journal of Health-System Pharmacy. 2016;73(17):1307-30.
- Pedersen CA, Schneider PJ, Ganio MC, Scheckelhoff DJ. ASHP National Survey of Pharmacy Practice in Hospital Settings: Monitoring and patient education-2018. American Journal of Health-System Pharmacy. 2019;76(14):1038-58.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Monitoring and patient education - 2012. American Journal of Health-System Pharmacy. 2013;70(9):787-803.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Monitoring and patient education - 2009. Vol. 67, American Journal of Health-System Pharmacy. American Society of Health-Systems Pharmacy; 2010:542-58.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Prescribing and transcribing-2016. American Journal of Health-System Pharmacy. 2017;74(17):1336-52.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Dispensing and administration - 2014. American Journal of Health-System Pharmacy. 2015;72(13):1119-37.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Prescribing and transcribing - 2013. American Journal of Health-System Pharmacy. 2014;71(11):924-42.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Dispensing and administration - 2014. American Journal of Health-System Pharmacy. 2015;72(13):1119-37.
- Schneider PJ, Pedersen CA, Scheckelhoff DJ. ASHP National Survey of pharmacy practice in hospital settings: Dispensing and administration-2017. American Journal of Health-System Pharmacy. 2018;75(16):1203-26.
- Schneider PJ, Pedersen CA, Scheckelhoff DJ. ASHP National Survey of pharmacy practice in hospital settings: Dispensing and administration-2017. Vol. 75, American Journal of Health-System Pharmacy. American Society of Health-Systems Pharmacy; 2018:1203-26.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Dispensing and administration - 2014. American Journal of Health-System Pharmacy. 2015;72(13):1119-37.
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Dispensing and administration - 2011. American Journal of Health-System Pharmacy. 2012;69(9):768-85.
- Schneider PJ, Pedersen CA, Ganio MC, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: Workforce - 2018. Vol. 76, American Journal of Health-System Pharmacy. 2019:1127-42.
- Pedersen C, Pharm, Schneider P, Scheckelhoff D, Pedersen. ASHP National survey of pharmacy practice in hospital settings: Prescribing and transcribing—2016. Am J Health Syst Pharm. 2017;74:411-27.
- Financial Training Australia. Glossary Of Financial and Accounting Terms [Internet]. [cited 2023 Aug 7]. Available from: finanacialtrainingaustralia.com
- Becker FG, Cleary M, Team RM, Holtermann H, The D, Agenda N, et al. An Introduction to Accounting and Financial Management. Health Administration Press. 2005:1-623.
- Bautista AGM. Financial Management of Pharmacies in the City of Cabanatuan, Philippines. International Journal of Advanced Engineering, Management and Science. 2020;6(8):405-13.
- Doucette WR, Mcdonough RP, Mormann MM, Vaschevici R, Urmie JM, Patterson BJ. Three-year financial analysis of pharmacy services at an independent community pharmacy. Journal of the American Pharmacists Association. 2012;52(2):181-7.
- Imani A, Janati A, Moghimi M, Golestani M, Doshmangir L. Identification of indicators for evaluating the financial and economic performance of the pharmacy: A systematic review [internet]. Pharm Sci. 2015;21(2):111-24. doi: 10.15171/PS.2015.25.
- SAMA. Saudi Central Bank. 2022 [cited 2023 23 May]; (M). Available from: https://www.sama.gov.sa/en-us/pages/default.aspx.
- Capital Market Authority. 2021 [cited 2023 23 May]; Available from: https://cma. org.sa/en/AboutCMA/Pages/AboutCMA.aspx
- SOCPA. Media Center. 2022 [cited 2023 May 23]. Saudi Organization for Certified Public Accountants. Available from: https://www.socpa.org.sa/Home.aspx
- IAASB. Handbook of International Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements. 2020;1.
- 42. International Auditing and Assurance Standards Board. International Auditing and Assurance Standards Board Handbook of International Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements 2020 Edition. 2020;3.

- IES. International Education Standard 3, Initial Professional Development -Professional Skills (Revised). International Accounting Education Standards Board. 2019.
- Board IAES. International Education Standard les 4 Professional Values, Ethics and Attitudes. 2005:52-7.
- IAESB. International Education Standard 8, Professional Competence for Engagement Partners Responsible for Audits of Financial Statements (Revised). 2019.
- Rischbieth A, Serafeim G, Trinh K. Accounting for Product Impact in the Pharmaceuticals Industry. 2021; 21-139. Harvard Business School.
- Eldenburg LG, Krishnan HA, Krishnan R. Management Accounting and Control in the Hospital Industry: A Review. Journal of Governmental and Nonprofit Accounting. 2017;6(1):52-91.
- Becker FG, Cleary M, Team RM, Holtermann H, The D, Agenda N, *et al.* An Introduction to Accounting and Financial Management. Health Administration Press. 2005:1-623.
- Directorate of Studies, Fundamentals of Accounting. Study Notes. The Institute of Cost Accountants of India. 2014.
- Ekasari K, Mustofa A, Kusmintarti A. Evaluation Of Accounting Information Systems Based on Open-ERP At Pharmacy : A Case Study. International Journal of Economics, Management, Business and Social Science. 2021;1(3):288-94.
- Mustofa A, Ekasari K, Kusmintarti A. Implementation of inventory accounting systems at pharmacy (Case Study at Tirta Pharmacy). International Journal of Economics, Management, Business, and ocial Science. 2021;2021(2):153–60.
- 52. McLean RA, Garis RI. Accounting principles, revenue recognition, and the profitability of pharmacy benefit managers. Research in Social and Administrative Pharmacy. 2005;1(1):118-25.
- 53. Lubis CW, Lubis NI, Muda I. The production cycle in the pharmaceutical sub-sector: Traditional vs digital accounting information systems era and implementation of internal control procedures that enable cost savings in dealing with threats in the cycle. J Pharm Negat Results. 2022;13(7):3522-32.
- Al-Arifi MN. The Managerial Role of Pharmacist at Community Pharmacy Setting in Saudi Arabia. Pharmacology & Pharmacy. 2013;04(01):63-70.
- 55. Ekasari K, Mustofa A, Kusmintarti A. Evaluation Of Accounting Information Systems Based on Open-ERP At Pharmacy: A Case Study. International Journal of.[Internet]. 2021;1(3):288-94. Available from: https://cvodis.com/ ijembis/index.php/ijembis/article/view/32%0Ahttps://cvodis.com/ijembis/index. php/ijembis/article/download/32/31
- Ravikumar A, Balushi A Al, Bulushi Y Al. P harmacists ' perception on the use of Accounting Information System for Pharmacy Management : A study in. J Pharm Negat Results. 2022;13(3):769-76.
- McDonough R. Writing a Business Plan for a New Pharmacy Service. Vol. 23, The Dynamics of Pharmaceutical Care: Enriching Patients' Health. 2010.
- Harris IM, Baker E, Berry TM, Halloran MA, Lindauer K, Ragucci KR, et al. Developing a Business-Practice Model for Pharmacy Services in Ambulatory Settings. Pharmacotherapy. 2008;28(2):7e-34e.
- Sachdev G. Sustainable business models: Systematic approach toward successful ambulatory care pharmacy practice. American Journal of Health-System Pharmacy. 2014;71(16):1366-74.
- PMBOK Guide. A Guide to the Project Management Body of Knowledge. Sixth Edit. Project Management Institute, Inc.; 2017.
- Becker FG, Cleary M, Team RM, Holtermann H, The D, Agenda N, et al. Healthcare Finance [Internet]. Vol. 7, Syria Studies. 2015:37-72. Available from: https://www.researchgate.net/publication/269107473\_What\_is\_governance/ link/548173090cf22525dcb61443/download%0Ahttp://www.econ.upf. edu/~reynal/Civil wars\_12December2010.pdf%0Ahttps://think-asia.org/ handle/11540/8282%0Ahttps://www.jstor.org/stable/41857625
- Lopez-Rico I, Vives R, Cruel M, Cerdan C, Moron-Besolí A, Ruiz MA, et al. Financial impact of the hospital pharmacy's participation in clinical trials. European Journal of Hospital Pharmacy. 2021;28(e1):E185-90.
- Government of Saudi Arabia. Saudi Arabia Vision 2030 [Internet]. 2016. Available from: https://vision2030.gov.sa/sites/default/files/report/Saudi\_Vision 2030\_EN\_2017.pdf
- Alomi YA. New Pharmacy Model for Vision 2030 in Saudi Arabia. J Pharm Practice Community Med. 2017;3(3).
- 65. Saudi Arabia's Vision 2030. National Transformation Program 2020. 2017;
- Adunlin G, Pan K. Pharmacy Students' Attitudes and Perceptions toward Financial Management Education. Healthcare (Switzerland). 2022;10(4):1-17.
- Osterwalder A, Pigneur Y, Smith A, Movement T. Business Model Generation. 2009:1-281.
- Saudi Central Board for Accreditation of Healthcare Institutions. National Hospital Standards. Third edit. Saudi Central Board for Accreditation of Healthcare Institutions; 2016.

### Alomi, et al.: Financial Management System in Pharmacy Practice: A New Initiative Project in Saudi Arabia

- International Auditing and Assurance Standards Board. International Auditing and Assurance Standards Board Handbook of International Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements 2020 Edition. 2020;2.
- 71. Ray S. The Risk Management Process in Project Management Project Manager.

com. ProjectManager. 2017.

 Kaplan RS, Mikes A. Harvard Business Review. 2012 [cited 2020 Mar 15]. Managing Risks: A New Framework. Available from: https://hbr.org/2012/06/ managing-risks-a-new-framework