Customer Relationship Management in the Healthcare Industry in Ghana

A Case Study in Ashanti Region and the Upper West Region

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THESIS TOPIC:

CUSTOMER RELATIONSHIP MANAGEMENT IN THE HEALTHCARE INDUSTRY.
A CASE STUDY IN ASHANTI REGION AND THE UPPER WEST REGION.

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Abstract
The recent rapid increase in the number and variety of information related to medical treatments, patients and healthcare management, has pushed hospitals to confront with essential issues related to the implementation of Customer Relationship Management (CRM) systems in order to improve healthcare services. A CRM system is an innovative technology that facilitates the process to acquire, develop, and maintain customer relationships more efficiently and effectively. From the business perspective, patients represent the major customers of the hospital. They receive and feel the healthcare services directly and realistically. Although the critical factors for the enhancement of CRM implementation have been identified in previous studies, few have specifically explored CRM systems implementation and enhancement in the hospitals despite the fact that it has dramatic impacts on the quality of healthcare services and patients satisfaction. This study considers this issue and aims at assessing PRM implementation and the ways to enhance it in Ghana’s public healthcare system considering two hospitals: Wa Regional and the Komfo Anokye Teaching hospital.

Data were collected through interviews and questionnaire. The results indicated essentially that the major objectives and benefits of CRM initiatives of these two healthcare institutions were improvement of customer service, cost reduction, customer retention and loyalty. Also, poor communication appeared as the major barrier to CRM implementation. It was also found out that the hospital size, the information system capabilities of staff, innovation of senior executives; knowledge management capabilities have significant influence on the CRM systems adoption. Finally, based on the obtained results, some recommendations are made concerning actions that should be undertaken to enhance CRM adoption and efficiency in healthcare institutions in Ghana.
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CHAPTER ONE

1.0 Introduction

This chapter in the thesis research proposal introduces the background information related to customer relationship management in the healthcare industry. This will be followed by problem statement discussion, which will help readers understand the insight of the research area. The problem statement ends with justification of the study and its purpose, specific research questions and the outline of the thesis.

1.1 Background

Customer Relationship Management (CRM) is about customer care and business strategy and the use of IT to achieve the objective of profitability through enhanced customer relations. According to Peter Keen (2009), we are on the threshold of a shift from a transaction-based economy to a relationship-based economy. The challenge over the next few years will be for Marketers, Business Unit executives to work closely with IT Professionals within the Company in order to understand the emerging CRM/eCRM methods and to see how it can be used to increase the profitability of the business. To remain competitive in today’s global economy, there is an urgent need to strengthen customer relations for ways to extend market reach, improve quality and customer service so as to increase profitability. Today marketing is just not developing, delivery and selling; it is about developing and maintaining long-term relationship with customers. Effective CRM has become a strategic imperative for companies in virtually every business sector. Companies are finding new innovative in creating value for its customers and transforming it into solution finding rather than selling and taking order. CRM is actually a tremendous step forward in creating a system that provide a means of retaining individual loyalty in a world of about six(6) billion population (Croteau & Li, 2009)

Furthermore, it also said that for one to understand CRM one must also understand
the changing nature of customers (Greenberg, 2008). Over the past decade, CRM has fascinated not only academics but also practitioners. Gartner group (2001) estimated that annual investment in CRM technology would surpass 76 US dollars. Customer Relationship Management has therefore been in existence over the years as far as people traded with each other. In those days, the physical closeness in location between the customer and the supplier led to the relationship. Even in less developed countries like Ghana and traditional societies, such business models currently still exist. People congregated on market days and the customers usually buy from people they know, and have bought from before. The supplier also knew his customers well, what they liked, how they liked it, what they did not want, and was able to deliver the needs and wants of the customers. Based on their knowledge of the customer, they could also add sweeteners to ensure customer loyalty, and bring in related samples to introduce their existing customers to new things. Their loyal customers then spread the word and introduced other customers to them. Gradually, they became well known for what they sold or provided.

Many different types of companies, both large and small, utilize CRM. The exact methods and devices employed will vary from one business environment to another. To get an idea of how a given company employs CRM, try looking for information on their customer service structure, or general customer care strategies. Customer relationships are at the heart of every business: how the people who keep your company afloat are treated. That is what customers do: they pay your wages, but too often, we see customers as a nuisance, as difficult, even as incidental to the business. We all go back to the people and places that make an effort, extend themselves and create some kind of connection with us. When we have been well ‘managed’, we become good customers, because loyalty and trust are built, dealing with those who treat us well is something we look forward to and appreciate. In turn, when you manage your customers well they will want to come back; they will want to deal with you or your company. They will know that if they present you with a difficulty, they are not going to get a blank stare; you will not get defensive or respond with, "Well, it’s not really my problem."
Actually, we believe that if you create good, healthy customer relationships, people will even forgive you your mistakes (as long as mistakes are not the norm!).

CRM is therefore an important issue in healthcare service especially when there is a potential for healthcare providers to build ongoing relationships with patients. In the competitive, healthcare environment, more healthcare providers focus on CRM with the assistance of information systems to deliver value over price.

According to Oliver, (2008), the value of CRM is to create and maintain good and long-term relationships with customers. Customer loyalty is a critical criterion for CRM. Loyalty refer to the repeated use of certain product and services by customers and even changes in business scenarios will not affect the purchase patterns or willingness to continue to use those products or services. Therefore, the core of the CRM in healthcare service is to satisfy patients’ interest and needs to increase the patient loyalty level.

A healthcare system over-wrought with inconsistencies and errors can prevent even the best organization from developing strong relationships with its patients. Customer relationship management (CRM) for the healthcare industry sounds simple enough. In fact, one might think that the concept of CRM is implicit in the practice of healthcare. There are few relationships as important as the one-to-one relationship between a patient and his or her healthcare provider. When patients choose providers, they trust those providers to have accurate and complete information about their health. Patients no longer tolerate the excuse that errors and inconsistencies in their medical information are just an unfortunate side effect of dealing with large amounts of data. The industry has begun to take notice and patients are pushing back at provider systems for accuracy, comprehensive record-keeping and stronger programs. The healthcare industry is in desperate need of a "patient service" overhaul to help organizations manage their customer relationships." (Springe-Verlog Berlin Heidelberg, 2009).
Patient relationship management (PRM) is an overarching strategy (not just a technology) for identifying and anticipating diverse patient and clinician needs and preferences in order to tailor communications and programs accordingly. The currency for these transactions is patient data. The resulting benefits typically include improved customer service; reduce medical error, better productivity, cost savings and improved health outcomes to name a few. This report first outlines the impetus for PRM stemming from the pervasive fragmentation of healthcare delivery and supporting data, then summarizes the “nuts and bolts’ of PRM, and finally highlights how several PRM initiatives are providing valuable benefits to both patients and providers. (Halpern D and Bates C., 2010)

"One-to-one relationship," "trust", "accurate and complete information” represent ideals upon which the tenets of coordinated, timely, and accessible healthcare have always been established. Yet, the fragmentation of patient care and supporting data is not new. Russell and Otley (2009) pointed out that, in the beginning, there was the physician and the patient, whose relationship was built on trust and good communication. Itinerant doctor could offer care in only one location at a time within a limited sphere of knowledge and collaboration. Today, despite medical, technological, and communication advances that minimize professional isolation, transient and discrete healthcare encounters are common in an age of myriad health care organizations and savvy, mobile ‘customers’ (a.k.a. patients) seeking optimal and immediate care for complicated conditions.

Healthcare is "characterized by complexity and fragmentation, with discrete silos of information often controlled by separate entities," with the patient left adrift, feeling frustrated and dissatisfied, and providers "lacking a comprehensive clinical picture of the patient." In essence, this milieu of fragmentation has rendered unwieldy data the elusive ‘ghost in the machine,’ despite best efforts in the past to leverage technology as a panacea for streamlining healthcare (Russell et al, 2009).
As outlined in Halpern D. and Bates C. (2010) previous World View report on business intelligence in healthcare, these concerns are now being addressed with improved methods for integrating and analyzing data, transforming analysis from retrospection to prediction and ‘real-time’ processing in order to help organizations adopt best practices.

It is nearly impossible to go a week without seeing a news story about alarming increases in the rates of chronic diseases, or about the need to increase focus on disease prevention. As much as clinicians want to assist in proactively addressing the overall well-being of their patients, silos of electronic information stored in multiple systems or even cumbersome paper-based records hinder them. (Bob Young, 2010)

Increased pressure to contain costs has put an even greater strain on under-funded healthcare information technology (IT) budgets, putting large-scale system overhauls out of reach for most healthcare organizations. More and more, healthcare IT professionals are looking to commercial applications that can integrate with current systems to make significant incremental improvements in patient care and satisfaction. By providing a centralized view of patient demographic information, standardizing and streamlining processes, and enabling proactive communications, a PRM system can help physicians improve their patients' overall health. Additionally, patients will be more satisfied with the service they receive, which increases the likelihood they will make regular preventative healthcare an ongoing priority. (Hagland M, 2009).

Healthcare encompasses one of the world’s largest and fastest-growing industries, consuming more than 10 percent of the gross national product for most developed nations. In the United States, as in many other countries, healthcare reform has been debated for several decades, with cost reduction consistently remaining a top priority for both the public consumers and providers. A major provider of healthcare in the southern United States initiated data center consolidation projects over recent years as
one way to reduce costs. Minimizing the number of servers achieved the goals for cost savings, but introduced the need to balance applications more efficiently over fewer resources.

The application infrastructure included load balancing and Secure Sockets Layer (SSL) off-loading for the provider’s Siebel deployment, but it had evolved into a cobbled-together combination of products from multiple vendors. Cisco Local Directors were combined with an SSL off-loads product and a software-based front-end load balancer, both from other vendors. Managing the products became very cumbersome. The Siebel deployment at this company included Siebel 7.7 Customer Relationship Management (CRM) enterprise software. This mission-critical application supported the daily work of more than four thousand (4000) customer service representatives supporting more than 8 million customers. Potentially, all of the representatives could be accessing the Siebel applications, making it critical that servers could meet and exceed this load for current and future demand. The provider’s requirements were not solely focused on the performance of the Siebel applications. Given the large number of support issues surrounding the provider’s previous solution, manageability of the application infrastructure was a priority. The provider also wanted to be able to address application scalability easily, without a complex server load balancing and SSL off-loading solution.

For years, public sector businesses have realized the benefits of deploying customer relationship management (CRM) systems that help them build long-term customer relationships. In turn, consumers have grown accustomed to dealing with businesses that proactively understand and serve their needs. Microsoft Dynamics CRM can seamlessly address patient relationship management (PRM) needs as well. Using PRM software applications, healthcare providers can move beyond treating episodes of illness to enabling proactive care by establishing productive, long-term relationships with patients. (Sumit Vimani, 2007)
1.2. Justification of the Study

The study is of great importance to management/healthcare administrators to help them provide a better patient relationship management to satisfy the patients’ needs and wants for a sustainable ‘customer’ loyalty.

Effective health care is important to individuals and nations alike. Indeed, it is a basic ingredient in the formula for a stable productive society. Today, however, there is growing concern over a looming crisis in healthcare. For example, in Ghana, which is known for extensive social programs, a recent poll found that 82% of the population was concerned about the collapse of their health system, and also, where healthcare is a perennial political issue; some 46.6 million people did not have health insurance as of 2005. Such realities are prompting a number of observers to question whether the current healthcare system is in fact sustainable. To many, the answer is no.

According to Wanless D, (2010), the challenges are so complex, that healthcare systems around the world need to fundamentally change the way they do business. Without such change, projections suggest, the current system will eventually collapse.

1.3 Research Main Objective

The purpose of this study is to evaluate and see how to enhance PRM implementation in Ghana’s public healthcare system considering two case studies: Wa Regional and the Komfo Anokye Teaching hospital.
1.4 Research Questions

Based on the research purpose, the following research questions are posed in order to address the purpose:

1. What type of benefits would the hospitals derive from the implementation of PRM in their healthcare activities?

2. What strategy and what technology have the selected hospitals adopted so far in terms of PRM to establish productive and long-term relationships with their patients?

3. What are the main barriers to PRM implementation in public hospitals in Ghana?

4. In which respect could the PRM implementation be enhanced in the selected hospitals and in Ghana’s public healthcare system in general?

1.5 Delimitations of the Study

The research covers public healthcare institutions in the Komfo Anokye Teaching Hospital in the Ashanti Region and Wa Regional Hospital in the Upper West Region providing healthcare to clients or patients in Ghana. Hence, the size of the sample will influence the inferences drawn about the population under study. The research focuses primarily on the customer relationship management in the public healthcare industry under study.
1.6 The Outline of the Thesis

This study contains five chapters. The first chapter deals with the introduction of the study. It comprises the background, the problem justification, the research objective, and the research questions. The second chapter deals with the literature review related to the tackled issues. The third chapter will be dedicated to the research methodology, and the methods used to obtain the relevant data for the study, the research design, the sample and the sampling procedure, the instruments, as well as the problems encountered in data collection from the study areas specifically Komfo Anokye Teaching Hospital and Wa Regional Hospital. The fourth chapter deals with the presentation of data and their analysis. Finally, the fifth chapter presents the findings, conclusions and recommendations of the study.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction
The previous chapter provided the problem discussion of the area of this study leading down to specific research questions. In this chapter, earlier studies related to the research subject will be reviewed. The aim of this chapter is to provide relevant literature in the field of Customer Relationship Management (CRM).

2.1. Customer Relationship Management (CRM)
A great number of definitions of Customer Relationship Management (CRM) exist in the literature. We present in what follows some of these definitions who helped us most understanding this concept. (Bose and Sugamaran, 2003), stated that: “CRM is an umbrella concept that places the customer at the centre of an organization. Customer service is an important component of CRM however; CRM is also concerned with coordinating customer relation across all business functions, points of interaction, and audiences”

“CRM isn’t a technology. As you will see, that is true, but not strictly. We also heard that it was a customer facing system. That is a strategy and/or a set of business processes, a methodology. It is all of the above or whichever you choose” (Greenberg 2001).
While retaining customer loyalty has been a sale principle for a very long time, according to Croteau and Li, (2001), CRM is actually a tremendous step forward in creating a system that can provide a means for retaining individual loyalty in a world of many souls. In order to understand CRM, one must also understand the changing nature of the customer because customers are not what they used to be (Greenberg, 2001).

Dyche (2001) defined CRM as an infrastructure that allows an increase in customer value, and the correct means by which to motivate valuable customers to remain loyal.
According to Brown (2000), CRM is neither a concept nor a project. Instead, a business strategy, which aims to understand, anticipates and manages the needs of the organizational current and potential customer. It is a journey of strategic, process, organizational and technical change whereby, a company seeks to better manage its own enterprise around customer behaviors. CRM is the process of acquiring, retaining and growing profitable customers. It requires a clear focus on the service attributes that represent value to the customer and create loyalty.

According to (Handen, 2000), CRM consists of five elements: strategy, technology, segmentation, process and organization.

CRM in the point of view of Harris (Harris, 2000) is a technology-enabled strategy to convert data driven into business actions in response to, and in anticipation of actual customer behavior. From a technology perspective, CRM represents a process to measure and allocate organizational resources to activity that has the greatest returns and impact on profitable customer relationship.

CRM is also considered by (Nicollet, Andren and Gilbert, 2000) as an enterprise-wide business strategy design to optimize profitability revenue and customer satisfaction by organizing the enterprise around customer segment, fostering customer satisfying behaviour and linking processes from customers through suppliers. Key CRM technology investment provides better customer understanding, increases customer access, more effective customer interaction and integration throughout customer channel and back-office enterprise function. The application domain of CRM includes technology enabled-selling, customer service and support, technology enabled-marketing.

According to Gefen and Riding (2002), CRM can be divided into three different types: operational, analytical and collaborative. Operational CRM is also known as front office CRM, enables and communication and involves the areas where direct customer contact occurs for example, call centre or email promotion (Romano, 2003). Operational CRM attempts to provide seamless integration of back-office transactions with customer interfaces. The majority of self-described CRM products on market today fall into the operational category (Adebango 2003).
Analytical CRM, also known as back-office or strategic CRM, involves understanding the customer activities that occurred in the front office and enables an organization to analyze customer relationships through data running (Gefen and Riding, 2002; Shaw, 2001). Analytical CRM requires technology to compile and process the mountains of customer data to facilitate analysis and new business process to refine customer-facing practices in order to increase loyalty and profitability (Adebango, 2003).

CRM is almost an overlay (Greenbery, 2001). It is the communication centre, the coordination network that provides the neutral paths to the customer and supplier (Schubert and Koch, 2002). It could mean a portal, a partner relationship management application, or a customer interaction center (Gefen and Riding, 2002). According to Fayerman (2002), it could also mean communication channels such as the web or e-mail voice applications or snail email. Fayerman (2002) further states that it also could mean channel strategies. In other words, according to Schubert and Koch (2002), any CRM function provides point of interaction between the customer and the channel itself.

According to Greenbery (2002), the goal with CRM is to recognize and treat each customer as an individual using the three types of CRM; operational CRM, analytical CRM, and collaborative CRM as already described above.

We end this part on the explanation of CRM with (Gartner, 2010) who gives a rather comprehensive definition stating that CRM is a broadly recognized, widely implemented strategy for managing a company’s interactions with customers, clients and sales prospects. It involves using technology to organize, automate, and synchronize business processes, principally sales activities, but also those for, marketing, customer service and technical support. The overall goals are to find, attract, and win new clients, nurture and retain those the company already has, entice former clients back into the fold, and reduce the costs of marketing and client service. CRM denotes a company-wide business strategy embracing all client-facing departments and even
beyond. When an implementation is effective, people, processes, and technology work together to increase profitability, and reduce operational costs.

2.1.1 Phases of CRM

According to (Gartner, 2010), the three phases in which CRM helps to support the relationship between a business and its customers are, to:

- Acquire: a CRM can help a business in acquiring new customers through excellent contact management, direct marketing, selling and fulfillment.
- Enhance: a web-enabled CRM combined with customer service tools offers customers excellent service from a team of trained and skilled sales and service specialists, which offers customers the convenience of one-stop shopping.
- Retain: CRM software and databases enable a business to identify and reward its loyal customers and further develop its targeted marketing and relationship marketing initiatives.

2.1.2 CRM Systems Implementation and related Issues

Increases in revenue, higher rates of client satisfaction, and significant savings in operating costs are some of the benefits to an enterprise. Proponents emphasize that technology should be implemented only in the context of careful strategic and operational planning. Implementations almost invariably fall short when one or more facets of this prescription are ignored:

- Poor planning: Initiatives can easily fail when efforts are limited to choosing and deploying software, without an accompanying rationale, context, and support for the workforce. In other instances, enterprises simply automate flawed client-facing processes rather than redesign them according to best practices.
Poor integration: For many companies, integrations are piecemeal initiatives that address a glaring need: improving a particular client-facing process or two or automating a favored sales or client support channel. Such “point solutions” offer little or no integration or alignment with a company’s overall strategy. They offer a less than complete client view and often lead to unsatisfactory user experiences.

Toward a solution: Experts advise organizations to recognize the immense value of integrating their client-facing operations. In this view, internally focused, department-centric views should be discarded in favor of re-orientating processes toward information sharing across marketing, sales, and service (Gartner, 2010).

2.1.3 Adoption Issues

Historically, the landscape is littered with instances of low adoption rates. A report by Gartner (2010) estimated that more than $1 billion had been spent on software that was not being used. More recent research indicates that the problem, while perhaps less severe, is a long way from being solved. According to Central Service Organization (CSO) Insights (2010), less than 40 percent of 1,275 participating companies had end-user adoption rates above 90 percent. In a Healthcare Information and Management System Society (HIMSS) (2010) survey from the U.K., four-fifths of senior executives reported that their biggest challenge is getting their staff to use the systems they had installed. Further, 43 percent of respondents said they use less than half of the functionalities of their existing system; 72 percent indicated they would trade functionality for ease of use; 51 percent cited data synchronization as a major issue; and 67 percent said that finding time to evaluate systems was a major problem. With expenditures expected to exceed $11 billion in 2010, enterprises need to address and overcome persistent adoption challenges. Specialists offer these recommendations for boosting adoptions rates and coaxing users to blend these tools into their daily workflow:
Choose a system that is easy to use: not all solutions are created equal. Some vendors offer more user-friendly applications than others, and simplicity should be as important a decision factor as functionality.

Choose the right capabilities: Employees need to know that time invested in learning and usage will yield personal advantages. If not, they will work around or ignore the system.

Provide training: Changing the way people work is no small task, and help is usually a requirement. Even with today’s more usable systems, many staffers still need assistance with learning and adoption.

Lead by example: Showing employees that upper management fully supports the use of a new application by using the application themselves may increase the likelihood that employees will adopt the application.

2.1.4. Privacy and Data Security System

One of the primary functions of these tools is to collect information about clients, thus a company must consider the desire for privacy and data security, as well as the legislative and cultural norms. Some clients prefer assurances that their data will not be shared with third parties without their prior consent and that safeguards are in place to prevent illegal access by third parties.
2.2 Application of Customer Relationship Management in Health Care

According to Alshawi (2005), Health care sectors of many nations are now opting for CRM for building a bridge of trust between hospital and customer. The CRM system enables healthcare sectors to get essential customer information and use it as efficiently as possible. CRM orchestrates a number of methodologies in a synchronized approach to delivering healthcare. As one of the most complex information management system, CRM system cannot be set up overnight. It needs a daily accumulation of data from both in-patient and outpatient departments terminals via multi-media platform and integration with other ancillary technical systems (Wan Yina, 2010).

In today's world, the medical sector is finding the need to know more and more about its current and prospective clients. The more efficient service hospitals can give their patients, the further they will go in retaining them. It springs from the eternal truth that the more you know your patients, the better you can respond to their current needs and predict what their future needs may be as well (Gartner, 2010).

The Health Care sector is now opting for CRM in its daily application. CRM Health Care consists of a wide array of software products that help healthcare organizations to maintain excellent relationships with their clients. CRM thus helps the health care sector to improve patient health, increase patient loyalty and patient retention and add new services as well. CRM Health Care Services include:

- Strategic Planning
- Communication Services
- Consulting Services
- CRM for Physicians
- Campaign Management
- Database Construction
- Predictive Segmentation
Communications Strategies

2.2.1 CRM Aids Customer Service

CRM provides the organization with the chance to acquire and retain customer relationships. It serves to convert almost every customer interaction into a health management opportunity. Its diverse functionality enables employers, customers and employees to access common information. Millions of patients or customers are being contacted daily through phone, e-mail, fax, and face-to-face interactions. All these increase the need for an affective and well-coordinated customer approach. CRM Healthcare supports the call centre by providing customer service representatives with essential customer information. This helps the health care sector to access critical information and deliver value to customers. CRM solutions succeed in transforming healthcare organizations into customer-centric efficient providers of health care. The healthcare industry has realized the importance of quality of service. CRM industry leaders now offer CRM solutions to help healthcare organizations deal with customer service issues while delivering excellent health services.

In addition, CRM helps Healthcare organizations plan and carry out sales and medical management campaigns. Healthcare CRM software increases the efficiency of call centers. It also assists the initiatives of medical management and facilitates the collection of information regarding physicians, hospitals and supplementary medical providers. In addition to this, it maintains secure and comprehensive information regarding physician profiles that can be used by both the sales and marketing department. (Lewis Dolan 2010)
2.2.2 CRM Aids in Overall Profitability

Most CRM industry leaders possess the latest IT technology along with excellent healthcare market industry knowledge and thus succeed in enabling the reduction of medical errors. The element of cost has also to be taken into consideration and healthcare organizations have realized that they need to make the patient the focal point of the business application. CRM helps the health sector to reduce operating costs, reduces the risk of errors, and facilitates better relationships with patients. While improving overall efficiency, it assists in supplying medical professionals and their patients with a means by which they can communicate effectively. It also maintains a comprehensive database of health care providers, thus enabling health care organizations to effectively manage their relationships with them. (ibid)

2.2.3 Health Industry Using Enterprise Health Relationship (EHR) Data to Target Patients in Marketing

Lewis Dolan (2010) reports that the healthcare industry is increasingly using customer relationship management systems to send to doctors and patients information they may be interested in based on their medical history and electronic health records. CRM software has largely been used to generate targeted e-mail campaigns personalized Internet content or phone banks that can be used to track information on physicians. However, the technology is increasingly being used to track patients because Enterprise Health Relationships (EHRs) provide a significant amount of data on patients.

EHR can be interoperable with CRM software, which increases the amount of data available and the accessibility of that data. Experts say that CRM software faces unique challenges in the health industry, particularly when targeted at patients because of the Health Insurance Portability and Accountability Act (HIPAA) regulations on patient privacy. Current HIPAA policies allow for the use of patient data for marketing purposes but require such use to maintain standards on patient trust. For example, some healthcare providers allow patients to decide whether they want to receive
customized information so that they know precisely what they will get (Lewis Dolan, 2010)

2.2.4 Patient Relationship Management (PRM)

(Russell and Otley, 2009) define the PRM as follows: "PRM introduces the principles of Customer Relationship Management (CRM) to the world of healthcare. Patient Relationship Management (PRM) is a commitment to understanding patients as individuals and then communicating relevant information to them and their caregivers using the medium they prefer. PRM is not a technology but rather a vision realized through technology; technology grants the ability to achieve more cohesion between the disparate parts of the healthcare system, which in turn improves both clinical outcomes and patient satisfaction".

According to (Lewis Dolan 2010), PRM applications can:

- Help prevent additional illness. With a 360-degree view of the patient, physicians can more easily identify relationships between current symptoms and future health concerns.
- Improve the quality and consistency of care. Automated processes can be created to ensure critical safety procedures are followed, and that the organization is in compliance with privacy and other regulatory policies.
- Speed routine processes, such as admissions, referrals, and discharges. By analyzing the performance of routine processes over time, improvements can be made that eliminate unnecessary steps and increase patient satisfaction.
- Eliminate time wasted accessing information. By electronically storing indexed documents, such as treatment plans, symptom-and-diagnoses relationships, and reference articles, less time is spent searching for information needed to deliver quality care.
- Automate proactive communications. By viewing patient data sorted by certain characteristics, targeted proactive communications can easily be sent. For
example, mailings to diabetic patients can inform them of new information, treatment options, or upcoming educational offerings.

- Reduce the number of missed appointments. Tasks can easily be set up to streamline appointment reminder calls. Automated processes can be put in place for follow-up and rescheduling should appointments be missed.

By providing a centralized view of patient demographic information, standardizing and streamlining processes, and enabling proactive communications, a PRM system can help physicians improve their patients' overall health. Additionally, patients will be more satisfied with the service they receive, which increases the likelihood they will make regular, preventative healthcare an ongoing priority (Bill Crounse’s, 2010).

2.2.5. Key Aspects of Patient Relationship Management (PRM)

PRM orchestrates a number of methodologies in a synchronized approach to delivering healthcare. Experts caution against rapid implementation and advocate instead a deliberate sequencing of these strategies in order to achieve desired results.

2.2.5.1 Enterprise Identity Management and Data Integration (EIM)

A crucial first step is the establishment of a system for accurately identifying ‘customers’ (patients, clinicians, etc). As Schumacher (2006) underscores, "one in 10 returning patients is not properly identified by his hospital system when he arrives for care." He goes on explaining that integration of enterprise-wide data is crucial to improving customer service. EIM provides the integration needed to bridge operational systems (such as electronic patient records) and thus supports data integrity across the organization. This in turn enables the development of "a mission-critical data warehouse of the most valuable asset i.e. patient data." Without a rigorous level of data integration, standardization, protection from error, and traceability, Patient Relationship Management (PRM) solutions will be stymied. An integrated single
database enables healthcare organizations to perform what Paddison (2006) describes as the "Patient Relationship Management (PRM) closed-loop cycle": Collect aggregate data – Analyze individual needs and preferences – Develop relevant messages based on individual needs and preferences – Deliver communications through preferred channels (direct mail, e-mail, phone, and fax) – Analyze results and refine the approach.

2.2.5.2 Outcomes Management and Predictive Modeling:

Outcomes analysis combined with predictive modeling offer a powerful means to deliver disease management. Healthcare organizations can, by: a) predicting who is at-risk for developing certain conditions, and b) identifying of those already diagnosed who is likely to develop complications, provide preventive interventions instead of more expensive treatments that may otherwise be required for acute episodes. In this manner, according to Plocher (2009), "outcomes for an entire population can be handled and improved."

This multi-layered foundation serves as the infrastructure for building a successful PRM strategy, the survival of which depends on strong change management and communication plans to ensure alignment between business needs and organizational models in support of strategic objectives (Phillips, 2009).
2.3 Benefits of Patient Relationship Management (PRM) in the Health Care Industry

According to Sumit Vimani, (2007), Patient PRM applications can speed routine processes, such as admissions, referrals, and discharges by analyzing the performance of routine processes over time. Improvements can be made to eliminate unnecessary steps and increase patient satisfaction.

Furthermore, it can help prevent additional illness by physicians taking thorough examination of the patients all times to enable them easily identify relationships between current symptoms and future health concerns.

Moreover, PRM application can eliminate time wasted accessing information by electronically storing indexed documents, such as treatment plans, symptom-and-diagnoses relationships, and reference articles, less time is spent searching for information needed to deliver quality care.

The PRM can automate proactive communications by viewing patient data sorted by certain characteristics, targeted proactive communications that can easily be sent. For example, mailings to diabetic patients can inform them of new information, treatment options, or upcoming educational offerings.

PRM can also contribute to improve the quality and consistency of care by creating automated processes to ensure critical safety procedures are followed, and that the organization complies with privacy and other regulatory policies.

Finally yet importantly is that PRM will reduce the number of missed appointments. Tasks can easily be set up to streamline appointment reminder calls. By putting automated processes in place for follow-up and rescheduling should appointments be missed (Sumit Vimani, 2007).
2.4. PRM versus CRM in Private and Public Health Care

Given the commercial marketing roots of CRM, it is important to distinguish the applicability of CRM principles to PRM in both private and public health care sectors. In brief, while CRM and PRM involve similar approaches, "the goal of CRM is ultimately to increase consumer spending. Conversely, PRM strives to give patients the information they need to make better healthcare choices, which will ultimately save them and the system money". Patient Relationship Management (PRM) also requires added consideration for handling complex data and the need to enforce airtight security and the appropriate use of patient data. (Russell & Otley 2009).

Despite the differences, commonalities between CRM and PRM enable stronger relationships that benefit from: greater anticipation of customer needs and wants, improved communication channels, timely and credible information, and the capture of tacit knowledge in essence knowing people better without wasting their time.

However, the marketing tactics of commercial persuasion and manufactured demand do not directly apply in healthcare; therefore, the best ‘marketing’ goal that a private for-profit healthcare organization can hope for in "the migration of CRM to PRM is the natural evolution of building the perception. When the need arises, the promoted physician practice or hospital is there to help you." (Wilson-Steele, 2009).

Nevertheless, ‘perception management’ also applies to public PRM in efforts to nurture relationships with a patient/provider audience receptive to preventive, cost-saving interventions that stave off the need for expensive acute care services. Responsibility for the public purse creates an impetus for seeking these efficiencies through this form of Citizen Relationship Management—the CRM equivalent in the public realm.

Driven by pressures to decrease costs, PRM in public health systems works to prevent "customer disconnects" and maintain a "360-degree view of the customer" (Phillips 2002), including functions like enhanced referral tracking and automatic reminders aimed at reducing missed appointments. According to Halpern and Bates (2006), in the National Health Service (NHS), the cost of "did not attends" (12.5% of outpatient appointments in 2000) "is a source of increasing concern" and "impacts seriously on
the health service’s ability to plan and deliver timely care” (Wanless Review 2010). This example illustrates how PRM applies practically in the public arena and could assist healthcare organizations to meet regulatory imperatives such as the UK’s Gershon(2005) Review requiring local authorities to achieve 2.5% efficiency savings each year, believed to be possible in large part through IT supported, streamlined processes.

2.5 Implementation of CRM in Health Care

According to Arlen Duncan (2002), CRM system needs a daily accumulation of data from both in-patient and outpatient departments’ terminals through multi-media platform and integration with other ancillary technical systems enable an effective CRM system to be completed after the following work is done well.

2.5.1 Integration of CRM system with Hospital Information System (HIS)

CRM system is the extension and complementation of HIS. Since medical data provides the basis to CRM in hospitals, CRM undoubtedly takes HIS as the main data source and has to assure the stability of HIS. The data in HIS database can be used at any time for data analysis and data mining. Based on the analysis of HIS data, CRM may find the management scheme and marketing model that fit the hospital best. Meanwhile, CRM may help to locate the key client groups and their special demand on service, as well as the general demands from common patients. Integrated with HIS, provides more comprehensive medical service, higher service quality and optimized configuration of medical resources. (Murray N. 2000)
2.5.2 Integration of CRM with Hospital Web Platform

Patients usually have to visit hospital when they need specialized clinical services, which requires a reservation ahead of time or a couple of days for laboratory outcome. Murray N. (2000) states that integrating with hospital web platform, CRM may reduce the frequency of patients’ visit to hospital by setting up an online reservation and outcome-check-up program to streamline the clinical process.

2.5.3 Integration of CRM with Call Centers

The regulatory environment for hospitals heightens the importance of appropriate corrective and preventive actions. Many hospitals use their CRM systems in the call center to handle the demand tracking process to ensure compliance. Traditional call service in hospitals only provides static information about clinical departments, doctors, medical fees, etc., based on which, no consultations can be made in accordance with the condition of patients then and there. It always requires a long time for patients explaining the symptoms of their own to get accurate information from hospitals. Integrating with call center, CRM can make operators aware of the information of patients including their identity, medical records, etc. when they make a phone call, so that it makes possible that operators can give an accurate and timely reply to patients and help them make a reservation with relevant doctors and specialists. When problems of patients are solved effectively and timely in the CRM model, a higher satisfaction about medical service will be achieved (Larry Yu, 2001).

2.5.4 Integration of CRM with short-message gateway

As an effective auxiliary of network communication, short-message gateway plays a significant role in information passage of CRM in hospitals. It is preferable to dispose bidirectional short-message gateway, through which reply messages from patients may be received. In practice, services such as message reminding, reservation confirmation and patient caring may be offered by sending messages (ibid).
2.5.5 Establishment of Customer Responding Mechanism and Database

Processing patients’ complaints is an important part of hospital routines. (Murray N., 2000) state that the mechanism integrating CRM platform with internet, telephone and mail system provides a multi-channel complaints management platform, where the advices and complaints are kept in record and timely response is made to enhance the satisfaction of patients and thus promote the standardization of hospital management. Arlen Duncan global director of IT for Diagnostic Ultrasound says the hospital’s CRM system plays an integral role in tracking patients’ complaints and providing data to the hospital’s quality system. “The users’ flag items for review by the quality assurance department as part of the hospital’s root cause analysis,” he says (Monteiro E, 2003).

According to Gartner’s Hagemeyer, (2009), most CRM packages are capable of handling complaints from patients. Wan Yina, (2010) points of differentiation are the ability to report directly to the regulatory agencies, supporting multiple points of entry into the complaint system, visibility of complaints throughout the hospital, and the ability to assess risk.

According to (Paul E. Smolke, 2009), PRM application can do the following:
Firstly, analyze the performance of routine processes over time (such as admissions, discharges, transfers, and referrals), improvements can be made to eliminate unnecessary steps and increase patient satisfaction.
Secondly, if patients have a better understanding of their role in ensuring good health, they can make better choices concerning their health and their lifestyle. That has the potential to have a significant impact on the health system.

Thirdly, the customized workflows can be developed to automate care coordination activities between provider institution (E.g., Hospital, Clinic, Home Health,), which can help improve patient outcomes while increasing operational efficiency and reducing costs.

Fourthly, clinicians can flag patients with specific chronic illnesses and automate targeted proactive communications to inform them of upcoming educational offerings.
and remind them of ways to manage their illnesses. Collaborative systems and processes will have to be able to accommodate new providers that emerge over time, such as home health organizations and disease-management and wellness companies.

The fifth point is that, the healthcare administrators will also have to provide a secure framework that protects patient privacy and consumer rights. In this vision, an informed patient will be able to make sound, cost-effective choices, working with a global healthcare community that can provide personalized, quality care. These choices, and the solid foundation of shared information provided by collaborative abilities, will help the entire system increase both efficiency and effectiveness. Altogether, this will help ensure that individuals and societies can rely on a strong and sustainable healthcare system long into the future.

The last but not the least argument is that the Government agencies, such as public health ministries, can monitor the entire healthcare community to improve the ability to detect disease outbreaks early on and quickly create effective interventions. Patients have the benefit of working with a health system that has a holistic, accurate view of their medical history, which is of course key to effective health care Customer Relationship Management (CRM) system that can enable segmentation of customers’ types to improve and tailor delivery (Paul E. Smolke, 2009).
CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter discusses the methods used to obtain the relevant data for the study, the research design, the sample and the sampling procedure, the instruments and finally the problems that we encountered in data collection.

3.1 Research Design

There are many research designs usually employed in the field of investigations. The design used for this study is the descriptive survey in the sense that data were systematically collected, at a point in time, analysed and presented to give a clear picture about the state of customers relationship management in the study area (healthcare). A descriptive research is basically designed to find out the existing situation of a particular phenomenon of concern. In other words, a descriptive research is the research, which deals with the relationship among non-manipulated variables. In descriptive research, the events or conditions either already exist or have occurred and the researcher mainly selects the relevant variables for an analysis for their relationships (Sarantakos, 2004).

The rationale for descriptive survey may be seen as:

- Telling what a situation is in a systematic manner
- Involving collection of accurate data for the purpose of determining the current nature of the subject of study
• Involving hypothesis formulation and testing or research questions and answers describing the situation using logical methods for inductive-deductive reasoning to arrive at generalizations.

The descriptive survey follows specific procedures and makes possible interpretation of data collected. Here, research questions are raised and answered in a descriptive way. Any other person therefore can follow the same procedure and come out with the same results.

The descriptive survey minimizes personality values; beliefs and predisposition of the researcher since there are laid down procedures to follow. The descriptive survey also provides the researcher with instruments, which are easier for the collection of data for the study.

Notwithstanding these strengths, descriptive survey has its own weaknesses. The main weakness of the descriptive survey is that, it is not sufficiently comprehensive to provide answers. Secondly, the descriptive survey cannot establish cause and effect relationships. Moreover, the researcher cannot deduce conclusively the cause of the phenomena or predict what the future phenomena will be. Furthermore, descriptive survey is costly when considered in terms of time and money when the target population is scattered.

This research examines what critical factors affect the implementation of CRMS in hospitals. It summarizes the factors, which influence the adoption of innovative technology into two categories: characteristics of organization and characteristics of CRMS. Factors related to the characteristics of organization include size of
organization, IS capabilities of staff, innovation of senior executives, and knowledge management capabilities. Factors related to characteristics of CRMS include relative advantage and complexity.

3.2 The Study Area

In the same way you dedicated the subsection above to Komfo Anokye Teaching Hospital, you should have a subsequent section here dedicated to your second considered hospital: Wa Regional Hospital

3.2.1 Health Facilities of Upper West Region, Wa.

The health sector is a very important component of the social system of every nation. There are two basic health care systems in the country and in the region; the orthodox Western allopathic type and the traditional mainly herbal practice. The majority of Ghanaians regards the traditional and modern medical systems as complementary and patronizes both of them.

The traditional medical system can be grouped into four main types of specialties, namely traditional birth attendants who play the role of midwives, especially in the rural areas, faith healers who operate from religious movements and derive their healing powers through faith in a divine being; fetish priests, including indigenous priests and priestesses of shrines, ritual and cult leaders, and herbalists. In some cases, a blend of spiritual and herbal healing is employed. The orthodox health
facilities are available in the region, which are Government, Mission and privately owned facilities.

The region has 10 hospitals, 60 health centres, 1 health post and three maternity homes. The Government owns 67.6 per cent of the health facilities in the region. Wa has the highest proportion, (32.4%) of health facilities, with the rest distributed fairly evenly among the other districts.

More than half of the available manpower in the region (56.2%) is made up of supporting staff, while professional and auxiliary nurses make up 38.8 per cent. The situation with medical doctors is not encouraging, considering that there are only 13 doctors for a population of 576,583 giving a doctor to population ratio of 44,353. The corresponding figure for nurses is 1,162 persons to a nurse. There is therefore the need for the District Assemblies to create the enabling environment for non-government participation in the orthodox health delivery system.
Figure 3.1: Map of the districts of Upper West Region

Districts: Wa West, Wa Municipal, Wa East, Nadawli, Lawra, Jirapa-Lambussie, Sissala West, Sissala East.
3.3 Population and Sampling Procedures

Oredein (2004) indicated that population relates to all members or elements in a given area which conform to the limits within which the research findings are applicable. He further stated that target population is all the members of a specified group to which the investigation relates from which a sample is chosen for the study. It is a recognised fact that the reliability and the accuracy of a survey is greatly determined by the sample size taken out of the sample population.

3.3.1 Population and sampling method

The population for this study is composed of the patients, healthcare authorities and other healthcare service providers of Wa Regional Hospital and Komfo Anokye Teaching Hospital during the period under study.

3.3.1.1 Komfo Anokye Teaching Hospital (KATH)

The Komfo Anokye hospital is located on a hill overlooking the city of Kumasi in the Ashanti region, and is built on the former site of the African and European hospitals. The hospital was completed in 1954, and initially named the Kumasi Central hospital. This name was subsequently changed to Komfo Anokye, in honor of a legendary fetish priest of the Ashanti kingdom of the same name. On its completion, the hospital also took over the Nurses Training College (established in 1945) and the Midwifery Training School (built in 1950), that had previously been attached to the African and European hospitals.
The Komfo Anokye Teaching Hospital, with just over 750 beds (1995 figures), is the second largest hospital in Ghana. In 1975, in pursuance of a Ministry Of Health policy to establish a second medical school in Ghana, Komfo Anokye hospital was converted into a teaching hospital (and renamed Komfo Anokye Teaching Hospital). The medical school of the University of Science and Technology, Kumasi, provided an attachment to the hospital, which was required to provide the necessary teaching facilities for medical students and other auxiliaries, in addition to patient care. In addition, Komfo Anokye Teaching Hospital is also the referral hospital for the Northern and Upper Regions, Brong Ahafo, and sometimes the Western and Central Regions of Ghana. Patient care, teaching, and research (in that order) are all considered central to the hospital’s mandate. The hospital has specialized units in Medicine, Surgery, Obstetrics, Gynecology, Pediatrics, Dentistry, Ophthalmology, Orthopedics, Ear, Nose and Throat, Pathology and Communicable Diseases. The other major departments include Pharmacy, Radiography, Radiotherapy, Physiotherapy and Occupational Health. (R. Govindaraj, A.A.D. Obuobi, N.K.A. Enyimayew, P. Antwi and S. Ofosu-Amaah, 2010)

Komfo Anokye is host to other institutions attached to the Ministry of Health, and also has links with several autonomous institutions. These include:

- The Nurses Training School
- The Midwifery Training School
- The Medical School of the University of Science and Technology, Kumasi
• The Blood Bank, and

• The Health Laboratory Services

The Komfo Anokye hospital has a Public Works Department that provides the hospital support services, but is not under its direct control. It was for this reason that the autonomy initiative was started in this teaching hospital, as a first step towards its implementation in all Ghanaian public sector health facilities.

3.3.1.2 Distances To Nearest Hospital Facilities

Access to health care facilities is an important indicator of welfare since distance and/or travel time to a health facility can affect the survival chances of a sick person, especially in emergencies. On the basis of this standard, the Region has poor access to health facilities. Whereas almost all localities have a traditional healing facility, less than two percent of the region’s localities have a hospital within the locality and only 11 percent of localities have a clinic/maternity home facility within the locality.

The Ministry of Health’s accessibility standard is to provide one health facility within a distance not exceeding eight kilometres. On the basis of this standard, the Region has poor access to health facilities. Whereas almost all localities have a traditional healing facility, less than two percent of the region’s localities have a hospital within the locality and only 11 percent of localities have a clinic/maternity home facility within the locality.

The Core Welfare Indicators Questionnaire (CWIQ) (2011), survey confirms that less than one-fourth of households in the region have access to (orthodox) health services.
In addition, only two thirds of the people who reported being ill or injured in the four weeks preceding the survey, sought medical treatment at the health service centres. Satisfaction with the usage of the health service centres is equally low. The main reasons for dissatisfaction were the cost and the distance to the facilities. Most public and private health facilities in the region are located in the regional capital Wa, and rural dwellers have to travel for more than an hour to reach the nearest health centre.

The availability of a hospital facility within the locality ranges from 0.5 per cent of communities in Jirapa-Lambussie to 2.6 per cent of communities in Sissala. In Lawra, 68.2 per cent of communities are within 10 kilometres of a hospital; the proportion is 39.4 per cent in Nadawli and 36.2 per cent in Jirapa-Lambussie. Although Wa is the largest in terms of population, only 15.6 per cent of localities in the district are within 10 kilometres reach of a hospital, while the proportion is 11.7 per cent in Sissala.

Wa and Lawra Districts have three hospitals each and Sissala has only one hospital. Distances to the nearest hospital are therefore clearly affected by differences in both the number of hospitals available and the sizes of the districts.

3.3.1.3 Distances to the Nearest Clinic/Maternity Home

Even though the number of clinics/maternity homes is also insufficient in the region, the situation is far better than with hospitals. In all districts except Wa, between 10.0 and 15.0 per cent of communities have a clinic/maternity home within the locality. The majority of localities in all districts except Sissala are a clinic within the community or within a radius of 10 kilometres. The proportion of localities with a
clinic/maternity home within 10 kilometres is lowest in Sissala (41.1%) and highest in Lawra (93.0%).

3.1.4 Traditional Healing Facilities

Every locality in Sissala, Jirapa-Lambussie and Lawra reported the availability of traditional healing facilities within the locality, while almost all localities (99.5%) reported the availability of traditional healing facilities in Wa and Nadawli. As already indicated elsewhere, the majority of Ghanaians regard the traditional and orthodox health delivery systems as complementary and patronize both of them. The individual attention given, the negotiated or flexible payment terms and the easy access to the health care provider make the traditional healing facilities, the first place of call, particularly for the rural population.

Sampling refers to a process of selecting a subset of the target population for study. According to Sarantakos (2004), sampling enables the researcher to study only a relatively small proportion of the population where generalisation or inferences based on the sample can be drawn.

It was impossible to survey the entire targeted population due to limited time for data collection, collation, analysis, budget constraints and time for presentation of results. As already mentioned, the subjects of this research are the Wa Regional hospital and the Komfo Anokye Teaching hospital.
3.3.2 Sampling Size and Sampling Method

A sample source will be achieved by the use of purposive sampling. A purposive sample is a sample selected in a deliberative and non-random fashion to achieve a certain goal. In a focus group, for example, we want to seek out respondents at both ends of a spectrum (as well as some in the middle) to insure that all viewpoints are adequately represented. We also preferentially recruit subjects who have the best knowledge and experience in an area. In order to achieve experimental diversification, participants were identified by purposive selection (Galloway A, 2008). The patients \( n = 75 \) were chosen from a data bank of participants to previous studies. Nurses \( n = 30 \) and doctors \( n = 30 \) were solicited through directors of professional services. They worked in different fields of healthcare services, in rural and urban areas. Management staff \( n = 15 \) were recruited through hospital managers who would identify which one was more familiar with the study clientele and worked in various rural and urban areas. All participants were recruited because of their critical abilities and their experience with needs related to the healthcare service process from onset to reintegration into the community.

The findings represent the views of 150 people as presented in Table 3.1. The participants tended to be older since participants were purposively chosen for experience with the system.
Table 3.1 Sampling size for each institution.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Wa Regional Hospital</th>
<th>Komfo Anokye Teaching Hospital, Kumasi</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration staff</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Doctors</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Nurses</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Patients</td>
<td>25</td>
<td>50</td>
<td>75</td>
<td>50</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>

3.4 Instruments

Interview guides and questionnaires (see appendix A and B) have been the main instruments for collection of data. According to Sarantakos (2004), questionnaire administration is the common technique for collecting data in most survey research. With questionnaires, subjects respond to written questions, which are used to elicit reactions, beliefs and attitudes.

The use of a questionnaire is chosen for the patients, health authorities, and healthcare providers. This is because data collection using this method is quicker since information is collected from a number of people at the same time, who are of a particular opinion about the topic (Abili K. 2009). Secondly, the health authorities, the staff and the clients/patients have busy schedules and therefore could respond to questionnaire at their leisure time.
Personal Interviews were used to collect data for the study. Personal interview is a method of field investigation whereby the researcher meets the respondents and interacts with them. Through the interaction, the researcher asks prepared questions and records the respondents’ answers.

The interview method is also chosen for the patients to have in-depth information about the patients-service providers’ relationship in the industry.

### 3.5 Documentary Sources

The documentary sources were collected from journals and books. The Internet also helped us getting more information for the research work.

### 3.6 The research approach

Abili K (2009) describes quantitative research as involving measurement of variables and the delivery of findings in numerical form in which research findings are described by text of significance, confidence intervals, and mathematically demonstrated relationships.

He further describes qualitative research as a paradigm, which is conducted to find out what people do, think, know and feel. Such a study aims at understanding and explaining a phenomenon that focuses on “why” and “how” questions as well as in-depth and detailed “what” questions. It is important to note that many researchers such as Abili K (2009) have agreed that a study may have a mixture of both quantitative and qualitative paradigms.
This study is based on both qualitative and quantitative paradigms. On one hand, words will be used in describing and explaining how CRM implementation impacts on quality of healthcare service provided to patients, which makes it a qualitative research. On the other hand, some numerical data will be collected and analyzed using descriptive statistics.

The approach and methodology involved a consultative and interactive process in which all respondents were engaged. Focus Group Discussions and Key Informant Interviews were used to collect primary data from the sampled population. These data were collected for specific purposes. The essence of obtaining such data is to ensure that the exact information wanted for the study were obtained.

3.7 Data processing and analysis

Data collected were mainly quantitative from the questionnaires and interviews. However, there were a few qualitative data. In analyzing all qualitative data collected, the open-ended responses from the questionnaires and interviews were listed, categorised and transcribed. These responses were further reduced and ordered or coded. The data were summarised into tables and conclusions were drawn from the summaries. The statistical package for social scientists was used to analyze descriptive statistics (quantitative data).
3.8 Limitations/problems of the data collection

The selection of respondents was based on a roster provided by each of the two hospitals because of limited resources (time, personnel, money etc). This in no way can be claimed to be rigorously representative from the statistical point of view. However, since the study was basically quantitative, the effect of this could be minimal.
CHAPTER 4

DATA ANALYSIS

This chapter presents the data gathered from the questionnaire. The data is then analyzed referring to the research questions.

4.1 Sample Description

57.3% of questionnaires were answered by female, 42.7% of respondents had education below high educational level, 27.6% graduated from high school, 53.4% had Bachelors degree and 18.4% had Master degrees or degrees above; in terms of experience, 39.1% of respondents had more than five years experience and the rest were less experienced.

As shown in table 4.1, in terms of positions, 10% of the respondents belong to the administration staff, 20% are doctors, 20% are nurses, and patients represent 50%.

**Table 4.1: Respondents in this study**

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency K</th>
<th>Frequency W</th>
<th>Frequency (k+w)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>10</td>
<td>5</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Doctors</td>
<td>20</td>
<td>10</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Nurses</td>
<td>20</td>
<td>10</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Patients</td>
<td>50</td>
<td>25</td>
<td>75</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>
Where $k = \text{Komfo Anokye Teaching Hospital}$

$w = \text{Wa Regional Hospital}$

$f$ stands for frequency

From a list consisting of 150 respondents, 64 were males (i.e. Komfo Anokye Teaching Hospital (KATH) 44 and Wa Regional Hospital 20) which represent 42.7% while 86 females (i.e. KATH 56 and Wa Regional Hospital 30) which represent 57.3% Table 4.2 below shows the details about the gender of the respondents in each hospital.

**Table 4.2: Gender of Respondents**

<table>
<thead>
<tr>
<th></th>
<th>Frequency $k$</th>
<th>Frequency $W$</th>
<th>Frequency $k+w$</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>44</td>
<td>20</td>
<td>64</td>
<td>42.7</td>
</tr>
<tr>
<td>Female</td>
<td>56</td>
<td>30</td>
<td>86</td>
<td>57.3</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>50</td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>
4.2 General questions related to PRM objectives and implementation

To the question: ‘Does your hospital follow one of the objectives of PRM?’, as shown in table 4.3, out of a total of 150 respondents, 78 (52%) answered Yes meaning their hospital actually follow one of the objectives of PRM, 17 (11.3%) answered No which implied their hospital does not follow any objective of PRM, and 55 (36.7%) answered ‘Not applicable’ simply meaning no idea about PRM objectives.

Table 4.3: Answers to the question: ‘Does your hospital follow one of the objectives of PRM?’

<table>
<thead>
<tr>
<th></th>
<th>Frequency K</th>
<th>Frequency W</th>
<th>Frequency (k+w)</th>
<th>Percentage (k+w)%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>54</td>
<td>24</td>
<td>78</td>
<td>52</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>5</td>
<td>17</td>
<td>11.3</td>
</tr>
<tr>
<td>Not applicable</td>
<td>34</td>
<td>21</td>
<td>55</td>
<td>36.7</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>50</td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>

To the question: ‘Which objective is more important for your organization?’, out of a list consisting of 78 respondents, 34 (43.6%) considered improving patient services as the most important objective in their hospital. Other objectives were considered as most important as shown in table 4.4 below. It is interesting to notice that no one considered increasing profit as the most important objective.
Table 4.4: Answers to the question: ‘Which objective is more important for your organization?’

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>F(k)</th>
<th>%</th>
<th>F(w)</th>
<th>%</th>
<th>F(k+w)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Retention</td>
<td>13</td>
<td>23.2</td>
<td>5</td>
<td>22.7</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>Sustainable Competitive advantage</td>
<td>8</td>
<td>14.3</td>
<td>2</td>
<td>9.1</td>
<td>10</td>
<td>12.8</td>
</tr>
<tr>
<td>Decreasing Cost</td>
<td>12</td>
<td>21.4</td>
<td>3</td>
<td>13.6</td>
<td>15</td>
<td>19.2</td>
</tr>
<tr>
<td>Improving Patient Service</td>
<td>22</td>
<td>39.3</td>
<td>12</td>
<td>54.6</td>
<td>34</td>
<td>43.6</td>
</tr>
<tr>
<td>Acquiring new customers</td>
<td>1</td>
<td>1.8</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Increasing profit</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100</td>
<td>24</td>
<td>100</td>
<td>78</td>
<td>100</td>
</tr>
</tbody>
</table>

Where f stand for frequency

Table 4.5 displays the answers to the question about who is involved in CRM implementation. One can notice that 51 (65.4%) respondents answered “hospital administrators”. And no one has answered ‘public servants’.

Table 4.5: Answers to the question: ‘Who are involved in the implementation of the CRM in your hospital?’

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Frequency K</th>
<th>Frequency w</th>
<th>Frequency k+w</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Public Servants</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>The hospital Administrators</td>
<td>34</td>
<td>17</td>
<td>51</td>
<td>65.4</td>
</tr>
<tr>
<td>The Healthcare Providers</td>
<td>14</td>
<td>5</td>
<td>19</td>
<td>24.4</td>
</tr>
<tr>
<td>All of the three mentioned</td>
<td>6</td>
<td>2</td>
<td>8</td>
<td>10.2</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>24</td>
<td>78</td>
<td>100</td>
</tr>
</tbody>
</table>
4.3 The Benefits of PRM implementation in your institution (Research Question 1)

A list consisting of 19 assumed statements was presented to the respondents (15 members of the management staff). They had to say if they strongly agree, agree, disagree, strongly disagree or simply did not know.

4 points are associated to the answer, “Strongly disagree”, 3 points are associated to the answer “disagree” 2 points and 1 point are respectively associated to the answers “agree” and “strongly agree”. The answer “I don’t know” associated to 5 points is disregarded and does not contribute to the calculation of the mean scores.

The obtained results are displayed in table 4.6.

Table 4.6: The Benefits of CRM Implementation in your institution

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing patients loyalty as a result of more personal and efficient service</td>
<td>2.0</td>
<td>0.90</td>
</tr>
<tr>
<td>Better understanding and addressing patient needs and issues</td>
<td>2.0</td>
<td>0.90</td>
</tr>
<tr>
<td>Relating patient needs and issues to your business products and services</td>
<td>2.3</td>
<td>0.67</td>
</tr>
<tr>
<td>Developing a closer relationship with patients</td>
<td>2.3</td>
<td>0.67</td>
</tr>
<tr>
<td>Increasing customer satisfaction</td>
<td>2.4</td>
<td>0.61</td>
</tr>
<tr>
<td>Decreasing patients’ acquisition costs of the services</td>
<td>2.5</td>
<td>0.69</td>
</tr>
<tr>
<td>The use of health information Technology system to reduce operations cost</td>
<td>2.6</td>
<td>0.74</td>
</tr>
<tr>
<td>The use of health information technology system to better communication with your hospital’s partners</td>
<td>2.6</td>
<td>0.74</td>
</tr>
<tr>
<td>Customer Retention</td>
<td>2.6</td>
<td>0.74</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>-----</td>
<td>------</td>
</tr>
<tr>
<td>Acquiring well-accepted outcomes of data mining activities</td>
<td>2.7</td>
<td>0.75</td>
</tr>
<tr>
<td>Improving the customer’s experience by providing self-service help, and by providing a fast and reliable support process</td>
<td>2.8</td>
<td>0.72</td>
</tr>
<tr>
<td>The use of health information technology system to increase the profitability of the hospital</td>
<td>2.8</td>
<td>0.72</td>
</tr>
<tr>
<td>Nurturing and maintaining your institution patient’s base</td>
<td>2.9</td>
<td>0.66</td>
</tr>
<tr>
<td>The use of health information technology system to provide timely information for decision-making</td>
<td>3.2</td>
<td>0.67</td>
</tr>
<tr>
<td>Supporting effective healthcare efforts, through better management of the healthcare provision process.</td>
<td>3.2</td>
<td>0.67</td>
</tr>
<tr>
<td>Maximizing profitability due to increase in sale</td>
<td>3.4</td>
<td>0.65</td>
</tr>
<tr>
<td>Gathering integrated information on customers</td>
<td>3.5</td>
<td>0.54</td>
</tr>
<tr>
<td>Ensuring sustainable competitive advantage</td>
<td>3.6</td>
<td>0.49</td>
</tr>
<tr>
<td>Collaborating with service for joint value creation</td>
<td>3.6</td>
<td>0.49</td>
</tr>
</tbody>
</table>

One can notice mainly that “Better understanding and addressing patient needs and issues” and “Increasing patients’ loyalty as a result of more personal and efficient service” appear to be the most important benefits observed in the selected hospitals. The benefits “Collaborating with service for joint value creation” and “Ensuring sustainable competitive advantage” seem not to be observed.
4.4 Creating Patient Relationship Management strategy and technology related to PRM (Research Question 2)

31 assumed statements were presented to the 15 respondents (i.e. management staff) to choose ‘well implemented’, ‘poorly implemented’, and ‘not implemented at all’. 4 points are associated to “no option”, 3 points are associated to the answer “not implemented at all’, 2 points are associated to the answer, “poorly implemented”. However, 1 point is associated to the answer “well implemented”. For each of the eight considered items related to PRM strategy, the best-implemented strategy is highlighted in bold.

The results are presented in table 4.7 below.

Table 4.7: Creating Patient Relationship Management Strategy

<table>
<thead>
<tr>
<th>1 Acquiring the right Patient</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify your most valuable customer</td>
<td>1.3</td>
<td>0.48</td>
</tr>
<tr>
<td>Calculate your share of purchase (wallet) for services</td>
<td>1.6</td>
<td>0.50</td>
</tr>
</tbody>
</table>

| 2 Crafting the right value proposition | |
| Identify new services you should be offering | 1.4 | 0.50 |
| Assess the services that your competitors offer today and tomorrow. | 1.5 | 0.73 |
| Determine the service your patient needs today and tomorrow | 1.8 | 0.41 |

| 3 Institute the best processing | |
| The technology investments are required to implement customer strategy. | 1.3 | 0.48 |
| Research the best way to deliver your product/services to customers | 1.7 | 0.45 |
| Determine the service capabilities that must be developed | 1.7 | 0.45 |
| 4 Motivate employees |  |
| Identify the tools your employees need to foster customer relationship | 1.7 | 0.45 |
| Earn employee loyalty by investing in training, development and constructing appropriate carrier paths for employees. | 1.8 | 0.41 |
| 5 Learn to retain customers |  |
| Understand why customers defect and how to win them back. | 1.8 | 0.35 |
| Identify the strategy your competitors are using to win your high-value customers | 1.8 | 0.41 |
| 6 Technology can help |  |
| Process transactions faster | 1.2 | 0.41 |
| Target marketing communications to high-value customers | 1.2 | 0.45 |
| Provide better information to customer contact employee | 1.5 | 0.51 |
| Analyze customer revenue and cost data | 1.6 | 0.48 |
| Capture relevant product and service behavior data from customer transaction | 1.6 | 0.50 |
| Track customer defection and retention levels | 1.6 | 0.50 |
| Track customer service satisfaction level | 1.6 | 0.50 |
| Distribute customer knowledge to employees throughout the organization | 1.7 | 0.45 |
| Manage logistics and supply chain more efficiently | 1.7 | 0.45 |
| Develop new pricing method | 1.7 | 0.45 |
| 7. Innovation of senior officers |  |
| They have original ideas. | 1.1 | 0.35 |
| They often risk doing things differently | 1.2 | 0.41 |
They will sooner create something new than improved before

<table>
<thead>
<tr>
<th>Knowledge management</th>
<th>1.8</th>
<th>0.35</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The hospital can provide authentic service information for quick and accurate patient interaction</strong></td>
<td>1.2</td>
<td>0.41</td>
</tr>
<tr>
<td>The hospital is able to provide fast patients response because of integrated patients’ knowledge across several functional areas</td>
<td>1.2</td>
<td>0.45</td>
</tr>
<tr>
<td>The hospital is able to provide fast decision making due to patients availability</td>
<td>1.4</td>
<td>0.50</td>
</tr>
<tr>
<td>The hospital can generally predict future patients’ expectation</td>
<td>1.5</td>
<td>0.51</td>
</tr>
<tr>
<td>The hospital is able to provide fast decision making due to knowledge precision</td>
<td>1.7</td>
<td>0.45</td>
</tr>
</tbody>
</table>

For each of the eight considered items related to PRM strategy, the best implemented strategy is highlighted in bold.

More globally, it is interesting to notice that the best implemented strategy is associated to “senior officers have original ideas” with a mean of 1.1 and a standard deviation of 0.35. Whereas the most poorly implemented strategies are associated to the four following points: “Earn employee loyalty by investing in training, development and constructing appropriate carrier paths for employees”; “Identify the strategy your competitors are using to win your high-value customers”; “They will sooner create something new than improved before”; “determine the service your patient needs today and tomorrow” with a mean score of 1.8 and standard deviation 0.41.
4.5 Barriers to PRM implementation in the Healthcare in Ghana *(Research Question 3)*

Ten assumed statements were presented to 45 respondents (i.e. 15 management staff and 30 doctors). Possible answers were: strongly agree, agree, disagree, strongly disagree and I do not know. It deals with the agreement or not with the fact that the proposed item constitutes a barrier to PRM implementation.

4 points are associated to the answer, “Strongly disagree”, 3 points are associated to the answer “disagree”, 2 points and 1 point are respectively associated to the answers “agree” and “strongly agree” The answer “I don’t know” associated to 5 points is disregarded and does not contribute to the calculation of the mean scores.

The obtained results are displayed in table 4.8 below.

**Table 4.8: Barriers to PRM implementation**

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor communication</td>
<td>1.9</td>
<td>0.59</td>
</tr>
<tr>
<td>Lack of senior management commitment to CRM</td>
<td>2.4</td>
<td>0.50</td>
</tr>
<tr>
<td>Inadequate supporting budgets</td>
<td>2.6</td>
<td>0.48</td>
</tr>
<tr>
<td>Interdepartmental conflict</td>
<td>2.6</td>
<td>0.50</td>
</tr>
<tr>
<td>Lack of end-user input at service stage</td>
<td>2.6</td>
<td>0.50</td>
</tr>
<tr>
<td>Resistance to change among the hospital’s staff</td>
<td>2.7</td>
<td>0.45</td>
</tr>
<tr>
<td>Inefficiency in business processes</td>
<td>3.0</td>
<td>0.25</td>
</tr>
<tr>
<td>An absence of complementary customer management skills</td>
<td>3.1</td>
<td>0.35</td>
</tr>
<tr>
<td>A lack of standardization</td>
<td>3.1</td>
<td>0.35</td>
</tr>
<tr>
<td>The skill required to use these technologies is too complex</td>
<td>3.2</td>
<td>0.45</td>
</tr>
</tbody>
</table>

It clearly appears that ‘Poor communication’ seems to be the most important barrier to PRM implementation with a mean score of 1.9 and standard deviation of 0.59.
4.6 Issues related to enhancing PRM implementation in the healthcare industry in Ghana (Research Question 4)

Fifteen respondents (i.e. management staff) have been proposed fourteen assumed actions and have been asked to say with which priority they think each of these actions should be performed to make the present PRM system more efficient in their hospital.

There were five possible answers: ‘strong priority’, ‘medium priority’, ‘low priority’, ‘I do not think it will help’; and ‘I don’t know’.

4 points are associated to the answer, “I do not think it would help”, 3 points are associated to the answer “low priority”, 2 points and 1 point are respectively associated to the answers “medium priority” and “strong priority”. The answer “I don’t know” is disregarded and does not contribute to the calculation of the mean scores. Table 4.9 below shows the obtained results.

Table 4.9: Issues related to Enhancing PRM implementation in the healthcare industry in Ghana

<table>
<thead>
<tr>
<th>CRM Enhancement</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 need specialized clinical services, which requires reduction in the frequency of patients’ visit to hospital by setting up an online reservation</td>
<td>1.4</td>
<td>0.50</td>
</tr>
<tr>
<td>2 Timely response is made to enhance the satisfaction of patients.</td>
<td>2.3</td>
<td>0.48</td>
</tr>
<tr>
<td>3 It assists in more comprehensive medical service, higher service quality and optimized configuration of medical resources</td>
<td>2.4</td>
<td>0.50</td>
</tr>
<tr>
<td>4 Used to receive reply messages from patients</td>
<td>2.4</td>
<td>0.51</td>
</tr>
<tr>
<td>5 need specialized clinical services, which requires outcome-check-up program to streamline the clinical</td>
<td>2.5</td>
<td>0.51</td>
</tr>
<tr>
<td>process</td>
<td>2.5</td>
<td>0.51</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----</td>
<td>------</td>
</tr>
<tr>
<td>6. As the main data source to assure the stability of Hospital Information System (HIS).</td>
<td>2.6</td>
<td>0.50</td>
</tr>
<tr>
<td>7. Patient Relationship Management (PRM) may help to locate the key client groups and their special demand on service, as well as the general demands from common patients.</td>
<td>2.7</td>
<td>0.45</td>
</tr>
<tr>
<td>8. It keeps advices and complaints of patients in record</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Patient Relationship Management (PRM) may help to locate the key client groups and their special demand on service, as well as the general demands from common patients.</td>
<td>2.7</td>
<td>0.45</td>
</tr>
<tr>
<td>10. Use data in HIS database at any time for data analysis and data mining.</td>
<td>2.8</td>
<td>0.56</td>
</tr>
<tr>
<td>11. need specialized clinical services, which requires a</td>
<td>2.8</td>
<td>0.56</td>
</tr>
<tr>
<td>12. couple of days for laboratory outcome</td>
<td>3.5</td>
<td>0.51</td>
</tr>
<tr>
<td>13. It can make operators aware of the information of patients including their identity, medical records.</td>
<td>3.6</td>
<td>0.48</td>
</tr>
<tr>
<td>14. It promotes the standardization of hospital management</td>
<td>3.8</td>
<td>0.41</td>
</tr>
<tr>
<td>15. It handles the demand tracking process to ensure compliance</td>
<td>3.8</td>
<td>0.41</td>
</tr>
</tbody>
</table>

It is obviously clear that the strongest priority observed is the need of specialized clinical services, which requires reduction in the frequency of patients’ visit to hospital by setting up an online reservation. Considering each hospital management staff separately, they will both end up with the above point as mentioned above.
5.0 Introduction

This chapter presents a summary of major findings based on the data analysis. It also presents implications from the management and patients sides respectively as well as global recommendations which come out from this study.

5.1 Major findings

Customer Relationship Management (CRM) is about customer care and business strategy and the use of IT to achieve the objective of profitability through enhanced customer relations.

PRM transposes the philosophy of Customer Relationship Management to the world of healthcare. This study has been dedicated to assess and see how to enhance PRM implementation in Ghana’s public healthcare system considering two case studies: Wa Regional hospital and the Komfo Anokye Teaching hospital.

To this purpose, interviews have been held and a questionnaire has been designed and submitted to a sample of respondents in each of the two hospitals.

57.3% of the respondents were female and 42.7% were male. Approximately 70% had a Bachelor degree or above; and nearly 40% of respondents had more than five years experience.

Respondents were patients on one hand and people holding a variety of positions in the hospitals on the other hand. They included the administration staff (10%), doctors (20%), nurses (20%), and patients (50%).

After data analysis, we had the following main findings:
PRM implementation was rather the job of the administration staff in the hospitals with 65.4% followed by healthcare providers who were believed to be involved by involved 24.4% of the respondents.

In the case of Komfo Anokye Teaching hospital, 39.3% of the respondents considered that “Improving patients services” as the most important objective for PRM implementation. Followed by “Patient retention” (23.2%) “Sustaining competitive advantage” (14.3%), “Acquiring new customer” (1.8%), and “decrease cost” (21.4%). It was also interesting to find that nobody considered “increasing profit” as an objective of PRM implementation.

In the case of Wa healthcare services, “Improving customer services” was considered as the most important objective with a rate of 54.6%, followed by “sustaining a competitive advantage” (9.1%), “patient retention” (22.7%), “decrease cost” (13.6%). No respondent from that hospital considered “acquiring new customers” or “increase profit” as an important objective for CRM implementation.

It was also found that for both Komfo Anokye Teaching Hospital and Wa Regional hospital, the present PRM system allow mainly increasing patients loyalty and better understanding and addressing patients needs.

More globally, it appeared that those hospitals are implementing PRM with the main purpose of trying to remain in the market and satisfy their current customers and much less for expanding their market share and attracting new patients.

In terms of barriers to the implementation of PRM, it clearly appeared in this study that poor communication is the most important barrier to PRM implementation, while the skill required to use technologies by employees is the least important barrier.
5.2. Implications and Recommendations

5.2.1 Managerial side

The Analytical CRM and Operational CRM paved the way for health service providers to understand consumer behaviour. It is primarily important for service providers to retain patients and co-create value if they intend to enrich staff-patient interaction quality.

This goes with the service-dominant concept as well. In this study, all items related to the interaction with patients (customers) scored average scores. To improve physician-patient collaborative interactions, physicians must demonstrate while delivering services, concern for the patient as individuals as all items have

Furthermore, they must allow themselves to truly care about and sympathize with their patients, though it is not easy to do so, given the number of patients a staff must see each day in such big referral hospitals. Moreover, it is also difficult for the staff, which sees misfortune every day, to continue expressing concern and sympathy and to keep from being depressed are negative outcomes. Yet, these are exactly the things that the staff must deliver in order to satisfy and retain patients’ role of co-creating firm value.

As the study results reflected, availability of physician is contributing comparatively less and because of limited time, it might be difficult for the doctors to develop relationships with patients. In such circumstances, nurses and other professional staff can bridge this void and help in developing the patients’ relationship with providers.

Mindset change and training will help organization in delivering customized services. The training by professional staff from across the world to employees on equipping them with latest know-how in medical practices and on relationship building,
screening of movies on best hospitals etc. should be key PRM techniques to build competitive interest in the employees and to make them understand their role to enhance customer satisfaction and loyalty.

5.2.2 Patients side

The benefit of effective interactions with physicians, nursing and support staff results in early recovery, improved quality, increased length of life of a patient and above all, higher patient satisfaction. Increased quality of patient empowerment and level of compliance will improve by working in concert with the physician, nursing and other staff. This subsequently improves patients’ health, mental and psychological condition in a more effective manner.

In this respect, we recommend that:

- Management of hospitals in Ghana should pursue more than one of the objectives of PRM.
- Improving patient services is not enough to achieve the objective, management should endeavour to motivate hospital staff to work harder than before.
- Management should ensure that any changes for achievement of the objectives should be communicated to employees of the hospitals.
- Employees of healthcare industries in Ghana should be given additional training to make them more productive in the application of PRM techniques.
- Management should make PRM implementation beneficial to stakeholders in Ghana.
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APPENDIX A

INTERVIEW GUIDE FOR STAKEHOLDERS/PATIENTS

1. We would like to know your name and position in this hospital.
2. Do you attend Wa Regional Hospital or Komfo Anokye Teaching hospital?
3. Do you use health insurance on your treatment?
4. If no, how is the cost of treatment without health insurance scheme card? (to find out if the cost of treatment is cheap/expensive as compared to the use of the health insurance scheme)
5. How fast can you obtain your card to see the medical officer?
6. How early does the medical officer start receiving patients?
7. How is the queue to the consulting room?
8. Is the number of doctors sufficient to attend every patient at a reasonable rate?
9. Are they really doctors or nurses consulting?
10. How is their relationship with you, cordial/harsh?
11. What do you suggest to be done to improve on the relationship?
12. What are your complaints about their services?
13. Do they give you any way to express your complaints (like a suggestion box or anything similar)?
14. What will be your contributions to enhance PRM implementation in your public Healthcare System?
15. Would you like your hospital to integrate Patient Relationship Management (PRM) system with
   i. Hospital Information System?
   ii. Hospital web platform?
   iii. Call centers?
   iv. Short-message gateway?
16. How will the integration of the above mentioned items, benefit you as patients?
INTERVIEW GUIDE FOR DOCTORS

1. We would like to know your name and position in this hospital.
2. Would you say the number of doctors is adequate?
3. What is your schedule duty?
4. How many of you handle the same work schedule in the unit/ward?
5. Do you have enough doctors to carry out all the activities in your hospital?
6. What is approximately the average waiting time per patient?
7. Do you think your patients are satisfied with the services they receive?
8. Is there enough logistical support for work to be carried out successfully?
9. If no, what would you do to improve or is there any other way to improve upon this situation.
10. How is the relationship between doctors and patient/stakeholders?
11. How many patients attend the hospital for treatment a day?
12. Do you use any information technology system to carry out your work in your hospital?
13. Are you satisfied with this information technology?
14. Are the doctors trained to use this information technology system?
15. Will integrating these technologies in your current work practices be very difficult?
16. Does your hospital provide incentives for doctors?
17. What kinds of incentives are provided for doctors in your hospital?
18. Is the PRM in your hospital
   i. fully implemented? Yes/No
   ii. implemented and promotion in progress? Yes/No
   iii. partially implemented? Yes/No
   iv. planned to be implemented? Yes/No
   v. unimplemented? Yes/No
19. What will you do to enhance PRM implementation in your public Healthcare System?
20. Would you like your hospital integrate Patient Relationship Management (PRM) system with
v. Hospital Information System?
vi. Hospital web platform?
vii. Call centers?
viii. Short-message gateway?

21. How will be the integration of the above mentioned items, benefit you as doctors?
22. How will you establish Customer Responding Mechanism and Database in order to enhance PRM implementation in your healthcare sector?

INTERVIEW GUIDE FOR NURSES

1. What is your schedule duty?
2. How many of you handle the same work schedule in the unit/ward?
3. Do you have enough nurses to carry out all the activities in your hospital?
4. What is approximately the average waiting time per patient
5. Would you say the patients are satisfied with services?
6. Is there enough logistical support for work to be carried out successfully?
7. If no, what would you do to improve or is there any other way to improve upon this situation.
8. How is the relationship between nurses and patients?
9. Do you use any information technology system to carry out your work in your hospital?
10. How efficient is this information technology?
11. Are the nurses trained to use this information technology system?
12. Is the skill required to use these information technology system too complex for you?
13. Will integrating these technologies in your current work practices be very difficult?
14. Does your hospital provide incentives for nurses?
15. What kind of incentives is provided for nurses in your hospital?
16. What will you do to enhance PRM implementation in your public Healthcare System?

17. Will your hospital integrate Patient Relationship Management (PRM) system with
   - hospital Information System
   - hospital web platform
   - call centers
   - short-message gateway and finally

18. Is the PRM in your hospital
   I. fully implemented? Yes/No
   II. implemented and promotion in progress? Yes/No
   III. partially implemented? Yes/No
   IV. planned to be implemented? Yes/No
   V. unimplemented? Yes/No

19. What will you do to enhance PRM implementation in your public Healthcare System?

20. Would you like your hospital integrate Patient Relationship Management (PRM) system with
   ix. Hospital Information System?
   x. Hospital web platform?
   xi. Call centers?
   xii. Short-message gateway?

21. How will you establish Customer Responding Mechanism and Database in order to enhance PRM implementation in your healthcare sector?

22. How will be the integration of the above, benefit you as nurses?
INTERVIEW GUIDE FOR MANAGEMENT STAFF

1. Can you please give us a brief background and history of this healthcare institution?

2. When did your healthcare institution embarked on Patient Relationship Management (PRM) implementation?

3. How many management staff members are there in this hospital?

4. How many nurses are there in this hospital?

5. How many doctors are there in this hospital?

6. How many patients attend the hospital for treatment a day on average?

7. Would you say the management staff are adequate in terms of numbers?

8. What is your schedule duty?

9. Do you have enough management staff to carry out all the management activities in your hospital?

10. What is approximately the average waiting time per patient?

11. Do you think the patients are satisfied with the services they receive?

12. Is there enough logistical support for work to be carried out successfully?

13. If no, what would you do to improve or is there any other way to improve upon this situation.

14. How is the relationship between management staff and patient/stakeholders?

15. How many patients attend the hospital for treatment a day?

16. Do you use any information technology system to carry out your work in your hospital?

17. How efficient is this information technology?

18. Are the management staff members trained to use this information technology system?

19. Is the skill required to use these information technology system too complex for your employees?

20. Will integrating these technologies in your current work practices be very difficult?
21. Do you intend to train more people among your workers on this information technology system?
22. How is the cost of training management staff on health information technology system in your hospital?
23. What do you do to motivate each category of employees of the hospital?
24. Does your hospital provide incentives for the employees?
25. What kinds of incentives are provided for employees in your hospital?
26. Is the Patient Relationship Management (PRM) in your hospital?
   i. fully implemented? Yes/No
   ii. implemented and promotion in progress? Yes/No
   iii. partially implemented? Yes/No
   iv. planned to be implemented? Yes/No
   v. unimplemented? Yes/No
27. What will you do to enhance PRM implementation in your public Healthcare System?
28. Will your hospital integrate Patient Relationship Management (PRM) system with
   a) Hospital Information System?
   b) Hospital web platform?
   c) Call centers?
   d) Short-message gateway?
29. How will you establish Customer Responding Mechanism and Database in order to enhance PRM implementation in your healthcare sector?
30. How will be the integration of the above mentioned items, benefit you as management?
APPENDIX B

QUESTIONNAIRE

Please note that all the information you impart will be treated as confidential.

Table 1: General information about the respondent

To Be Answered By Doctors, Nurses And Management Staff As Well As The Patients.

<table>
<thead>
<tr>
<th>General Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (optional)</td>
</tr>
<tr>
<td>Sex: Male</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Number of years of Working Experience in your hospital :</td>
</tr>
<tr>
<td>The number of your hospital beds.</td>
</tr>
<tr>
<td>Organisation</td>
</tr>
<tr>
<td>Hospital :</td>
</tr>
<tr>
<td>Position in organisation :</td>
</tr>
<tr>
<td>Number of employees :</td>
</tr>
</tbody>
</table>

What is Patient Relationship Management (PRM)
Answer :
Does your hospital follow one of the objectives of PRM? Yes No
IF YES CONTINUE
Which objective is more important for your organization?

<table>
<thead>
<tr>
<th>Patient Retention</th>
<th>Sustainable</th>
<th>Decreasing</th>
<th>Improving</th>
<th>Acquiring</th>
<th>Increasing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost</td>
<td>Cost</td>
<td>Patient Service</td>
<td>new customers</td>
<td>profit</td>
</tr>
</tbody>
</table>

Who are involved in the implementation of the CRM in your hospital? Is it the
(circle the right answers below):

| A. the Public servants | B. the hospital administrators | C. the Healthcare providers | D. All of the three A, B, & C mentioned. |
Table 2: Questions related to Research Question 1
To Be Answered By Management Staff

Please rate each item according to the following scale by circling the appropriate box (number) for each statement: 1 – strongly agree, 2 - Agree, 3 – Disagree, 4 – strongly disagree, 5 - I don’t know.

<table>
<thead>
<tr>
<th>THE BENEFITS OF CRM IMPLEMENTATION IN YOUR INSTITUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The present patient relationship management (PRM) in your hospital allows:</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
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<tr>
<td>5</td>
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<td>6</td>
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<td>7</td>
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<td>8</td>
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<td>9</td>
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<tr>
<td>10</td>
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<tr>
<td>11</td>
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<tr>
<td>12</td>
</tr>
<tr>
<td>13</td>
</tr>
<tr>
<td>14</td>
</tr>
</tbody>
</table>
Customer Retention

The use of health information technology system to increase the profitability of the hospital

The use of health information technology system to provide timely information for decision-making

The use of health information Technology system to reduce operations cost

The use of health information technology system to better communication with your hospital’s partners

Table 3: Questions related to Research Question 2.

TO BE ANSWERED BY MANAGEMENT STAFF

Rate the following CRM strategies regarding their present application in your institution. A – Well implemented; B – Poorly implemented; C – not implemented at all; and D - No option

| 15 | Customer Retention | 1 | 2 | 3 | 4 | 5 |
| 16 | The use of health information technology system to increase the profitability of the hospital | 1 | 2 | 3 | 4 | 5 |
| 17 | The use of health information technology system to provide timely information for decision-making | 1 | 2 | 3 | 4 | 5 |
| 18 | The use of health information Technology system to reduce operations cost | 1 | 2 | 3 | 4 | 5 |
| 19 | The use of health information technology system to better communication with your hospital’s partners | 1 | 2 | 3 | 4 | 5 |

Creating Patient Relationship Management Strategy

1. Acquiring the right Patient

1. Identify your most valuable customer
2. Calculate your share of purchase (wallet) for services

2. Crafting the right value proposition

3. Determine the service your patient needs today and tomorrow
4. Assess the services that your competitors offer today and tomorrow.
5. Identify new services you should be offering

3. Institute the best processing

6. Research the best way to deliver your product/services to
<table>
<thead>
<tr>
<th></th>
<th>customers</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Determine the service capabilities that must be developed</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>8</td>
<td>Do the technology investments that are required to implement customer strategy.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

### 4. Motivate employees

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Identify the tools your employees need to foster customer relationship</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>10</td>
<td>Earn employee loyalty by investing in training, development and constructing appropriate carrier paths for employees.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

### 5. Learn to retain customers

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>11</td>
<td>Understand why customers defect and how to win them back.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>12</td>
<td>Identify the strategy your competitors are using to win your high-value customers</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

### 6 Technology can help

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>13</td>
<td>Analyze customer revenue and cost data</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>14</td>
<td>Target marketing communications to high-value customers</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>15</td>
<td>Capture relevant product and service behavior data from customer transaction</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>16</td>
<td>Process transactions faster</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>17</td>
<td>Provide better information to customer contact employee</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>18</td>
<td>Manage logistics and supply chain more efficiently</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>19</td>
<td>Align employee incentives and performance measures</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>20</td>
<td>Distribute customer knowledge to employees throughout the organization</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>21</td>
<td>Track customer defection and retention levels</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>22</td>
<td>Track customer service satisfaction level</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>23</td>
<td>Develop new pricing method</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

### 7. Innovation of senior officers

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>They have original ideas.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>36</td>
<td>They often risk doing things differently</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>
They will sooner create something new than improved before

8. Knowledge management

The hospital is able to provide fast patients response because of integrated patients’ knowledge across several functional areas

The hospital is able to provide fast decision making due to patients availability

The hospital is able to provide fast decision making due to knowledge precision

The hospital can generally predict future patients’ expectation

The hospital can provide authentic service information for quick and accurate patient interaction

Table 4: Questions related to Research Question 3

To Be Answered By Doctors and Management Staff

Please rate each item according to the following scale by circling the appropriate box (number) for each statement: 1 – strongly agree, 2 - Agree, 3 – Disagree, 4 – strongly disagree 5 – I don’t know.

BARRIERS TO PRM IMPLEMENTATION

The following potential barrier for PRM implementation is present in your hospital

<table>
<thead>
<tr>
<th></th>
<th>Inadequate supporting budgets</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Lack of senior management commitment to CRM</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Poor communication</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>An absence of complementary customer management skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Inefficiency in business processes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Lack of end-user input at service stage</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>A lack of standardization</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Table 5: Questions related to Research Question 4

To Be Answered By Management Staff

Please rate each item according to the following scale by circling the appropriate box (number) for each statement: 1 – Strong priority, 2 – Medium priority, 3 – Low priority, 4 – I don’t think it would help 5 – I don’t know.

<table>
<thead>
<tr>
<th></th>
<th>Interdepartmental conflict</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>The skill required to use these technologies is too complex for our employees</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>Resistance to change among the hospital’s staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**ISSUES OF ENHANCING PRM IMPLEMENTATION**

With which priority do you think the following should be done to make the present PRM system more efficient in your hospital

<table>
<thead>
<tr>
<th></th>
<th>Integrate Patient Relationship Management (PRM) system with Hospital Information System</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>as the main data source to assure the stability of Hospital Information System (HIS).</td>
</tr>
<tr>
<td></td>
<td>Use data in HIS database at any time for data analysis and data mining.</td>
</tr>
<tr>
<td></td>
<td>The data analysis may help patient find the management scheme and marketing model that fit the hospital best.</td>
</tr>
<tr>
<td></td>
<td>Patient Relationship Management (PRM) may help to locate the key client groups and their special demand on service, as well as the general demands from common patients.</td>
</tr>
<tr>
<td></td>
<td>It assists in more comprehensive medical service, higher service quality and optimized configuration of medical resources.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Integrate Patient Relationship Management (PRM) with hospital web platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>need specialized clinical services, which requires a couple of days for laboratory outcome</td>
</tr>
<tr>
<td></td>
<td>need specialized clinical services, which requires reduction in the frequency of patients’ visit to hospital by setting up an online reservation</td>
</tr>
<tr>
<td></td>
<td>need specialized clinical services, which requires outcome-check-up</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>C</td>
<td><strong>Integrate Customer Relationship Management (PRM) with call centers</strong></td>
</tr>
<tr>
<td></td>
<td>It handles the demand tracking process to ensure compliance.</td>
</tr>
<tr>
<td></td>
<td>It can make operators aware of the information of patients including their identity, medical records, etc. e.g. a phone call makes it possible for operators to give an accurate and timely reply to patients and help them make a reservation with relevant doctors and specialists</td>
</tr>
<tr>
<td>D</td>
<td><strong>Integrate Patient Relationship Management (PRM) with short-message gateway</strong></td>
</tr>
<tr>
<td></td>
<td>Used to receive reply messages from patients</td>
</tr>
<tr>
<td>E</td>
<td><strong>Establish Patient Responding Mechanism and Database</strong></td>
</tr>
<tr>
<td></td>
<td>It keeps advices and complaints of patients in record.</td>
</tr>
<tr>
<td></td>
<td>Timely response is made to enhance the satisfaction of patients.</td>
</tr>
<tr>
<td></td>
<td>It promotes the standardization of hospital management.</td>
</tr>
</tbody>
</table>