Effects of Cash Management Practices on Operational Performance of Selected Public Hospitals in Kisii County, Kenya

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Abstract

Cash management is necessary service mismatches between the timing of payments and the availability of cash may interfere with operations of a firm. Studies have noted that many hospitals have maintained large cash reserves and liquidity positions within their investment portfolios in an effort to partially accommodate unforeseen expenditure. However, inadequate cash management practices among the hospitals has led to slow rate of service delivery, accompanied with regular strikes of employees, insufficient medicines and other basic equipment for use in hospitals and employee strikes which are all linked to management of funds. The objectives of the study were to identify the effects of preparing cash budgets as cash management practice on operational performance of public hospitals, to determine the effects of operating bank accounts as cash management practice on operational performance of public hospitals and to establish the effects of Book Keeping as cash management practice on operational performance of public hospitals. The descriptive survey research design was adopted in the study. The study was undertaken in Kisii County. The target population was 99 respondents consisting of 34accountants, 30 Medical Superintendents and 35 assistant administrators of all public hospitals in Kisii County. The sample frame for the study was 31 public hospitals within Kisii County. The sample size was 99 respondents which was selected using census sampling technique. Primary data were collected using a questionnaire. The data were tabulated, then analyzed using descriptive and inferential statistics with the help of Social Sciences (SPSS) version 22 software. Descriptive statistics involved the use of weighted averages and percentages while inferential statistics involved the use of ANOVA and regression analysis. The findings revealed that cash budgets assist in making cash flow projections and ensures budgetary control and controls a hospital's spending habits although and that it does not create competition of resources and politics; operating bank accounts ensured security of hospital funds besides helping keep track of hospital transactions; the hospitals keep records of all cash payment and receipts on daily basis, facilitating accountability that improves operational performance of public funds. The ANOVA results revealed that, at 5% level of significance, cash budget, operating bank account(s) and book keeping all have a significant influence in determining the operational performance of public hospitals. The findings from regression analysis realized that that cash budgeting account for 38.9% effect size in influencing operational performance, operating bank accounts account for 14.1% effect size in influencing operational performance while book keeping account for 49.3% effect size in influencing operational performance in public hospitals. The study findings are helpful to the County governments in understanding the importance of preparing cash budgets, operating bank accounts and Book Keeping to improve operational performance of public hospitals. The study will also be helpful to relevant stakeholders in the health sector and the management of these hospitals on having proper management practices in their institutions.

Keywords: Cash Management Practices, Operational Performance, Health institutions

1.1 Background to the Study

Cash is both a fundamental resource and the means by which the entity acquires other resources. To manage cash is to manage the entity's ability to purchase assets, service debt, pay employees, and control operations. Thus, effective cash management directly correlates with the entity's ability to realize its mission, goals, and objectives. The term cash management has been defined in different ways by different scholars. Barrett (1999) cash management as the series of processes used by an organization to obtain the maximum benefit from its flow of cash funds. Storkey (2003) cash management is having the right amount of money in the right place and time to meet the government's obligations in the most cost-effective way. Sound cash management involves better timing of expenditure decisions, earlier collection and banking of revenue, and more accurate forecasts of cash flows. This helps minimize the cost of any borrowing that is necessary and facilitates investing surplus funds to achieve the best return overall (Barret, 1999). The techniques of cash management and the degree of sophistication in business processes vary from entity to entity and are influenced by an entity size, geographical location and the nature of its operations. Basically, the process of managing cash today has been significantly influenced by the growing developments in the business world over the years (Kesseven, 2006). Lienert (2009) found out that modern cash management has four major objectives, namely; to ensure that adequate cash is available to pay for expenditures when they are due, to borrow only when needed and to minimize government

borrowing costs, to maximize returns on idle cash and to manage risks, by investing temporary surpluses productively against adequate collateral.

Kane (2001) study on the Medicare cost report and the limits of hospital accountability, lamented that financial accounting elements in hospitals are unreliable, poorly defined, and lacking in critical detail in most of the US hospitals. The study goes on to state that the Medicare Cost Report and matched, audited financial statements reveal long-standing problems with the Medicare Cost Report 's data, including major differences in reported profits; variations in the reporting of both revenues and expenses; variations in the reporting of both revenues and expenses; an absence of relevant details, such as charity care, bad debt, operating versus non operating income, and affiliate transactions; an inconsistent classification of changes in net assets and a failure to provide cash flow statements. Because of these problems, Medical Cost Report financial data give only a limited and often inaccurate picture of the financial position of hospitals.

Song and Reiter (2010) documented on trends in asset structure between Not-for-Profit and Investor Owned Hospitals in the US. The study aimed to describe and analyzes trends in aggregate asset structure between Not-For-Profit (NFP) and Investor Owned (IO) hospitals during the post-capital based prospective payment system (PPS) implementation period, providing the first documentation of long-term trends in hospital investment. The study found out that hospitals' aggregate asset structure differs significantly based on ownership, size, and profitability. The study also observed that both NFP and IO hospitals, financial securities have remained consistent over time, while fixed asset representation has declined in IO hospitals. Wongthatsanekorn (2010) studied the impact of Cash-to-Cash cycle time, inventory conversion period (INV), receivable conversion period (AR), and payable deferral period (AP) of listed private hospitals in the Stock Exchange of Thailand (SET) on their corporate profitability, by using both regular and panel data analysis. The study sought data from the financial reports of the listed private hospitals in SET across 13 private hospital populations, from 2002 to 2008. The results from regular regression revealed that only the payable deferral period was negatively related to Asset Turnover under the control variables like the control variables are company size, sales growth, financial debt level, and annual gross domestic product growth. The study revealed that, Cash-to-Cash cycle time, inventory conversion period, receivable conversion period had no relationship with Assets Turnover at significance level 0.10. The results from panel data regression showed that both receivable conversion period and deferral period are negatively related with Asset Turnover at significance level 0.10. The results further suggested that, the listed firms in Stock Exchange of Thailand can increase corporate profitability by decreasing payable deferral period and receivable conversion period.

Kamau (2014) investigated the effect of internal factors on the profitability of private hospitals in Kenya. This was a case study of the Karen Hospital Limited. The main objectives of the study were to examine the effect of firm size on the profitability of private hospitals, to establish the effects of leverage on the profitability of private hospitals, to find out how the volume of capital affects profitability of private hospitals and to assess the effect of tangibility of assets on the profitability of private hospitals in Kenya. The study established a positive relationship between profitability of private hospitals and firm size, volume of capital and tangibility of assets with leverage showing a negative relationship. The study concluded that firm size, leverage, volume of capital and tangibility of assets affect profitability of private hospitals in Kenya. The researcher recommends that private hospitals should expand in a controlled way with the aim of achieving an optimum size, avoid situations where they are highly leveraged, increasing the number of shareholders, and develop sound techniques of managing their assets. The researcher recommends a study on the external factors that may affect the performance of hospitals in Kenya.

Ayiekoet al. (2012) were interested in the Variations in Mortality in Children Admitted with Pneumonia to Kenyan Hospitals. The study aimed to analyze case fatality rates of children admitted to nine Kenyan hospitals with pneumonia during the era of routine infant immunization with Hib conjugate vaccine to determine if significant variations exist between hospitals. By obtaining data from a 9.25-year period (1999-March 2008) in one of the participating hospitals and using hospital case fatality rates for inpatient pneumonia during 2007 to 2008 modeled using a fixed effect binomial regression model with a logit link, the results were that, overall, 5.9% children admitted to all 9 hospitals with pneumonia from March 2007 to March 2008 died in hospital. After adjusting for child's sex, comorbidity, and hospital effect, mortality was significantly associated with child's age and pneumonia severity. There was also evidence of significant variations in mortality between hospitals. The study concluded that there are important variations in hospital-pneumonia case fatality in Kenya and these variations are not attributed to temporal changes, and that such variations in mortality are not addressed by existing epidemiological models and need to be considered in allocating resources to improve child health. From the above literature, it is evident that, although few studies have been done in this area, there isn't

any that addresses the influence of cash management practices on the operational performance of public hospitals.

1.2 Statement of the Problem

Cash management is necessary to avoid mismatches between the timing of payments and the availability of cash. Past studies note that cash shortage is a chronic challenge to most firms, and its management is crucial to the survival and growth of enterprises (Attom, 2014). Many hospitals have maintained large cash reserves and liquidity positions within their investment portfolios in an effort to partially accommodate unforeseen expenditures. However inadequate cash management has led to slow rate of service delivery, accompanied with regular strikes of employees, insufficient medicines and other basic equipment for use in hospitals and further employee strikes are all linked to inappropriate management of funds within public hospitals in Kenya. Therefore improper preparation accounts and inadequate cash management procedures were some of the major challenges. This study determined the effects of cash management practices on operational performance of public hospitals in Kenya.

1.3 Objectives of the Study

The main objective of the study was to determine the effects of cash management practices on operational performance of selected public hospitals in Kisii County. The specific objectives of the study were to;
   i. identify the effects of preparing cash budgets as cash management practice on operational performance of public hospitals in Kisii County
   ii. determine the effects of operating bank accounts as cash management practice on operational performance of public hospitals in Kisii County
   iii. establish the effects of Book Keeping as cash management practice on operational performance of public hospitals in Kisii County

1.4 Literature Review

Monetary Theoretic Approach to Cash Management argues that monetary economists are interested in the cash management of firm with an aim of describing the mechanism of the demand for money by firms, it views cash management as financial transactions, which means the purchasing or selling of financial securities or borrowing or repaying of capital. The firm is presumed to hold the amount of money, which minimizes the interest cost by holding money rather than investing it in short-term investments and the transaction costs associated with transferring between securities and cash. Operations Research Approach to Cash Management indicate that numerous operational models have been developed to optimize the split between cash and marketable securities based on the firm's needs for cash, the predictability of these needs, the interest rate on marketable securities, and the cost of a transfer to cash and vice versa (Kytonen, 2002; Abioro, 2013). The basic transaction models most commonly accepted in the financial literature are the deterministic Baumol-Tobin (1952) and the stochastic Miller-Orr inventory models (1966). Financial Theoretic Approach to Cash Management; Kytonen (2002) opined that in financial theory, researchers are interested in how cash and other liquid assets affect firm value and the optimal capital structure of a firm. This theory links cash management to financial theory by considering its importance in an imperfect market. According to this study, this can be done by adding it to the financial theoretic models, such as the Capital Asset Pricing Model (CAPM) or the Modigliani-Miller model. The study further observes that the effects of the inclusion of cash balances in these theoretical models show the importance of liquid assets for the value of a firm (through the systematic risk component) and for the optimal capital structure through the liquidity slack concept. Cash management is the process of ensuring that businesses have good cash balances to ensure that they continue to stay in business. Thus prudent cash management ensures that a small business would be able to honour its debt obligations as and when they fall due and also to facilitate the responsibility of the firm to pay for its upcoming expenses (Attom, 2014). Cash management forms an integral part of working capital management. Hence, it is considered as part of the scope of a good working capital management in modern businesses (Brealey, Myers and Allen, 2008). Once cash budget has been approved, and appropriate net cash flow established, Abioro (2013) recommends that the financial manager should ensure that there does not exist a significant deviation between projected cash flows and actual cash flows and that to achieve this, there will have to be proper control of cash collections and disbursements.

Attom (2014) identified several cash management practices. Traditionally, budgeting is considered to be one of the most important management tools to steer the organization, evaluate its performance and motivate its people (Maritim, 2013). For other organizations, budgeting process has been implemented to a very advanced level including planning, coordinating, control, and performance evaluation (Yang, 2010 cited in Maritim, 2013). Cash budget refers to a table showing cash flows (receipts, disbursements, and cash balances) for a firm over a specified period of time. It identifies all the cash receipts components and a schedule that tracks cash payments to suppliers with respect to purchases. It is a measure that establishes the cash position (deficit or surplus) of a

firm given the cash inflows and outflows over the period under consideration (Attom, 2014). Cash budget is the most significant device to plan for and control the cash receipts and payments Marfo-Yiadom (2009), and it aids in the effective operation of any business (Barrel, 1999) a study by Nguyen (2001) noted that most firms carried out their cash budgeting on a weekly basis mainly to plan for shortages and surpluses of cash and that they would determine target cash balances based on needs for transaction balances, and put its idle cash in cash management accounts or certificates of deposit.

In Kenya, Maritim's (2013) study revealed that the budgeting practices that are common among the firms in Kenya are budget planning, budget participation and budgetary sophistication among commercial and manufacturing parastatals in Kenya, and that, however, employee participation in the budgeting process resulted in greater success in actualization of the plan set out in a particular period followed by budget planning. It is disclosed in the study that, more formal budgeting planning promotes higher growth of sales revenues in the parastatals, more formal budgetary control leads to a higher growth of profit in parastatals and greater budgetary participation leads to better managerial performance. Uwalomwa and Egbide (2011) claims that cash management entails taking the needed precautionary measures to ensure that adequate cash levels are maintained in the business so that the operational requirements could be met. This claim is seconded by Aliet (2012) who indicated that, cash management is the management of cash to maximize the cash held in the business that is not invested in buying inventory or fixed assets. In other words, it is the management of cash to avoid the risk of the business becoming insolvent. But is the situation the same to public hospitals in Kenya.

A study by Ademola et al. (2012) discovered that majority of small scale enterprises in Kogi State did not operate bank accounts. The study also noted that, of the 7% of the respondents that had opened a bank account, they did so with the intention that one day, they could benefit from the bank, in form of bank loan possibly because of lack of finance or the required fund. However, it was discovered that the banks rejected the loan applications for majority of these small scale entrepreneurs because most of the business organizations did not keep their records. These include sales records, purchase record, inventory records, accounts receivable records among others. For public hospitals bank accounts are for transactions that are not profit oriented. Despite this situation can it lead to effective cash management and its related effects to operational performance in these hospitals. There is no research in particular that has been done to address the effect of keeping books of accounts as cash management practice on the operational performance of public hospital.

Book keeping is the analysis, classification and recording of the business transactions in the books of accounts (Saleemi, 2008). Okwena, Onkioma and Onsongo (2011) define bookkeeping as the recording of financial transactions which include sales, purchases, income, and payments by an individual or organization. Ademola, Samuel and Ifedolapo(2012) define book keeping as the recording of business transactions in systematic manner so thatthe financial position of an organization can be ascertained at any point in time. Record keeping involves identification, classification, storage and protection, receipt and transmission, retention and disposal of records for preparation of financial statements. (Ademola et al., 2012). The transactions recorded during book keeping include sales, purchases, income, and payments by an individual or organization. Book keeping is usually performed by a bookkeeper (Okwena et al., 2010). Bookkeeping and accounting share two basic goals: to keep track of income and expenses, which improves chances of making a profit, and to collect the financial information necessary for filing various tax returns? There is no requirement that records be kept in any particular way. As long as the records accurately reflect the business's income and expenses (Okwena et al., 2010).

Mungai (2014) identified the following as some of the cash management practices: Inventory management and control, handling Debtors, and Cash budget. Inventory management: It's easy to turn cash into inventory but it's not easy to turn inventory into cash. When inventory is sold and floor space is freed up, the business profitability really changes. The slow moving inventory should not increase to more than 5% of all inventory stocked in the business (Barrera, 2013). To address the slow moving inventory, the study suggested that; put emphasis on those items to attract sales, make sure that the First-in-First-out system for stocking inventory on the shelf is practiced by setting the newer stock at the back of the shelf to allow for the older stock to get sold first, offer discounts; and try bundling that slow moving item with something which is of demand to consumers. However, these measures cannot be applied in the hospital setup since hospitals do not stock goods for sale. Besides, the people who attend hospitals do not wish but rather because their ailments or suffering leaves them with no option but to visit the hospitals. It is very difficult to find a hospital client asking for more services.

The Bank of America (2009) stated that in order to collect receivables more quickly, more efficiently and more predictably requires healthcare organizations to understand the day-to-day activity and trends associated with major streams of receipts most of the hospitals did not have a systematic way of managing its short-term cash. The study cites Gaston Memorial which, like many healthcare organizations, undermined effective cash management by having multiple cash accounts with several financial institutions. As a result, the hospital could not get a handle on banking fees, nor could it take advantage of tools for analyzing inflows and outflows and identifying ways to improve cash management. The study warned that, whether a healthcare organization

anticipates having a budget surplus or a deficit, it needs to have cash to meet its obligations, accomplish its objectives, and respond to unexpected challenges. To justify this claim, the study noted that revenues are down, expenditures are on the rise, and credit is tight, healthcare organizations are trying to get cash in sooner, hold onto cash longer, and forecast future cash needs with confidence. For this reason therefore, healthcare organizations consequently are examining strategies, tools and best practices that can make their cash or liquidity management more effective.

Integrated health services encompass the management and delivery of quality and safe health services so that people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services through different levels and sites of care within the health systems, and according to their needs throughout the life course (WHO, 2015).Strengthening service delivery is a key strategy to achieve the Millennium Development Goals. This includes the delivery of interventions to reduce child mortality, maternal mortality, and the burden to HIV/AIDS, tuberculosis and malaria (WHO report , 2008). The report further records the following as the service delivery indicators focusing on low and lower middle income countries. These are; the number and distribution of health facilities in an area, the number and distribution of in-patient beds, adequate provision of basic amenities like regular water supply from safe source on-site, sanitary facilities, waiting area protected from sun and rain, communication equipment and electricity, regular and adequate provision of basic equipment for instance adult weighing scale, child weighing scale, thermometer, stethoscope, BP cuff, refrigerator, needles and syringes); infection control (includes functioning sterilization equipment, written guidelines or protocols, sharps container or box, soap, disinfecting solution, gloves, and water (in service delivery area); Human resources and tracer drugs and diagnostics. Therefore it is inevitable to effectively use cash management practices to improve on the operational performance of Health institutions for the benefit of mankind.

2.0 Research Methodology

The survey research survey design was adopted in the study. Several related studies found survey design to be the most applicable research design (Mungai, 2014; Abioro, 2013; Ademola et al., 2013). The study target population was 99 respondents from 30 public hospitals consisting of all the accountants, medical superintendents and assistant administrators in Kisii County Level 4 and level 6 hospitals; selected by census sampling technique. Primary data were collected using a questionnaire. The data was analyzed using descriptive and inferential statistics.

3.0 Results and Discussion

3.1 Category of Hospitals under Study

The study established that 96% of the hospitals under study were level 4 hospitals (Sub County hospitals) while 4% of the hospitals under study were level 6 (Teaching and Referral hospitals). The choice of these hospitals for the study was because most people prefer going to them due to the perception that they are better equipped with personnel and medical facilities compared to level 3 and level 2 hospitals. Further that study established that 95.6% of the respondents declared that had worked in their current station hospitals for over 10 years, 3.3% had worked in their hospitals for between 7 years and 10 years, and only 1.1% had worked at the respective hospital for between 3 years and 7 years. This implied that majority of the respondents had adequate experience in their job. Besides, it also communicates that majority of the respondents had enough experience in the preparation of the books of accounts and understand hospital performance indicators in the public sector. The study further established the number of employees in the hospitals under study; the study results revealed that there were 801employees in the Level 4 hospitals which constituted 391 permanent employees and 410 casuals, and 181 employees in the Level 6 hospital and this number constituted 69 permanent employees and 112 casual employees. This implies that the hospitals under study have casual employees who need to be paid on monthly basis, hence the need for cash management to maintain liquidity or availability of funds at the hospitals to foot their wage bills. This population of employees signals the expectation to have better operations in the hospitals since the hospitals have the manpower.

3.2 Keeping of Accounting Records in Public Hospitals

The study established that all hospitals keep accounting records. Further on the frequency of maintaining accounting records, the study realized that 72.8% of the respondents felt that the records were kept "often". This could be due to the requirement by the Public Accounting Procedures and the Ministry of Heath that all the public offices handling money must maintain proper accounting records so as to ensure accountability of the

public funds. The results concurred with study by Lane, Longstreth and Nixon (2001) that accounting reports are more useful for internal hospital reporting as the cost accounting information is provided at a departmental level. Besides, it is also more useful as they report data at the institutional level. Besides, 16.3% of the respondents felt that the records were kept "occasionally" while the remaining 10.9% of the respondents felt that the records were "rarely" kept.

3.3 Cash Budgets and Operational Performance of Public Hospitals

The established the effects of keeping cash budgets on operational performance of hospitals. Some aspects of cash budgets were provided on a five point Likert scale for respondents to rate them.

Table 1: Analysis of the Effects of Preparing Cash Budgets on Operational Performance

Cash Budgets	Strongly agree 5	Agree 4	Undecided 3	Disagree 2	Strongly disagree 1	Σf_i	$\Sigma f_i x_i$	$\dfrac{\Sigma f_i x_i}{\Sigma f_i}$
Assist in making cashflow statements	68	24	0	0	0	92	436	4.74
Ensure budgetary control	22	66	0	0	0	92	386	4.20
Reduces initiative and innovation	43	26	21	2	0	92	386	4.20
Controls hospital's spending habits	1	90	1	0	0	92	368	4.00
Demotivate employees	18	44	30	0	0	92	356	3.87
Cause perception of unfairness	0	1	25	66	0	92	211	2.29
Interferes with hospital goals	0	4	12	43	33	92	171	1.86
Create competition for resources and politics	0	0	0	70	22	92	162	1.76

As table1 depicts, the respondents "agreed" that cash budgets assist in making cash flow projections (4.74 mean weight), ensures budgetary control, reduces initiative and innovation (4.20 mean weight) and controls a hospital's spending habits (4.20 mean weight). The study also observed that the respondents were "undecided" on whether cash budgets demotivate employees because of lack of motivation (mean weight 3.87). These findings are in harmony with Uwonda, Okello and Okello (2013) who noted the importance of preparing cash budgets by opining that most SMEs prepare cash flow projections, ensuring budgetary control, internal control system and controlling their spending habits.In support of these findings, Jensen's (1989) Cash Flow Theory also warned that, when free cash flows are available to top managers, they tend to invest in negative Net Present Value (NPV) projects instead of paying out dividends to shareholders. In the hospital setup, free cash flows are likely to be misused by purchasing unnecessary equipment and infrastructure. Mungai (2013) also observed that proper cash management practices stems from creation of a realistic cash flow budget that charts finances for both the short term and longer term. According to the study, this will boost an organization's habit and redouble efforts to collect outstanding payments owed to the hospital. However, the study disagreed on the claim that preparation of cash budget may interfere with the attainment of the hospital's goals and that it can create competition of resources and politics (mean weight 1.86 and 1.76 respectively). These findings differed with Kim (2002) who observed that the dysfunctional aspects of budgets systems may interfere with the attainment of the organization`s goals and also create competition for resources and politics. The findings also differed with Jensen (1989) who states that budgeting reduces free cash flows hence making an organization to focus on its goals. **3.4 Operation of Bank Accounts and Performance of Public Hospitals**

The study established whether the various hospitals operated bank accounts. The results revealed that 100% of the respondents agreed that their respective hospitals operated a banks account and were active and the 65.5% of the hospitals had a means of saving the excess cash in bank account, this being an indication of cash management practice. The study revealed the effects of operating bank account on operational performance of public hospitals.

Table 2: Effects of Operating Bank Account on Operational Performance of Hospitals

Effects of Bank Account	Most influential 5	More influential 4	Moderately influential 3	Less influential 2	Not influential 1	Σf_i	$\Sigma f_i x_i$	$\frac{\Sigma f_i x_i}{\Sigma f_i}$
Ensures security of Hospital funds	88	4	0	0	0	92	456	4.96
Helps keep track of hospital transactions	63	29	0	0	0	92	431	4.68
Improves financial controls	23	35	31	3	0	92	354	3.85
Proper cash management	12	49	21	6	4	92	335	3.64
Enables fast payment of bills in accounts far series in hospitals	11	31	32	16	2	92	309	3.36
Enables tracking of funds	7	9	21	47	8	92	236	2.57

As table 2 shows, the most influential reason why hospitals consider operating banks accounts is because it ensures security of business funds (weight 4.96 on a five point likert scale) besides helping keep track of business transactions (weight 4.68 on a five point likert scale) implying that the factors were more influential. However, the study also realized that the following factors moderately influence hospitals to operate a bank account: It improves financial controls (weight 3.85 on a five point likert scale), ensures proper cash management (weight 3.64 on a five point likert scale) and enables fast payment of bills in accounts weight 3.36 on a five point likert scale). Further still, the respondents claimed that, enabling tracking of funds(weight 2.57 on a five point likert scale) is less influential in encouraging a public hospital to operate a bank account. This means that assurance of security of hospital funds and helping keep track of hospital transactions are the major factors which influence opening of bank accounts while tacking of funds is less influential. On one hand, these findings are consistent with Attom (2014) who observed that a business's bank account helps it to keep track of business transactions and also ensures the security of its funds, while on the other hand they differ on the claim that, operating bank accounts enables tracking of funds.

3.4 Effects of Book Keeping and Operational Performance of Public Hospitals

The established effects of book keeping on the operational performance of hospitals. It is perceived that, to some extent, book keeping has some influence on the operational performance of an organization.

Table 3: Effects of Book Keeping on Operational Performance of Public Hospitals

	Strongly Agree 5	Agree 4	Undecided 3	Disagree 2	Strongly Disagree 1	Σf_i	$\Sigma f_i x_i$	$\frac{\Sigma f_i x_i}{\Sigma f_i}$
To facilitate cash payment of supplies on daily basis	35	39	13	5	0	92	380	4.13
To reconcile cash and bank accounts of payments of government funds	34	41	15	4	0	92	379	4.11
To maintain cash receipts on daily basis	34	22	21	6	3	92	336	3.91
To prepare balance sheet at the end of accounting period	0	2	21	41	28	92	181	1.97

The respondents agreed that the hospitals facilitate cash payment on daily basis and reconcile cash and bank accounts as reflected by the respondents rating weight of 4.13 and 4.11 on a five point Likert scale. The respondents were not decided on whether or not the hospitals maintain cash receipts on daily basis (weights 3.91). This disparity on this claim that book keeping maintain cash receipts on daily basis indicate that cash receipts is not priority in public hospitals. This could be due to the fact that cash receipts in hospitals largely depend on the number of patients which is difficult to predict. The respondents also strongly disagreed to the claim that hospitals prepare balance sheet at the end of accounting period (weight 1.97 on a five point Likert scale). This means that the public hospitals are very much concerned about making cash payments on daily basis and also reconcile cash and bank accounts. This could be the probable reason why some of the hospitals do not operate bank accounts. These findings are consistent with Ademola et al. (2012) who observed that book keeping facilitates cash payment on daily basis besides reconciling cash and bank accounts. However, the study disagreed

with Ademola et al. (2012) who stated that book keeping assists in preparing balance sheet at the end of accounting period. This could be because balance sheets and profit and loss accounts are rarely kept in public sector.

3.5 Effects of Cash Management Practices on Operational performance of Public Hospitals

The study established the effects of cash management practices on operational performance. Several attributes of operational performance were presented on a five point Likert scale and respondents were asked to rate them.

Table 4: Effects of Cash Management Practices on Operational Performance Indicators

Operational Performance Indicators in the Hospital	Most affected 5	More affected 4	Moderately affected 3	Less Affected 2	Not Affected 1	Σf_i	$\Sigma f_i x_i$	$\dfrac{\Sigma f_i x_i}{\Sigma f_i}$
Adequate child weighing scales	92	2	0	0	0	92	451	4.90
Adequate adult weighing scales	82	10	0	0	0	92	443	4.82
adequate supply of safe water	28	58	3	3	0	92	383	4.16
Un-interrupted supply of electricity	26	62	3	1	0	92	379	4.12
Adequate Space for patients	7	80	3	0	0	92	374	4.06
Adequate disinfectants	30	50	9	3	0	92	374	4.06
Written infection control guideline at the hospital	8	82	2	0	0	92	374	4.06
Adequate maternity beds/rooms	4	35	46	6	1	92	309	3.36
Adequate beds in the hospital for patients.	10	26	44	10	2	92	298	3.24
Adequate supply of syringes and needles	0	5	37	32	18	92	221	2.40
Adequate personnel in the hospital	0	2	27	53	10	92	212	2.30
Adequate supply of drugs	0	2	34	23	33	92	197	2.14
Enough buildings housing hospital facilities	0	0	21	13	16	92	194	2.10
Adequate gloves for use in hospital	0	0	24	42	26	92	184	2.00

As table 4 shows, it was agreed that the hospital has enough child weighing scales (weight 4.90), enough adult weighing scales (weight 4.82), and there is enough regular supply of safe water in the hospital (weight 4.16). The respondents also agreed that there is constant supply of electricity in the hospital, there is adequate waiting area for patients, the hospital has enough disinfectants, and that there are written guidelines in at the hospital. All these claims were given a weight of over 4 on a five point Likert scale. Indicating that cash management practices directly affect their adequacy in the hospital in relation to provision of Medicare services. These findings concur with the study by WHO (2008) which stated identified regular water supply from safe source on-site, waiting area protected from sun and rain, communication equipment and electricity, regular and adequate provision of basic equipment for instance adult weighing scale, child weighing scale, infection control as the service delivery indicators in hospitals focusing on low and lower middle income countries. However, the study "disagreed" with the claims that the hospitals have adequate supply of syringes and needles (mean 2.40), there are enough personnel in the hospital (weight 2.30) and that the hospital has adequate supply of drugs (2.14). Besides, there was also disagreement on the claim that there are enough buildings housing hospital facilities (weight 2.10) and that the hospital has enough gloves for use (weight 2.00). These claims were in disagreement with the study by WHO (2008) which identified regular and adequate provision of basic equipment for needles and syringes, gloves, drugs and diagnostics and human resource as key in strengthening service delivery in hospitals so as to achieve the Millennium Development Goals.

3.6 Regression Analysis Results

The regression analysis used the equation:

$$OP = \beta_0 + \beta_1 CB + \beta_2 BA + \beta_3 BK + \varepsilon$$

Where
CB – Cash budgeting
BA – Operating bank account
BK – Book keeping
ε – Error term

Table 5 Coefficients of the Regression

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	271.85	160.900		.410	.007
Cash Budgeting	1.21	1.828	.389	.548	.046
Bank Account	4.024	3.327	.141	.298	.025
Book Keeping	20.2241	5.257	.493	.765	.001

a.   Dependent Variable: Operational Performance of Hospitals

The coefficients so found were used in the linear regression equation below

$$OP = \beta_0 + \beta_1 CB + \beta_2 BA + \beta_3 BK + \varepsilon$$

$$OP = 271.85 + 1.21CB + 4.024BA + 20.2241BK_{,,}$$

From table 5 the positive values of unstandardized beta coefficients are statistically significant in inferring operational performance imply that, cash budgeting, operating bank accounts and book keeping have positive effects on the operational performance of public hospitals. It is also evident from the table that cash budgeting account for 38.9% effect size in influencing operational performance, operating bank accounts account for 14.1% effect size in influencing operational performance while book keeping account for 49.3% effect size in influencing operational performance in public hospitals. This means that all the three independent variables under study in the three objectives (cash budgeting, operating bank account and book keeping) all have significant influence on the operational performance of the public hospitals.

An Analysis Of Variance (ANOVA) test was run using the SPSS version 21 in an effort to determine the significance of each of the independent variables on the dependent variables. The findings were as presented in table 6 below

Table 6: ANOVA Results

		Sum of Squares	df	Mean Square	F	Sig.
Cash budget	Between groups	23412.860	3	7804.28	2.11	.003
	Within groups	328693.718	89	3693.19		
	Total	562822.32	92			
Bank accounts	Between groups	182534976.17	3	60844992.06	13.92	.000
	Within groups	389128716.76	89	4372232.77		
	Total	221447792.93	92			
Book keeping	Between groups	2178452445.65	3	726150815.20	8.32	.009
	Within groups	7767781250.000	89	87278441.01		
	Total	49946233695.652	92			

This means that, at 5% level of significance, the factors "cash budget" (P-value .003), "Bank accounts" (P-value .000) and "Book keeping"(P-value .009) are all significant in determining the operational performance since their P-values are less than 5%. This means that cash budget, operating bank account(s) and book keeping all have a significant influence in determining the operational performance of public hospitals.

Table 7 Model Summary of Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.678[a]	.652	-.096	219366.08274

a. Predictors: (Constant), Cash Budgeting, Bank Account, Book keeping practices

The value R^2 also called the coefficient of multiple determinations is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. As table 7 depicts, the value of the coefficient of determination, R^2 was found to be .652. This communicates the fact that 65.2% of the effects of Cash management practices determines the operational performance of public hospitals and explained its variation upto by the three independent variables under consideration in this study (cash budgeting, operating bank account and book keeping. The remaining 34.8% of the operational performance are explained by other factors outside the model; further implying a positive and fairly strong correlation between the independent variables and dependent variables in this study.

4.0 Conclusion

 Based on the findings the study concludes that cash budgets assist in making cash flow projections, ensures budgetary control, reduces initiative and innovation and controls a hospital's spending habits although they do not interfere with the attainment of the hospital's goals and neither can it create competition of resources and politics. Secondly, operating a bank account ensures security of hospital funds besides helping keep track of hospital transactions. Thirdly, the hospitals keep records of all cash payment on daily basis and that Budgeting facilitates accountability although the hospitals do not prepare balance sheet at the end of accounting period. Cash management practices have positive effects on the operational performance of public hospitals; therefore management and stakeholders including the government should encourage the use of these cash management practices to improve on the operations of these hospitals purposely to provide health services to the general public in the most effective and efficient way.

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