Accounting and Financial in Pharmacy Practice: Education and Training

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ABSTRACT

Objectives: To explore the accounting and financial system education and training in pharmacy practice as a new initiative in Saudi Arabia. Methods: It was a narrative review of accounting and financial policy and procedures in pharmacy practice. Litterateur searched various databases, including PubMed, Medline, and Google Scholar. The search period is from the 1960s until 15 October 2023. The term is in full-text English and includes Case Reports, Classical Articles, Clinical Conferences, Clinical Studies, Clinical Trials, Evaluation Studies, Government Publications, Guidelines, Meta-Analysis, Observational Studies, Practice Guidelines, Randomized Controlled Trials, Reviews, Systematic Reviews, with Humans subject. All hospital or community pharmacy services are included in a search term. Besides, the National and international guidelines of general infection control in hospital practice. The committee of pharmacy accounting policy and procedures formulated and consisted of various expert members. That includes clinical pharmacists, accountant specialists, and financial experts. The guidelines of the policy draft by one member by the second member were reviewed and corrected. The third revision was by the accountant specialist. The topic emphasizes the accounting system education and training in pharmacy practice of the Pharmacy policy. Results: The Pharmacy Infection control policy of the Research Education and Training consisted of various items. That has included program objectives, admission requirements, teaching and education methodology, and Pharmacy infection control Education and Training steps in pharmacy practice. The research education and training contained five models. For instance, accounting and financial cycle, pharmacy financial position statement analysis, and managerial accounting. Besides, the pharmacy feasibility studies, pharmacy accounting, and financial quality management. Each model describes the Module description, Learning Objectives, Module Outlines, and Competency items. Conclusion: The accounting and financial system education and training in pharmacy practice is a new initiative for pharmacy career professionals. It will improve pharmacy accounting and financial system skills and encourage pharmacist compliance with accounting and financial system regulations in different pharmacies in various healthcare organizations. Therefore, the accounting and financial system education and training policy and procedures are necessary for the pharmacy system in Saudi Arabia.

Keywords: Accounting, Financial, Policy, Pharmacy, Education, Training, Saudi Arabia.

INTRODUCTION

The pharmacist is critical in reducing morbidity and mortality in the healthcare setting.[1-6] Besides, saving costs avoids unnecessary economic burdens on the healthcare system and pharmacy setting.^[7-11] Those outcomes came due to comprehensive education and training. One of the essential parts of pharmacy accounting and financial branches is education and training. The pharmacist needs various topics in that field, including inventory management, preparation of an annual budget, and cost of sold products of medications or medical supplies.[12-14] Besides, financial analysis of hospital and community pharmacy systems and standardized pharmacy accounting and financial management compliance.[14-22]

The pharmacy schools and associations should provide basic information about pharmacy accounting and financial aspects such as inventory management and annual position statements.

Additional certifications in accounting and finance in pharmacy practice include advanced topics such as financial statements and related analysis, financial risk management, and pharmacy health insurance. That's knowledge highly probable to increase pharmacy revenue and avoid unnecessary expenses with more efficient financial accounting and budgeting.^[12-22] Despite various training and educational tools on accounting and financial policies and procedures required for pharmacy practice. The topic is rarely published locally or internationally.^[12,13,17,19-34] Education and training policies and procedures apply to all individuals, not pharmacists precisely.^[15,16,18,35-39] In addition, the authors were unaware of publications regarding education and training policies and procedures for accounting and financial pharmacists. The current review describes education and training in accounting and financial policies and procedures in pharmacy practice.

METHODS

It is a narrative review of Financial and accounting in pharmacy practice. The literature search was performed using PubMed, Medline, and Google Scholar databases about specific pharmacy practice accounting and financial system topics. The search period was from the 1960s until 15 May 2023. The searched terms were in full-text English. They included Full text, Case Reports, Classical Articles, Clinical Conferences, Clinical Studies, Clinical Evaluation Studies, Government Trials. Publications, Guidelines, Meta-Analysis, Observational Studies, Practice Guidelines, Randomized Controlled Trials, Reviews, Systematic Reviews, Humans, in the English language. The pharmacy services included inpatient, outpatient, or ambulatory care pharmacy, satellite pharmacy, extemporaneous preparation, repackaging units, pharmacy store, drug information center, and clinical pharmacy services. Moreover, the national and international guidelines of general accounting and financial practice emphasizing at pharmacy and healthcare setting were used as guides for writing the review.[12,13,17,19-34] That's including guidelines from 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).^[15,16,18,35-39] The pharmacy accounting Financial committee and comprises accountants, financial experts, and clinical pharmacists. Some authors drafted the policy guidelines, and other authors reviewed them. The accountant specialist revised the draft. The policy included topics in the accounting cycle, Feasibility studies in a pharmacy environment, pharmacy financial statements including income list, cash flow, budget sheet or balance sheet, electronic applications of accounting and financial in n pharmacy setting, quality of pharmacy Financial and accounting, competency of pharmacy Financial and accounting, and education and training of pharmacy Financial and accounting. The current topic emphasizes accounting system education and training in pharmacy practice. The Appraisal of Guidelines, Research, and Evaluation (AGREE) guided the reporting of the results of this review.^[40]

The search term methodology was done as follows:

Search: (pharmacy[Title/Abstract]) AND (Financial[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Title/Abstract] AND "Financial" [Title/Abstract]) AND ((casereports[Filter] classicalarticle[Filter] OR OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: (pharmacy[Text Word]) AND (Financial[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Text Word] AND "Financial" [Text Word]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference [Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] governmentpublication[Filter] OR OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: (pharmacy[MeSH Terms]) AND (Financial[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

(("pharmacy" [MeSH Terms] OR "pharmacies" [MeSH Terms]) AND "economics" [MeSH AND Terms]) ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

Financial[MeSH Terms]: «economics»[MeSH Terms]

Search: (pharmacist[Title/Abstract]) AND (Financial[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacist" [Title/Abstract] AND "Financial" [Title/Abstract]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: (pharmacist[Text Word]) AND (Financial[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacists" [MeSHTerms] AND "economics" [MeSH Terms]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacist[MeSH Terms]: «pharmacists»
[MeSH Terms]

Financial[MeSH Terms]: «economics»[MeSH Terms]

Search: (pharmacy[Title/Abstract]) AND (accounting[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

accounting[MeSH Terms]: «accounting» [MeSH Terms]

Search: (pharmacist[Title/Abstract]) AND (accounting[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacist" [Title/Abstract] AND "accounting" [Title/Abstract]) AND ((casereports[Filter] classicalarticle[Filter] OR OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudv[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: (pharmacist[Text Word]) AND (accounting[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication,

Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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(accounting[MeSH Terms]) Filters: Full text, (accounting[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacists" [MeSHTerms] AND "accounting" [MeSH Terms]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudv[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacist[MeSH Terms]: «pharmacists»
[MeSH Terms]

accounting[MeSH Terms]: «accounting» [MeSH Terms]

Search: (pharmaceutical care[Title/Abstract]) AND (accounting[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: (pharmaceutical care[Text Word]) AND (accounting[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmaceutical care" [Text Word] AND "accounting"[Text Word]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Search: (pharmaceutical care[MeSH Terms]) AND (accounting[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmaceutical services" [MeSH Terms] AND "accounting" [MeSH Terms]) AND ((casereports[Filter] OR classicalarticle[Filter] clinicalconference[Filter] OR OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmaceutical care[MeSH Terms]:
 «pharmaceutical services»[MeSH Terms]
 accounting[MeSH Terms]: «accounting»
 [MeSH Terms]

Search: (pharmacy[Title/Abstract]) AND (accounting cycle[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government

Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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Translations

accounting: «account»[All Fields] OR «accounted»[All Fields] OR «accounting» [MeSH Terms] OR "accounting"[All Fields] OR "accountings"[All Fields] OR "accounts"[All Fields]

Search: (pharmacy[Text Word]) AND (accounting cycle[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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Translations

accounting:«account»[All Fields]OR«accounted»[All Fields]OR«accounting»[MeSH Terms]OR"accounting"[All Fields]OR "accountings"[AllFields]OR "accounts"[All Fields]

Search: (pharmacy[MeSH Terms]) AND (accounting cycle[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

((pharmacy[MeSH Terms]) AND (accounting cycle[MeSH Terms])) AND ((casereports classicalarticle[Filter] [Filter] OR OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

Warnings

(pharmacy[MeSH Terms]) AND (accounting cycle[MeSH Terms])

Term not found: cycle

Search: (pharmacist[Title/Abstract]) AND (accounting cycle[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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Translations

accour	ting:	«account	»[All	Fields]
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«accounting»[MeSH Terms] OR "accounting"[All Fields] OR "accountings"[All Fields] OR "accounts"[All Fields]

Search: (pharmacist[Text Word]) AND (accounting cycle[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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Translations

accounting:«account»[All Fields]OR«accounted»[All Fields]OR«accounting»[MeSH Terms]OR"accounting"[All Fields]OR "accountings"[AllFields]OR "accounts"[All Fields]

Search: (pharmacist[MeSH Terms]) AND (accounting cycle[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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Translations

pharmacist[MeSH Terms]: «pharmacists»
[MeSH Terms]

Warnings

(pharmacist[MeSH Terms]) AND (accounting cycle[MeSH Terms])

Term not found: cycle

Search: (pharmaceutical care[Title/ Abstract]) AND (accounting cycle[Title/ Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English ("pharmaceutical care" [Title/Abstract] AND (("account" [All Fields] OR "accounted" [All Fields] OR "accounting" [MeSH Terms] OR "accounting" [All Fields] OR "accountings" [All Fields] OR "accounts" [All Fields]) AND "cycle" [Title/Abstract])) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

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Search: (pharmaceutical care[Text Word]) AND (accounting cycle[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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Translations

accounting:«account»[AllFields]OR«accounted»[AllFields]OR«accounting»[MeSHTerms]OR"accounting"[AllFields]OR "accountings"[AllFields]OR "accounts"[AllFields]

Search: (pharmaceutical care[MeSH Terms]) AND (accounting cycle[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

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Translations

pharmaceutical care[MeSH Terms]: «pharmaceutical services»[MeSH Terms]

Warnings

(pharmaceutical care[MeSH Terms]) AND (accounting **cycle**[MeSH Terms])

Term not found: cycle

Search: ((pharmacy[Title/Abstract]) AND (accounting[Title/Abstract])) AND (Saudi[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy"[Title/Abstract] AND "accounting" [Title/Abstract] AND "Saudi"[Title/ Abstract]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[Text Word]) AND (accounting[Text Word])) AND (saudi[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English ("pharmacy" [Text Word] AND "accounting" [Text Word] AND "saudi" [Text Word]) AND ((casereports[Filter] OR classicalarticle[Filter] clinicalconference[Filter] OR OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[MeSH Terms]) AND (accounting cycle[MeSH Terms])) AND (saudi[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

(((pharmacy[MeSH AND Terms]) (accounting cycle[MeSH Terms])) AND (saudi[MeSH Terms])) AND ((casereports[Filter] OR classicalarticle[Filter] clinicalconference[Filter] OR OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

Warnings

((pharmacy[MeSH Terms]) AND (accounting cycle[MeSH Terms])) AND (saudi[MeSH Terms])

Terms not found: cycle, Saudi.

Search: ((pharmacy[Title/Abstract]) AND (Financial[Title/Abstract])) AND (saudi [Title/Abstract])) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Title/Abstract] AND "Financial" [Title/Abstract] AND "saudi" [Title/ AND Abstract]) ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[Text Word]) AND (Financial[Text Word])) AND (saudi[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English ("pharmacy" [Text Word] AND "Financial" [Text Word] AND "saudi" [Text Word]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[MeSH Terms]) AND (Financial[MeSH Terms])) AND (saudi[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational

Study, Practice Guideline, Randomized

Controlled Trial, Review, Systematic Review, Humans, English

(((pharmacy[MeSH Terms]) AND (Financial [MeSH Terms])) AND (saudi[MeSH AND Terms])) ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

Financial[MeSH Terms]: «economics»[MeSH Terms]

Warnings

((pharmacy[MeSH Terms]) AND (Financial[MeSH Terms])) AND (saudi[MeSH Terms])

Term not found: Saudi

Search: ((pharmacy[Title/Abstract]) AND (accounting[Title/Abstract])) AND (policy[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Title/Abstract] AND "accounting" [Title/Abstract] AND "policy" [Title/ Abstract]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[Title/Abstract])

AND (accounting[Title/Abstract])) AND (procedure[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized

Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Title/Abstract] AND "accounting" [Title/Abstract] AND "procedure" [Title/ Abstract]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[Title/Abstract]) AND (Financial[Title/Abstract])) AND (policy[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Title/Abstract] AND "Financial" [Title/Abstract] AND "policy" [Title/ ((casereports[Filter] Abstract]) AND OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[Text Word]) AND (Financial[Text Word])) AND (policy[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English ("pharmacy" [Text Word] AND "Financial" [Text Word] AND "policy"[Text Word]) AND ((casereports[Filter] OR classicalarticle[Filter] clinicalconference[Filter] OR OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR

systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[MeSH Terms]) AND (Financial[MeSH Terms])) AND (policy[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

(("pharmacy" [MeSH Terms] OR "pharmacies" [MeSH Terms]) AND "economics" [MeSH Terms] AND "policy" [MeSH Terms]) AND ((casereports[Filter] OR classicalarticle[Filter] clinicalconference[Filter] OR OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

Financial[MeSH Terms]: «economics»[MeSH Terms]

policy[MeSH Terms]: «policy»[MeSH Terms] Search: ((pharmacy[Title/Abstract]) AND (Financial[Title/Abstract])) AND (procedure [Title/Abstract])) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Title/Abstract] AND "Financial" [Title/Abstract] AND "procedure" [Title/ Abstract]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[Title]) AND (Financial[Title])) AND (procedure[Text Word]) Filters: Full text, Case Reports,

Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English ("pharmacy" [Title] AND "Financial" [Title] AND "procedure" [Text Word]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[MeSH Terms])

AND (Financial[MeSH Terms])) AND (procedure[MeSH Terms])) AND (procedure[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

(("pharmacy" [MeSH Terms] OR "pharmacies" [MeSH Terms]) AND "economics" [MeSH Terms] AND "methods" [MeSH Terms]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

Financial[MeSH Terms]: «economics»[MeSH Terms]

procedure[MeSH Terms]: «methods»[MeSH
Terms]

Search: ((pharmacy[Text Word]) AND (accounting[Text Word])) AND (policy[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Text Word] AND "accounting" [Text Word] AND "policy" [Text Word]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[Text Word]) AND (accounting[Text Word])) AND (procedure[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Text Word] AND "accounting" [Text Word] AND "procedure" [Text Word]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[MeSH Terms]) AND (accounting[MeSH Terms])) AND (policy[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

(("pharmacy" [MeSH Terms] OR "pharmacies" [MeSH Terms]) AND "accounting"[MeSH Terms] AND "policy" [MeSH Terms]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

accounting[MeSH Terms]: «accounting» [MeSH Terms]

policy[MeSH Terms]: «policy»[MeSH Terms] Search: ((pharmacy[MeSH Terms]) AND (accounting[MeSH Terms])) AND (procedure[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

(("pharmacy" [MeSH Terms] OR "pharmacies" [MeSH Terms]) AND "accounting" [MeSH Terms] AND "methods" [MeSH Terms]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

accounting[MeSH Terms]: «accounting» [MeSH Terms]

procedure[MeSH Terms]: «methods»[MeSH
Terms]

Search: ((pharmacy[Title/Abstract]) AND (Accounting[Title/Abstract])) AND (education[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Title/Abstract] AND "Accounting" [Title/Abstract] AND "education" [Title/ Abstract]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[Text Word])) AND (Accounting[Text Word])) AND (education[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Text Word] AND "Accounting" [TextWord]AND"education"[TextWord])AND ((casereports[Filter] OR classicalarticle[Filter] clinicalconference[Filter] OR OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) ((pharmacy[MeSH Search: Terms]) AND (Accounting[MeSH Terms])) AND (education[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

(("pharmacy" [MeSH Terms] OR "pharmacies" [MeSH Terms]) AND "accounting" [MeSH Terms] AND ("educational status" [MeSH Terms] OR "education" [MeSH Terms])) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR OR governmentpublication[Filter] guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

Accounting[MeSH Terms]: «accounting» [MeSH Terms]

education[MeSH Terms]: «educational status» [MeSH Terms] OR "education"[MeSH Terms]

Search: ((pharmacy[Title/Abstract]) AND (Accounting[Title/Abstract])) AND (training[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Title/Abstract] AND "Accounting" [Title/Abstract] AND "training" [Title/ Abstract]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[Text Word]) AND (Accounting[Text Word])) AND (training[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Text Word] AND "Accounting" [Text Word] AND "training" [Text Word]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) ((pharmacy[MeSH Terms]) Search: AND (Accounting[MeSH Terms])) AND (training[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

(("pharmacy" [MeSH Terms] OR "pharmacies" [MeSH Terms]) AND "accounting" [MeSH Terms] AND "education" [MeSH Terms]) AND ((casereports [Filter] OR classicalarticle [Filter] OR clinical conference [Filter] OR clinical study [Filter] OR clinical trial [Filter] ORevaluationstudy[Filter]ORgovernmentpublication[Filter]ORguideline[Filter]ORORobservationalstudy[Filter]ORpracticeguideline[Filter]ORrandomizedcontrolledtrial[Filter]ORreview[Filter]ORsystematicreview[Filter])AND(fft[Filter])AND (humans[Filter])AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

Accounting[MeSH Terms]: «accounting» [MeSH Terms]

training[MeSH Terms]: «education»[MeSH Terms]

Search: ((pharmacy[Title/Abstract]) AND (Financial[Title/Abstract])) AND (education[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Title/Abstract] AND "Financial" [Title/Abstract] "education" [Title/ AND Abstract]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[Title/Abstract]) AND (Financial[Title/Abstract])) AND (training[Title/Abstract]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

("pharmacy" [Title/Abstract] AND "Financial" [Title/Abstract] AND "training" [Title/ Abstract]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Search: ((pharmacy[MeSH Terms]) AND (Financial[MeSH Terms])) AND (education[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

(("pharmacy" [MeSH Terms] OR "pharmacies" [MeSH Terms]) AND "economics" [MeSH Terms] AND ("educational status" [MeSH Terms] OR "education" [MeSH Terms])) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH Terms] OR "pharmacies"[MeSH Terms]

Financial[MeSH Terms]: «economics»[MeSH Terms]

education[MeSH Terms]: «educational status» [MeSH Terms] O

Search: ((pharmacy[Text Word]) AND (Financial[Text Word])) AND (training[Text Word]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English ("pharmacy" [Text Word] AND "Financial" [Text Word] AND "training" [Text Word]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter])) Search: ((pharmacy[MeSH Terms]) AND (Financial[MeSH Terms])) AND

Alomi, et al.: Accounting and Financial Education and Training in Pharmacy Practice

Modu	Module 1: Accounting and financial cycle.		
1	Module description	It is the pharmacy practice's fundamental accounting principles and the financial cycle. Besides, accounting and financial cycles are at different pharmaceutical care departments and units.	
2	Learning Objectives:	 After finishing the accounting and financial cycle course, the trainees should be able to, Know the basic principle of Transaction identification, Understand Journal entry, Familiar with the general ledger, Know the trial balance preparation, Aware of all types of Adjusting entries, Understand the Adjusted trial balance, Know the essential principles of Financial statement preparation, Familiar with Closing entries. 	
3	Module Outlines:	 Transaction identification, Journal entry, General ledger, Trial balance preparation, Adjusting entries, Adjusted trial balance, Financial statement preparation, Closing entries. 	
4	Competency	 By the end of the course, each trainee will be able to: Explains the basic principles of Accounting and the financial cycle. Demonstrate Journal entry and General ledger skills. Exhibit the Adjusted trial balance skills. Apply the Financial statement preparation at different locations in the pharmacy department. 	

Module 2: Pharmacy Financial Position Statement Analysis.		
1	Module description	Its practice of pharmacy accounting and financials. Prepare the pharmacy income statement, the cash flow statement, and the position statement or balance sheet in various pharmacy settings. Besides, apply multiple types of analysis, including profitability, liquidity, liabilities, and efficiency.
2	Learning Objectives:	 After finishing the Pharmacy Financial Position Statement Analysis, the trainees should be able to, Know the pharmacy income statement analysis at various pharmacy setting, Understand to prepare the cash flow statement and analysis, Know the annual position statement or balance sheet analysis, Aware of multiple types of analysis (Profitability analysis, Liquidity analysis, Liabilities analysis, and Efficiency analysis).
3	Module Outlines:	Pharmacy income statement, Analysis of income statement, Cash flow statement, Analysis of Cash flow statement, Financial position statement or balance sheet, Analysis of Financial position statement or balance sheet, Profitability analysis, Liquidity analysis, Eificiency analysis.
4	Competency	 By the end of the course, each trainee will be able to: Exploring the different pharmacy income statement analyses in various pharmacy settings, Demonstrate preparation and analyses of the cash flow statement in pharmaceutical care services, Apply, prepare, and analyze the Financial position statement or balance sheet, Demonstrate the Profitability analysis, Liquidity analysis, Liabilities analysis, and Efficiency analysis of the pharmacy budget.

Alomi, et al.: Accounting and Financial Education and Training in Pharmacy Practice

Modu	Module 3: Managerial Accounting.		
1	Module description	It is the principle of Managerial Accounting of all pharmacy-working environments and products. Besides, different pharmacy costs and calculation of pricing of end products in the pharmacy setting.	
2	Learning Objectives:	 Learning Objectives: After finishing the Managerial Accounting model, the trainees should be able to, Know the foundation of pharmacy Managerial Accounting, Understand of calculation of pharmacy Cost material, Know the estimate of pharmacy preparation Cost, Aware of various types of calculation of pharmacy administrations Cost, Familiar with the calculation of pharmacy marketing Cost, Exhibits of pharmacy pricing end products. 	
3	Module Outlines:	 Pharmacy Managerial Accounting, Calculation of pharmacy Cost material, Estimate of pharmacy preparation Cost, Calculation of pharmacy administrations Cost, Calculation of pharmacy marketing Cost, Pharmacy pricing end products. 	
4	Competency	 By the end of the course, each trainee will be able to: Exploring the different pharmacy cost. Demonstrate Pharmacy pricing end products. Apply various Managerial Accounting in particular conditions for pharmacy workers. 	

Mod	lule 4: Pharmacy Feasib	vility Studies.
1	Module description	The foundation of Pharmacy Feasibility studies the new idea or project yet implemented internationally or nationally. It analyzes the new pharmacy project from various angles, such as SWOT analysis, Operational studies, Economic studies, Marketing Studies, and Regulatory Studies. Besides, Business Model generation with NINE tips including collaborates, activities, resources, value proposition, and customer relationships. Similarly, the Channel of communications, customer segments, cost structure, and revenue stream.
2	Learning Objectives:	 After finishing the Pharmacy Feasibility studies model, the trainees should be able to, Know the analysis types of pharmacy Feasibility studies, Understand pharmacy SWOT analysis, Operational studies, Economic studies, Aware of the pharmacy Marketing Studies, Regulatory Study, Know the content of the Business Model Generation, Applied NINE angles of the Business Model Generation of Pharmacy Practice.
3	Module Outlines:	Module Outlines:The content of pharmacy Feasibility studiesSWOT analysis,Operational studies,Economic studies,Marketing Studies,Regulatory Study,Business Model GenerationThe collaborates,Activities,Resources,Value proposition,Customer relationship.Channel of communications,Customer segments,Cost structure,Revenue stream.
4	Competency	By the end of the course, each trainee will be able to: Exploring the difference among the types of analysis of pharmacy Feasibility studies, Demonstrate the Business Model generation concept in pharmacy practice, Illustrate the SWOT analysis, Operational studies, Economic studies, pharmacy Marketing Studies, and Regulatory Study, Exhibit the implementations of NINE angles of the Business Model Generation of pharmacy practice.

Mod	Module 5: Quality Management of Pharmacy Accounting and financial system.		
1	Module description	The principle of Accounting and financial auditing and active surveillance of accounting and financial system in pharmacy practice. Besides, quality management of the pharmacy Accounting and financial performances with financial indicators.	
2	Learning Objectives:	 At the end of this course, the student should be able to: Familiar with pharmacy accounting and financial auditing processes, Understand the national and international accounting standards, Know the quality management financial indicators of the accounting and financial activities, Know economic administration indicators of the accounting and financial activities. 	
3	Module Outlines:	Pharmacy accounting and financial auditing processes, The national and international accounting standards, The financial indicators of the pharmacy accounting and financial activities, The economic administration indicators of the accounting and financial activities.	
4	Competency	 By the end of the course, each trainee will be able to: Demonstrate the pharmacy accounting and financial auditing processes, Exhibit the national and international accounting standards, Perform financial indicators of the pharmacy accounting and financial activities, Assess the efficacy of accounting and financial activities in pharmaceutical care units. 	

(training[MeSH Terms]) Filters: Full text, Case Reports, Classical Article, Clinical Conference, Clinical Study, Clinical Trial, Evaluation Study, Government Publication, Guideline, Meta-Analysis, Observational Study, Practice Guideline, Randomized Controlled Trial, Review, Systematic Review, Humans, English

(("pharmacy" [MeSH Terms] OR "pharmacies" [MeSH Terms]) AND "economics" [MeSH Terms] AND "education" [MeSH Terms]) AND ((casereports[Filter] OR classicalarticle[Filter] OR clinicalconference[Filter] OR clinicalstudy[Filter] OR clinicaltrial[Filter] evaluationstudy[Filter] OR OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] observationalstudy[Filter] OR OR practiceguideline[Filter] OR randomizedc ontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

Translations

pharmacy[MeSH Terms]: «pharmacy»[MeSH
Terms] OR "pharmacies"[MeSH Terms]

Financial[MeSH Terms]: «economics»[MeSH Terms]

training[MeSH Terms]: «education»[MeSH Terms]

RESULTS AND DISCUSSION

Program objective

Upon completion of the pharmacy accounting and financial system, the learner will be able to:^[12-23, 31,41-43]

- 1. Integrate knowledge of pharmacy practice at healthcare organizations and accounting and financial systems.
- 2. Practice pharmacy accounting and financial system guidelines and Apply the accounting and financial system measures at all pharmaceutical care departments and units.
- 3. Determine the risk factors of accounting and financial systems in pharmaceutical preparation and products.
- Develop pharmacy plans of pharmacy accounting and financial systems in all pharmacy settings.
- 5. Work independently as an accountant and financial pharmacist, collaborating with accounting and financial system teams and committees.
- 6. Develop and assess the pharmacy accounting and financial system audit of the pharmacy practice.
- 7. Provide pharmacy accounting and financial system education and training for pharmacy leaders and personnel.
- 8. Participate in the accounting and financial system performance and activities through healthcare organizations and pharmacy services.

Required for admission

Any pharmacist has a bachelor's or Pharm D degree with preferably 1-2 years of experience. They have, besides, had a valid license to practice basic computer literacy.

Program requirements

The program consisted of five weeks during the entire period. A total of 48 hours of didactic and clinical hours must be completed. Besides, the trainees should complete eight hours per shift.

Teaching and education method

There are various methods of teaching and education in pharmacy accounting and financial systems. That included interactive lectures and discussions, presentations, weekly reading assignments, and group discussions.

Evaluation and Assessment

The program preceptor will Evaluate and Assess trainees based on various methods. Completing the weekly activities, reading assignments, presentations, and daily discussions. The trainees do the program's final evaluation by the end of the training, the receptors evaluation, and the program evaluation.

The pharmacist was counseled following the coverage and methods for pharmacy accounting and financial system training and coaching.

- The accounting and financial pharmacist coach assesses the understanding and exercise of the trainee thru a digital survey with specific questions.
- 2. Discussed with the trainee the outcomes of the evaluation survey. Besides the goal that's wished for the trainee as explored in Modules 1-5
- Set up schedules for educational lectures and dialogue with trainees overtraining period.
- 4. Setup the lookup things to do based totally on the lookup lectures agenda
- 5. Review the pharmacy accounting and financial system things to do with trainee and right them therefore

- The trainee corrects the errors of lookup things to do with the accounting and financial pharmacist education preceptor.
- 7. The last evaluation of know-how and exercise of accounting and financial education at every education and examined with a preliminary assessment.
- 8. Do a closing survey about trainee pride of the accounting and financial pharmacist coaching application and Discuss the effects with the trainee for future improvement.
- 9. The accounting and financial pharmacist coaching preceptor revises all preceding evaluation effects before and after the education application and closing pride of lookup training. It updates the goal, objective, and things to do accordingly.

CONCLUSION

Covering education and training in pharmacy accounting and financial systems is essential for undergraduate and postgraduate pharmacists. The training software consists of 5 weeks of coaching with five modules: Accounting and Financial Cycle, Analysis of Pharmacy Financial Situation, Operational Accounting, Pharmacy Feasibility Study and Pharmacy Accounting, and Financial Quality Control. It was done. Each module is explained by understanding the purpose, module outcomes, and competencies. Training and coaching in pharmacy accounting and financial system coverage and strategy can be carried out efficiently and conveniently at the pharmacy site. The level and methods of training and education in pharmacy accounting and financial systems have been surprisingly well received in Saudi pharmaceutical sales.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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None

Consent for Publications

It does not apply to this review

Ethical Approval

This research is exempted from research and ethical committee or an institutional review board (IRB) approval. https://www.hhs.gov/ohrp/regulations-andpolicy/decision-charts-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; International IAESB: The Accounting Education Standards Board; IESBA: The International Ethics Standards Board; IPSASB: The International Public Sector Accounting Standards Board; AGREE: The Appraisal of Guidelines, Research, and Evaluation.

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