Accounting and Financial in Pharmacy Practice: Managerial Accounting

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ABSTRACT

Objectives: To explore the managerial accounting policy and procedures in pharmacy practice as a new initiative in Saudi Arabia. **Methods:** It was a narrative review of the pharmacy practice's managerial accounting policy and procedures. 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 managerial accounting of the Pharmacy policy. **Results:** The managerial accounting policy and procedures in pharmacy practice calculate the costs of products sold, working fees, labor costs, and other costs related to running a pharmacy. Managerial accounting in pharmacy practice can analyze the prices of various products and services, track sales revenue and profit margins, and improve pharmacy operations' efficiency, effectiveness, and profitability. The steps of cost calculation policy and procedures were illustrated in the review. **Conclusion:** The managerial accounting policy and procedures in pharmacy practice is a new pharmacy management initiative. The managerial accounting policy and procedures in pharmacy practice can help pharmacy managers and administrators make effective financial decisions and plan pharmacy budgets and product pricing. Therefore, pharmacy career professionals in Saudi Arabia must implement the administrative-accounting policy and procedures in pharmacy practice.

Keywords: Accounting, Financial, Policy, Pharmacy, Managerial Accounting, Saudi Arabia.

INTRODUCTION

The national pharmacy administration programs were established several years back locally.[1] That's consistent with leadership development, Human Resources, continuous professional development, pharmacy practice standards, and pharmacy quality management.[1] The pharmacist's contact with the patients to distribute or sell the medications. The pharmacist must control the cost, revenues, and expenses of pharmaceutical care services and medical products at the hospital and community pharmacy business.[2-5] The recording of financial transactions should be recorded daily. Thus, the pharmacy business project needs an accounting and financial reporting system.[6-12] Moreover, the pharmacist must set up the cost or prices of all pharmacy operations, such as revenues, human resources, quality management, education, and technology costs. All those costs should be calculated to determine the products' overall marketing or selling prices. Those items are

called administrative accounting or managerial accounting.[6-12]

There are various advantages to implementing the managerial accounting system. The pharmacist can assign the selling prices of the pharmaceutical products and medical supplies and how much quantity should be sold monthly and annually. Managerial accounting helps the pharmacist set up a marketing plan and asses the pharmacy manager of budget allocation for each pharmacy product. The pharmacist can forecast the selling products, time for break even, and expenses required to reach the break-even.[6-12]

Although pharmacy practice requires managerial accounting policies and procedures. The topic is rarely reported either at local or international levels.[8,13-30] All managerial accounting policies and procedures apply to professional accountants or financial officers, not to pharmacists.[31-38] Furthermore, the authors were unaware of any publications on managerial accounting in pharmacy practice. This review declares the hospital or community pharmacy's managerial accounting policies and procedures.

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 Trials, Evaluation Studies, Government 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 pharmacy and healthcare settings were used as guides for writing the review.[8,13-30] 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 (A.A.A), 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).[31-38] The pharmacy Financial and accounting committee comprises experts, clinical pharmacists, and accouters. 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, visibility study in a pharmacy environment, pharmacy financial statement including income list, cash flow, budget sheet or balance sheet, electronic applications of accounting and financial in a 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 on managerial accounting in pharmacy practice. The Appraisal of Guidelines, Research, and Evaluation (AGREE) guided the reporting of the results of this review.[39]

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] 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 (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] 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])** 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 ((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**

("pharmacist"[Text Word] AND "Financial" [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] 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[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

("pharmacists"[MeSH Terms] 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**

("pharmacy"[Title/Abstract] AND "accounting" [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])** 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 ((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

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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])** 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 ((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]

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] 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 (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

("pharmacist"[Text Word] AND "accounting" [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] 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]))

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("pharmacists"[MeSH Terms] AND "accounting" [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]

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**

("pharmaceutical care"[Title/Abstract] AND "accounting"[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 randomizedcontrolledtrial[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] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedcontrolledtrial[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] 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 randomizedcontrolledtrial[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

("pharmacy"[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] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedcontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

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 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 (("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"[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] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedcontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

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[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[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 randomizedcontrolledtrial[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**

("pharmacist"[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] OR evaluationstudy[Filter] OR governmentpublication[Filter] OR guideline[Filter] OR meta-analysis[Filter] OR observationalstudy[Filter] OR practiceguideline[Filter] OR randomizedcontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

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: **(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**

("pharmacist"[Text Word] 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"[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] 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

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: **(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**

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

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] 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

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: **(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**

("pharmaceutical care"[Text Word] 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"[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] 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

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: **(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**

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

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 randomizedcontrolledtrial[Filter] OR review[Filter] OR systematicreview[Filter]) AND (fft[Filter]) AND (humans[Filter]) AND (english[Filter]))

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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.

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

Warnings

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

RESULTS AND DISCUSSION

Managerial accounting is one accounting branch that deals with administration accounting by utilizing the financial or accounting information and administration to take action, plan, and control project business performance.

The pharmacist should follow the policy procedures to start managerial accounting.[1-7]

- The pharmacist should prepare an estimated amount for the following year. Revising your year-to-date cash flow to list all estimated expenses and income and expanding cash flow for each operating or investing account would be best.

- The pharmacist must request a budget income statement in advance. That includes all estimated revenue from all services and amounts expected to grow or grow over the next year. You must offer to reduce or reduce all estimated expenses as planned by shrinking or expanding new projects.

- A pharmacist must prepare a balance statement and estimate total asset and expense changes. Then, on the other hand, liability to capital and earnings due to planned project growth or contraction, expansion or contraction;

- On a monthly or quarterly basis, the pharmacy monitors all three forecasted, estimated, or budgeted financial statements, including active and current accounts, compares them, and agrees with the projected financial statements. It would be best to analyze the reasons for doing so and correct or take action on the n the remaining financial year.

Cost accounting

Pharmacists should be familiar with various product cost calculations, such as the typical prices calculated by including.

1. Cost of material, either direct or indirect material. Such as the preparation of Intravenous medications; the material is medications plus containers of piggyback, which indirect materials like Laminar Flow Hoods (LMFH) and antiseptics are used during the medication preparations (Table 1)

2. Cost of operations includes the direct staff of preparation of Intravenous (IV) admixtures medications, such as pharmacy staff, technicians, and pharmacists. While the indirect pharmacy staff, such as pharmacy supervisors or administrations and porters

3. The administration cost is direct, such as the maintenance of Laminar Flow Hoods (LMFH), or indict cost, such as the place renting or Health insurance for medication errors.

4. Cost of marketing that's including the direct cost of packing and labels, the indirect cost of the sales department, and the cost of marketing services like

The pharmacist should follow the instructions of policy and procedures.

Table 1: Cost of material involved in the preparation of intravenous medication.	
Direct cost	**Indirect cost**
Medications	Antiseptics
Piggyback	Porters
Syringe and needles	Rent the preparation places.
Package and labels	Supervisor of preparation
LMFH equipment	Administrators of unit
Pharmacy tech preparation	Transportation
Pharmacist preparation	Marketing services
Stoking or inventory of personal	Maintenance of LMFH
Sales personnel	Health insurance for medications errors
Fixed cost	**Variable cost**
Rent the preparation places.	Medications
LMFH equipment	Piggyback
Pharmacy tech preparation	Syringe and needles
Pharmacist preparation	Package and labels
Porters	Antiseptics
Stoking or inventory of personal	
Sales personnel	
Supervisor of preparation	
Administrators of unit	
Transportation	
Marketing services	
Maintenance of LMFH	
Health insurance for medications errors	

- The cost of products is based on the number of preparation and variable costs. If you divide the variable cost by the number of preparation, you will come to the cost of preparation. If the number of preparation increases, the variable and product costs will be the same. However, if calculated based on a fixed price, the cost of products will decrease by increasing the number of preparations.

- The pharmacist can calculate the cost of the operation used for preparation equal to the total fixed price of preparation times divided by the procedure's availability. Besides, the pharmacist can calculate the cost of the operation not used for preparation equal to the total fixed price of preparation times operation not used divided by availability operation; that is, you can determine the energy used or non-user for the procedure to prepare the intravenous product.

- The pharmacist can calculate the break-even and number of products or cost sales need to reach this point by equation. The price of sales products times the number of units equals fixed expenses plus variable expenses. The variable expenses are equal to the variable cost of production time number of the products. As a result, The price of sales products times the number of units is equal to fixed expenses plus the variable cost of production time. Then you can calculate the number of products needed to break even, and the number of products times costs sales, you will get the cost sales needed to break even.

- The pharmacist can calculate the number of units for one product to break even by the following equation. The number of products equals fixed expenses divided by price sales minus variable expenses (contribute margin). If the pharmacist wishes to reach the net profit of the number of specific products, use the above equation with the following little changes. The number of products equals fixed expenses plus additional profit divided by price sales minus variable expenses.

- The pharmacist can calculate the profit's security level for each product you sell. The highest percentage of profit security level the suitable products to continue selling. You can use the following equation: The number of sales products or cost minus the break-even number of products or cost divided by the number of sales products or cost times 100.

- The pharmacist can calculate the number of units for several products to break even by the following equation. The number of products equals the fixed expenses of all products divided by the average contribution margin. The average contribution margin can be calculated by each product's sales time price percentages and variable cost percentages. Then calculate all average sales minus average variable cost. Then you can calculate the number of products needed to break even by dividing the total cost by the average contribution margin. The net profit comes up with the number of all products and time average sales.

- If the pharmacist wishes to reach break-even for each product equal to the number of total products times the percentage of sales, then calculate the net product for each product by the number of one product times price sales. Make this calculation for each product alone. The sum of all products equals break even for all products, and the sum of all net profit equals the total product of profit for break-even.

CONCLUSION

The managerial accounting policy and procedures in pharmacy practice as a new initiative project of pharmacy administration services. It explores the price calculations of various products and operations of pharmacy services. Managerial accounting in pharmacy practice is a vital branch of accounting required for pharmacy managers and administrations used for effective and efficient pharmacy performances and operations. Besides, the monitoring of adherence to accounting standards and regulations. The managerial accounting policy and procedures in pharmacy practice are a sessional part of pharmacy management and highly demand pharmacy practice in Saudi Arabia.

ACKNOWLEDGEMENT

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

Funding

Consent for Publications

Informed consent was obtained from all the participants

Ethical Approval

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

https://www.hhs.gov/ohrp/regulations-and-policy/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; **IAESB:** The International 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; **LMFH:** Laminar Flow Hoods (LMFH); **IV:** Intravenous

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