THE REFERRAL SYSTEM AND FEEDBACK PROCESS BY MEDICAL CONSULTANTS AT THE UNIVERSITY COLLEGE HOSPITAL, IBADAN.

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DEDICATION

This work is dedicated to God, the Alpha and the Omega. He indeed has been my strength.

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ABSTRACT

Referral is an essential two-way process linking the three tiers of health care together. Lack of feedback is a common constraint to the proper functioning of the referral process and information is lacking on the factors which affect this process. This study was therefore designed to assess the knowledge, level of practice as well as the factors influencing the feedback process in the two-way referral system by medical consultants at the University College Hospital, Ibadan.

A cross-sectional study of all medical consultants (82) who routinely receive referrals and actively provide specialized patient care at the University College Hospital, Ibadan was carried out. Using a self-administered questionnaire, information on socio-demographic characteristics, knowledge, practice and the factors affecting the two-way referral process was obtained from respondents. Validation was done by assessing all new patients' records (1,207) in their clinics. Knowledge scores ranged between 0-8, scores of 0-4 were classified as poor knowledge and 5-8 as good knowledge. Chi-square test was used to determine association between categorical variables at 5% level of statistical significance.

The mean age of the respondents was 46.5 ±7.5 years, 64.6% of the respondents were males and 51.2% had 15-24 years working experience as a doctor. The respondents included were surgeons (17.1%), dentists (15.9%), paediatricians (14.6%), physicians (12.2%), obstetrician and gynaecologists (9.8%), psychiatrists (6.1%), community health physicians (6.1%), haematologists (6.1%), radiotherapists (4.9%), ophthalmologists (3.7%), and

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otorhinolaryngologists (3.7%). Although 84.1% of the respondents had good knowledge of the two-way referral system, only 56.1% reported sending feedbacks. Evidence of feedbacks was available however in only 9.7% of case notes. The decision to send feedbacks was based on the reason for referral and detail of clinical information supplied by the referring healthcare provider as reported by 42.7% and 32.9% of the respondents respectively. Ignorance of the existence of the feedback system (14.6%), lack of commitment to the practice of sending feedbacks (13.4%), inadequate resources (11.0%) and a heavy patient load (9.8%) were identified by respondents as challenges to the two-way referral system. Most (97.6%) of the respondents believed that there was a need to improve the feedback system. Working experience was significantly and positively associated with sending of feedbacks. Feedback was also significantly associated with the existence of a coordinating system for referrals within the departments. Feedbacks were given more on outpatients than inpatients. Feedbacks from Ophthalmologists were significantly higher than those from other consultants. A feedback was also more likely if the information on the referral letter to the consultants contained detailed information.

Knowledge about the two-way referral system was high in the study population but the feedback practice was poor. There is a need for a mechanism to monitor referrals, provide adequate resources and re-orientate medical consultants about the feedback.

Keywords: Two-way referral system, Health care provider, Factors, Health facility.

Word count: 450 words

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CERTIFICATION

I certify that this research has been carried out by **Victoria Oluwabunmi OLADOYIN** in the Department of Community Medicine, Faculty of Clinical Sciences, University of Ibadan, Nigeria.

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GLOSSARY

A and E	Accident and Emergency
ENT	Ear, Nose, and Throat (Otorhinolaryngology)
GOPD	General Outpatient Department
ICD	International Statistical Classification of Diseases and Related Health Problems
O and G	Obstetrics and Gynaecology
SD	Standard Deviation
SPSS	Statistical Package for Social Sciences

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UCH	University College Hospital
WHO	World Health Organization

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

The national health care system provides for three tiers of health care; primary, secondary, and tertiary (Federal Ministry of Health, Abuja, 2004). The primary health care service, which is the closest to the people, is constitutionally the responsibility of the Local Government. The secondary health care services cater for patients whose problems cannot be solved at the primary level and is the responsibility of the State Government while the federal medical centres, teaching hospitals and specialist hospitals where tertiary health services are offered are supervised by the Federal Ministry of Health (Federal Ministry of Health, Abuja, 2004).

Primary Health Care which is the first level of contact of the individual and community with the national health system is defined as essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation and at a cost which the country can afford to maintain at every stage of their development in the spirit of self-reliance and self determination (WHO 1978 and Akinsola, 2006).

In order to facilitate accessibility and adequacy of care at the level medically fit for everybody demanding it, it is essential to establish a referral system. The Primary Health Care programme, through a referral pathway, links with the other levels of care – secondary and tertiary (Akinsola, 2006).

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A referral can be defined as a process in which a health worker at one level of the health system, having insufficient resources (drugs, equipment, skills) to manage a clinical condition, seeks the assistance of a better or differently resourced facility at the same or higher level to assist in, or take over the management of the client's case (WHO referral system guidelines.) A good referral practice, however, is the two-way referral system which implies that the higher centre receiving the patient should give relevant feedback about the patient to the referring centre after the patient has been seen and treated. Sometimes, it may be necessary for follow-up treatment to continue at the lower level after necessary investigations and treatment have been initiated by the higher centre, thus releasing the pressure on the higher centre (Obionu, 2007). An ideal referral system would ensure that patients can receive appropriate, high- quality care for their condition at the lowest cost and closest facility possible, given the resources available to the health system, with seamless transfer of information and responsibility as that patient is required to move up or down the referral chain. Few referral systems anywhere in the world live up to this ideal fully however, and do provide a target in relation to improving the current situation (Hensher et al., 2006).

The development of an effective patient referral system is one of the important public health issues in developing countries. Primary health care will not work unless there is effective hospital support to deal with referred patients, and to refer patients who do not require hospital attention back to one of the other primary health care services (WHO, 1987). Unfortunately in many developing countries, the referral system performs well below expectations (Bossyns and Van Lerberghe, 2004). The current knowledge and practice of the two-way referral system needs to be established so as to have updated information about the system in Nigeria.

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It is important to know what the current situation is within university teaching hospitals, since faulty practices may be learned during training. The University College Hospital (UCH) being a tertiary level hospital with her highly specialized staff and technical equipment, clinical services highly differentiated by function and teaching activities made her an appropriate site for this study.

1.2 Statement of the problem

The malfunctioning of the referral system is usually analysed in terms of either the need for standardised guidelines and criteria for referral, distance and transport or financial barriers. Fewer studies concentrate on the socio-cultural barriers (Bossyns and Van Lerberghe, 2004). An additional source of malfunction is the feedback process from the higher level facility to the lower one. The feedback process has been described in the developed world. Information is lacking on the feedback process and the factors affecting it in the developing countries and especially in a country like Nigeria.

The weakest part of the referral process is generally the feedback or back referral from the higher level facility (Department of Health, Republic of South Africa, 2003). This makes the higher health facilities to be overwhelmed with patients that can be followed up at the lower levels of health care (WHO, 1992); makes many patients to spend long waiting hours to see highly trained medical workers; leads to long appointment days before patients can see the highly trained health workers; is a mismanagement of highly trained health workers' time and patients that really need specialists' care are not adequately attended to (Hensher et al., 2006).

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Continuing treatment of chronic illnesses such as diabetes, hypertension, epilepsy, and psychiatric illnesses by the lower level facility is particularly important and assures not only high quality of care for the patient, but also greater convenience and less burden on the higher levels of the system (Department of Health, Republic of South Africa, 2003).

The weak feedback process also implies that continuing education to the lower level facility will also be deficient (Omaha et al, 1998).

The feedback process of the referral system is therefore a problem that needs to be investigated and solved.

1.3 Justification

An effective referral system ensures a close relationship between all levels of the health system and helps to ensure people receive the best possible care closest to home. It also assists in making cost-effective use of hospitals and primary health care services.

By carrying out this study, it is hoped that the gaps in the referral system will be identified and that the findings obtained will be used to improve the weak links of the referral system especially the feedback process. This will ultimately promote the management of patients at the lowest level of care and cost possible as well as providing significant support to personnel in lower level facilities.

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1.4 Objectives

Broad Objective

To assess the current knowledge and level of practice of the feedback process of the two-way referral system by medical consultants at the University College Hospital, Ibadan.

Specific Objectives

1. To assess the knowledge of medical consultants at the UCH Ibadan about the referral system.
2. To determine the level of practice of the two-way referral system by medical consultants at the UCH Ibadan.
3. To ascertain the factors influencing the practice of the feedback process in the two-way referral system.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Deeply alarmed at the outrageous low life expectancy averages and the high mortality rates among children of a majority of the world's population, whose living conditions were substandard and impoverished, the World Health Assembly (1977) proposed the formation of a global health strategy for the attainment by all the people of the world by year 2000 of a level of health that will permit them to lead a socially and economically productive life popularly referred to as Health for all in the year 2000 (WHO 1978, WHO, 2006 and WHO, 2008). In 1978, during an international conference held at Alma Ata, the World Health Organization made a declaration that Primary Health Care is the key to attaining "Health for all in the year 2000" and that it should be adopted by all member states of the World Health Organization (WHO, 1978 and WHO, 1981).

The referral system is closely linked to the concept of primary health care. This system which explains the relationship between units of medical care is based on the idea that patients should be treated as close to their homes as possible in the smallest, cheapest, most simply equipped, and most humbly staffed unit that will provide them an adequate service. This system however, is a two-way system, which takes into account the capacity at each level of care. (Akinsola, 2006).

The process of referring is crucial to the sustainability of the primary health care and to the health of our nation, Nigeria (Daramola, 2006) but unfortunately, Nigeria has

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challenges with implementation of her referral system (Federal Ministry of Health, Abuja, 2004). The non-functional or ineffective referral system between various types of health care facilities is one of the highlights of the current situation of the health care system and health status of Nigerians (Federal Ministry of Health, Abuja, 2004).

2.2 The National Health Policy and Referral

The national health policy of Nigeria represents the collective will of the governments and people of the country to provide a comprehensive health that is based on primary health care. It describes the goals, structure, strategy and policy direction of the health care delivery system in Nigeria. It defines the role and responsibilities of the three tiers of government without neglecting the non-governmental actors. Its long-term goal is to provide the entire population with adequate access not only to primary health care, but also secondary and tertiary services through a well functioning referral system (Federal Ministry of Health, Abuja, 2004).

2.3 The National Health Care System

The national health care system in Nigeria is built on the basis of the three-tier responsibilities of the Federal, State and Local Governments. The various levels of government (Federal, State and Local) are to support, in a coordinated manner, a three-tier system of care. The system is expected to be comprehensive, have multisectoral inputs, community involvement and also collaborate with non-governmental providers of health care (Federal Ministry of Health, Abuja, 2004).

The national health care system is developed at three levels which are the Primary, Secondary and Tertiary health care. Primary health care provides general health

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services of preventive, curative, promotive and rehabilitative nature to the population as the entry point of the health care system. The provision of care at this level is largely the responsibility of Local Governments with the support of State Ministries of Health. Private sector practitioners also provide care at this level. The secondary health care level provides services to patients referred from the Primary health care level through out-patient and in-patient services of hospitals for general medical, surgical, paediatrics, obstetrics and gynaecology and community health services. This level of care is the responsibility of State Governments. Tertiary health care consists of highly specialized services and it is provided by Teaching hospitals and other special hospitals which provide care for specific disease conditions or specific group of patients. This level of care is the responsibility of the Federal Government (Federal Ministry of Health, Abuja, 2004).

2.4 The Two-Way Referral System

A referral can be defined as a process by which a health care provider transfers the responsibility of the patient's management temporarily or permanently to another health care provider or professional. A good referral practice however, is the two-way referral system which implies that the higher centre receiving the patient should give relevant feedback about the patient to the referring centre after the patient has been seen and treated (Obionu, 2007). Except in emergency situations when patients can be referred to any of the facilities for immediate treatment, a two-way referral system is advocated from the lowest level of health care to the highest (Ransome-Kuti et al, 1998). A functioning referral system is a critical part of an appropriate health care delivery system according to WHO/UNICEF (1978) and for it to be effective, it requires good communication and coordination between levels of care and support

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from higher to lower levels to help manage patients at the lowest level of care possible (Hensher et al., 2006).

Physician-to physician communication is vital to the success of an outpatient referral. Optimal communication involves the transfer of relevant clinical information in both directions- from the referring physician to the specialist and vice versa (Ghandi et al, 2000). According to Siddiqi et al (2001), this two-way communication should be initiated by the referring physician and completed with appropriate feedback by the referee, usually a consultant physician at a hospital. In the absence of specific programs to link the efforts of generalists and specialists, clinicians often work in parallel rather than collaboratively. This system leaves patients at risk for disjointed, ineffective care (Stille et al, 2005). Linkages and collaboration must therefore be encouraged between Community health care providers, Primary health care workers and health workers at referral centers if the problem of the referral system must be surmounted. This fact is particularly underscored by the fact that Primary health care will not work without an efficient referral system supported by hospitals to provide continuity of care (Musa et al, 2004).

The referral process is a critical component of quality clinical care and if quality care is thus to occur, it is essential that the referral process be completed successfully. The five steps to the successful completion of a referral are: (1) definition of the need and purpose of a referral by both the patient and the referring physician, (2) communication of the need and purpose to the consultant, (3) attention given to the problem by the consultant, (4) communication of the consultant's findings and recommendations to the referring physician, and (5) understanding by the patient, the

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consultant, and the referring physician of who is taking responsibility for the patient's continuing care.(Cummins et al, 1980). Problems have been identified at each step of this process. The referring physician may not clearly define the purpose of consultation or communicate it to the consultant. The consultant, in turn, may fail to communicate his findings or recommendations to the referring physician promptly. (Cummins et al, 1980).

According to some studies in paediatrics department, ineffective communication between levels of care is a problem and is a critical target for both research and education (American Academy of Paediatrics, 1999, Forrest et al, 1999 and American Academy of Paediatrics, 2000).

2.5 Advantages of a Two-Way Referral System

A good referral system can help to ensure that clients receive optimal hospital care at the appropriate level. It also helps to ensure that hospital facilities are used optimally and cost-effectively. Another advantage is that clients who most need specialist services can access them in a timely way. Also, primary health services are well utilized and their reputation is enhanced (WHO referral system guidelines and Ayanian et al, 2002).

In addition, a two-way referral serves as a means of continuous education for health personnel (Newton et al, 1992, Omaha et al., 1998, and Gandhi et al, 2000). Bjerrum et al (2012), in a qualitative study to explore Primary health care staff's perception, challenges and needs pertaining to identification of children with Tuberculosis in

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Muheza district in Tanzania, identified that good feedback systems is an opportunity for continuous learning and motivation of Primary health care staffs.

The two-way referral system helps the referring physician to know the results of the consultant's evaluation in order to render proper and coordinated care. This is particularly true in chronic multisystem illness, where the consultants diagnose problems and initiate treatments, but the referring physician supply ongoing supervision and counselling (Cummins et al, 1980). Increasing patient's satisfaction and decreasing morbidity and mortality rates are other identified advantages (Vision project, 2004).

2.6 Knowledge of the Referral System

Generally, there is a dearth of information on studies of the referral knowledge of medical consultants. Cloutier et al (2010) conducted a study in Canada to assess physicians' attitude and knowledge of mental health services and centralized intake services for mental health among 735 physicians in active practice within the catchment area of a regional centralized intake for child and youth mental health services. Their study revealed that majority of the physicians who completed and returned the survey were aware of in-patient services delivered both at hospital facilities (73.4%) and through out-patient mental health teams (62.1%).

In a regional physician survey on generalist - subspecialist communication for children with chronic conditions, Paediatricians and General practitioners in New England were probed about communication practices and their opinions about the role of communication in care. Ninety-eight percent of the respondents agreed that

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communication was important for good care. Reported practices, however, reflected large gaps in this area (Still et al, 2003).

2.7 Practice of the Two-way Referral System

Studies have been conducted in the developed countries and other developing countries on the rates of communication from specialists back to the referring physician. But unfortunately, there is a limited body of knowledge concerning the practice of the two-way referral system in Nigeria. Prior studies, in the United States, from general internal medicine and family medicine (Cummins et al, 1980, McPhee et al, 1984 and Byrd et al, 1987) have described rates of communication from specialists back to referring physicians after a consultation that ranged from 55% to 80%.

In order to study the communication between primary care physicians and subspecialty consultants within university medical centers, since faulty practices may be learnt during residency training, Mcphee et al (1984) prospectively studied the communication between 27 referring practitioners and their consultants for 464 consecutive patient referrals from a general internal medicine group practice at a university medical centre in San Francisco. They found out that consultants communicated their findings to referring practitioners in only 55% of the consultations. Referring physicians who personally contacted consultants or who supplied them with more clinical information were more likely to learn the results of the consultation.

In another study to assess how frequently consultants at the secondary care level performed their part of the referral process, in particular for those patients requiring

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continuity of care, Cummins et al (1980) documented an overall rate of receiving follow-up information of 62%. Private specialists, however, provided substantially more follow-up information (78%) than either university-affiliated emergency rooms (48%) or university-affiliated specialty clinics (59%). Patients requiring continuing medical supervision from the referring physician also fared poorly as follow-up information were provided only 54% of the time for them.

Byrd et al (1987), in a Boston based study that was designed to look at several aspects of general internal medicine outpatient consultations which included the communication rate and communication pattern from the specialist to the general internist, reported that referring physicians received communications from the consultants 80.5% of the time when appointments were kept.

A national study in paediatrics found that referring generalists reported receipt of communication from subspecialists 51% of the time within 3 months after a referral was made, and sharing of care was discussed in only 31% of cases (Forrest et al, 2000).

According to Khattab et al (1999) in a review of random sample of records of 864 referred patients conducted in the Southern region of Saudi Arabia, hospital feedback was reported for only 22–39% of patients. The feedback was given only if requested by the patients or primary care doctors. The feedback reports lacked essential information including details of the advice given (100%), diagnoses (15%), or findings on investigations (21%).

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In another national study to present the situation of the patient referral system in the Republic of Honduras, Omaha et al (1998) reviewed a total number of 46,739 patient records. From these reviews, 2266 'received referrals' cases and 1072 'sent referral' cases were found. Only 1.4% (15/1072) of 'sent referral' cases received a reply from higher level institutions.

Siddiqi et al (2001) conducted a study to analyse the referral system in Attock district of Punjab province, Pakistan for the purpose of identifying its strengths and weaknesses. They reported that none of the higher level facilities provided feedback to first level care facilities while records of higher level facilities revealed lack of information on either patient referrals or feedback.

According to Bjerrum et al (2012), in a qualitative study to explore Primary health care staff's perception, challenges and needs pertaining to identification of children with Tuberculosis in Muheza district in Tanzania, the respondents desired feedback about the patients sent to the hospital for tests and diagnosis, as well as information about any treatment initiated. The respondents in this Tanzanian study were however frustrated as the referral feedback was either non-existent or inconsistent.

During the second half of the eighties, some successes were recorded with regards to the state of the health systems and, to some extent, the health status of Nigerians. The primary health care system was developed and strengthened and this helped to improve some of the health status indicators (Federal Ministry of Health, Abuja, 2004). Unfortunately, this success was not sustained. There has been a downward trend in health development since 1993. The non-functional or ineffective referral

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system between various types of health care facilities is one of the highlights of the current situation of the health care system and health status of Nigerians (Federal Ministry of Health, Abuja, 2004).

In her study to appraise the two-way referral system between state governments owned primary and secondary health care facilities in Ibadan municipality, Nigeria, Daramola (2006) found that the pattern of referral was in the one-way upward direction only as opposed to the two-way concept of referral. The study did not find a single referral made down the pathway.

2.8 Constraints to the proper functioning of referral systems

Despite the elaborate network of Pakistan's public health service structure (Basic health units, rural health centres and the existing higher level facilities in the country) primary care activities have not brought about expected improvements in health status, especially of rural population groups. One of the reasons for this failure is the absence of a properly functioning referral system (Siddiqi et al, 2001). Several factors militate against the proper functioning of the referral system generally and there have been previous studies which confirm this.

The problem of distance to referral centers is a factor which affects the proper functioning of a referral hospital. In a study on the accessibility of referral hospital care in Ibadan, Iyun (1983) reported the existence of a steep distance-decay function, indicating that -other things being equal- individuals with a given need for a clinical service will be less likely to access that service the farther away from the referral center they live.

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In their study to understand the nature of the constraints to referral that relate to the interaction between nurses and patients in rural Niger, Bossyns and Van Lerberghe (2004) reported that the referral systems perform well below expectations in many developing countries. They concluded that a lack of investment in the district hospitals and professionalization of care at first level contact attributes to the failure of the referral systems in sub-Saharan rural Africa. They reported that not until district hospitals have reached an acceptable level of care will nurses be willing to refer patients and to convince them to make the necessary investments and effort to consult at the hospital. Also in their report, there is a need for staffs that are sufficiently self-confident to be able to refer without fear of loss of face.

Kloos (1990) and Martey et al (1998) identified other problems relating to the availability, regularity and cost of transportation to referral centers. They also indicated that prohibitive hospital fees are often a significant barrier to utilization of referral hospitals, especially among poorer patients. Other important barriers included perceived lack of drugs and essential supplies, even at referral centers, negative staff attitude and cultural and linguistic differences.

According to Atkinson et al (1999), the striking lack of linkage from the hospital back to the urban health centres for follow-up care is one of the problems contributing to the malfunctioning of the urban referral system.

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2.9 Factors affecting the feedback process of the Two-way referral system

Effective and efficient communication and feedback systems between the levels of care can be a great challenge. Some of the factors responsible for this have been discussed by previous studies.

Cummins et al (1980) identified the fact that the responsibility for communicating with the referring physician is either not defined or not supervised in their study to assess how frequently consultants at the secondary care level performed their part of the referral process, in particular for those patients requiring continuity of care. This is especially true in emergency rooms and subspecialty clinics. A patient may be seen by interns, residents and/or an attending physician. In this ambiguous situation of ‘’who is in charge?’’ defined responsibility for communication often belongs to no one. The same authors reported that the rare failures of the referring physicians are often dealt with and the common successes seldom seen, and also that the house staff and attending physicians have no perceived financial stake in ensuring a continuing flow of patients by referral, especially when the consultant was in an academic medical centre compared to consultants in private practice. Their study showed that there was a substantial difference between the rates at which private specialists and University medical centers provided follow-up information.

Inadequate secretarial and clerical staff can make the process of sending letters, copying records, and answering return phone calls difficult or impossible (McCue and Beach 1994). These authors also reported that the involvement of multiple practitioners in patient’s care also compounds the communication between the primary care physicians and consultants.

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In a paper on communication between primary care physicians and consultants, Epstein (1995) documented several reasons for the poor communication between family physicians and consultants. He reported that good communication between physicians takes time, is an undervalued activity and involves skills they may not have developed during training. Also, there are economic considerations as all of the time spent communicating between health care practitioners is not directly compensated. Other reasons documented include lack of familiarity between primary care physicians and consultants and that some patients refer themselves directly to consultants, bypassing the primary care physician.

Smith and Khutoane (2009) in a qualitative study on why doctors do not reply to referral letters, reported that doctors in training, such as registrars, define their role in relation to those of their supervisors and that they do not have a sense of their role in the wider health care system. These doctors in training do not perceive that their consultants value intercollegial ties as important; hence, they stated that it is their heads of departments or consultants responsibility to ensure that replies are written. The authors in their article therefore suggested that consultants have responsibilities to help socialise their juniors in their role as a doctor, not only in terms of their responsibility towards their patients, but also in terms of the broader implications for the health care system. The same authors in their study concluded that while better quality referral letters do not always lead to increased replies, it does result in better quality replies when written, and inferior quality letters most probably will receive a more negative response. They also reported that hospital doctors perceived that it is futile to answer referral letters. Their study participants feel that reply letters do not reach the clinic. They feel the patients do not return to the clinic, either because they

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do not have money for transport to the clinic, or because they believe they get better care at the hospital and do not want to return to the clinic. Adjustment of the referral system so that it does not rely on patients to courier letters was a suggestion to address this issue.

Forrest et al (2000) in their study to describe the frequency with which primary care paediatricians and specialists engage in various coordination activities when referrals are made and to examine the effect of these activities on referral completion and referring physicians satisfaction with the specialty care their patients received, found that when referring physicians scheduled the consultation appointment and/or sent information to the specialist, the chances of referral completion were significantly increased.

Feedback was given only if requested by patients or the primary care doctors in a study of the referral system in one family practice centre in Saudi Arabia, hospital (Khattab et al, 1999). Referring physicians who personally contacted consultants or who supplied them with more clinical information were more likely to learn the results of the consultation, while those who provided reasons for the referral and scheduled a return appointment for the patients were also most likely to receive a feedback (McPhee et al, 1984).

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CHAPTER THREE

METHODOLOGY

3.1. Study area

This study was conducted at the University College Hospital, a federal tertiary referral health institution established in September, 1952, where training, research and clinical services are ongoing. It is strategically located within Ibadan, the capital of Oyo state, Nigeria. The hospital had 56 service and clinical departments and ran 96 consultative out-patient clinics a week in 50 specialty and sub-specialty disciplines at the time of the study. There were about 223 Medical consultants at the University College Hospital, Ibadan at the time of the study. The hospital had about 850 bed spaces and about 163 examination couches during the time of the study. Enhancing and strengthening the referral system is one of her strategic objectives (Establishment department, University College Hospital, Ibadan, 2007).

3.2. Study population

The study population were all medical consultants who consult at the various consultant clinics of the University College Hospital, Ibadan.

Inclusion criteria: Medical consultants in the following clinical departments at the University College Hospital, Ibadan who routinely receive referrals and actively provide specialized patient care were included – Paediatrics, Surgery, Internal Medicine, Ophthalmology, Obstetrics and Gynaecology, Psychiatry, Otorhinolaryngology, Dentistry, Community Medicine, Radiotherapy and Haematology.

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Exclusion criteria: Medical consultants in the following clinical departments at the University College Hospital, Ibadan were excluded - General Out-patient, Pathology, Radiology, Anaesthesia, Institute of Child health, Nuclear Medicine and Accident and Emergency departments. Consultants at the General Out-patient Department were excluded because they provide primary care within a tertiary hospital setting while the other consultants in the other departments were excluded on the grounds that they did not routinely receive referrals and typically did not provide care on an on-going basis but do so as a onetime consult.

Medical consultants who were on sabbatical leave, those who were not employed by the University College Hospital, those who did not consent and those who were not around for a long time for other reasons were excluded from the study.

3.3. Study design

Two types of surveys were conducted. Firstly, a descriptive cross-sectional study of medical consultants was performed which asked the respondents about their socio-demographic characteristics, knowledge and practice of the two-way referral system as well as the factors affecting it (Appendix 1). However, the author was concerned that respondents might favourably present a picture of their practice of the two-way referral system. Therefore to reduce recall bias and look more closely at the practice of the feedback process, a descriptive retrospective study was performed by reviewing patients' case notes and recording the findings on an observation checklist (Appendix 2).

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3.4. Sample size calculation

Sample size formula for descriptive study was used to calculate the sample size i.e.

$$n = \frac{z^2pq}{d^2}$$

where n = minimum sample size

z = critical value at 95% confidence interval

p = proportion of consultants who sent feedbacks to the referrals received

d = level of precision taken as 5%

q = 1- p

therefore z = 1.96

p = 0.55 i.e. 55% (McPhee, et al, 1984).

d = 0.05 (i.e. 5%)

q = 1 – 0.55 = 0.45

$$n = \frac{1.96*1.96*0.55*0.45}{0.05*0.05}$$

n = 380.32 + 10% allowance for non response

n = 418.35

The sample size calculation using p = 0.55 from McPhee, et al (1984) yielded a sample size of 419. A total sampling method was used for this study because the study population was found to be smaller in size than the calculated sample size.

3.5. Sampling method

A total sampling method was used.

Procedure: A list of all the medical consultants was obtained from each clinical department which met the inclusion criteria. After eliminating the author's

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supervisor's name, 98 medical consultants remained in the included clinical departments. A letter was then written, initially to the heads of department (Appendix 3), and then subsequently to each medical consultant (Appendix 4) to notify them about the study and also to seek their kind cooperation as respondents in the study. Questionnaires enveloped in brown A-4 sized envelopes with pens included were thereafter taken to all the medical consultants in the included clinical departments.

All the medical consultants in the included clinical departments who consented were included in the study.

The records of all new referred patients in January, 2008 were also reviewed retrospectively for each of the clinical department that was included in the study. Approval was obtained from the Chairman Medical Advisory Committee, University College Hospital, to review their records. Records of old patients on follow up were excluded from the study. Records of patients who were registered personally by the consultant who wanted to see them were also excluded.

The author administered the questionnaires to the respondents personally in their departmental offices while trained research assistants assisted in completing the checklist for review of records.

3.6. Data collection method

Data collection occurred from November 2008 to July 2009 using two instruments namely:

-A self administered questionnaire (Appendix 1) and

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-A checklist for review of records of all new patients in January 2008 (Appendix 2)

The questionnaire was a structured (pre-coded) 30-itemed instrument, with few open-ended questions written in English language. It was divided into sections based on the objectives of the study as shown below:

SECTION A: Socio-demographic data

SECTION B: Knowledge of the two-way referral system

SECTION C: Level of practice of the two-way referral system

SECTION D: Factors influencing the practice of the feedback process in the two-way referral system

The checklist for the review of records summarised the patients' records by age, sex, referring institution, location of referring institution, who referred the patient, mode of referral, information on referral note, diagnosis on referral, final diagnosis and whether there was a feedback or reply to the referring institution or not.

3.7. Validity of the instrument

The validity of the instruments was ensured by pre-testing thirty questionnaires and thirty checklists for review of records on medical consultants and case notes, respectively, which fulfilled the inclusion criteria at the Olabisi Onabanjo University Teaching hospital, Sagamu. Irrelevant questions were eliminated and confusing ones re-structured.

3.8. Ethical consideration

Ethical approval was obtained from the University of Ibadan/University College Hospital Institutional review body (Appendix 6). Approval was also obtained from the

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Chairman Medical Advisory Committee, University College Hospital, so as to be able to review the patients' record (Appendix 7). Approval was as well obtained from each Head of department. Careful explanation of the purpose, content, and implication of the research was made known to the participants. Confidentiality of the information provided was assured and written informed consent was obtained from the participants.

3.9. Data management and analysis

The questionnaires and checklist were manually sorted out and coded. They were inspected daily so as to detect and correct errors early. The ICD-10 for classification of diseases was used to categorise the diagnosis into twenty-one categories. Data was entered into a computer and analyzed using SPSS 15.0 statistical package. The specialties/departments were further re-grouped into medical, surgical and laboratory specialties/departments. The medical specialties/departments were Psychiatry, Community Medicine, Internal Medicine and Paediatrics. The surgical specialties/departments were Ophthalmology, Otorhinolaryngology, Radiotherapy, Obstetrics and Gynaecology, Dentistry and Surgery. Haematology was the only Laboratory specialty/department. Knowledge scores ranged between 0 and 8. It was categorized as good or poor based on percentile. The score corresponding to the 50^{th} percentile was 4. Scores of 0 to 4 were classified as poor knowledge and 5 to 8 as good knowledge. Frequencies, proportions and percentages were generated with appropriate diagrams. Summary indices such as means and standard deviations were also generated for quantitative variables. Test of association of variables was done using Chi-square test and Fisher's exact test for categorical variables at 5% level of statistical significance.

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3.10. Dissemination of knowledge

Findings from this study will form part of the requirements for the award of a Masters degree of the University of Ibadan. Findings from the study and appropriate recommendation will be made available to the University College Hospital, Ibadan, the Heads of all the clinical departments at the University College Hospital, Ibadan as well as the Oyo State Ministry of Health. Findings will equally be published in a peer reviewed journals of repute and will be presented at conferences.

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CHAPTER FOUR

RESULTS

Of the 223 Medical Consultants at the University College Hospital at the time of the study, 98 (43.9%) met the inclusion criteria, 83 (37.2%) were in the clinical departments that did not meet the inclusion criteria, nine (4.0%) were on sabbatical leave, 21 (9.4%) did not consent, three (1.4%) described themselves as ineligible because they were not employed by the University College Hospital, eight (3.6%) were not around for other reasons during the data collection period and the author's supervisor represented 0.5%. Questionnaires were completed by only 82 of 98 eligible medical consultants giving a response rate of 83.7%.

4.1 DEMOGRAPHIC CHARACTERISTICS.

Table 1 shows the socio-demographic characteristics of the respondents. The mean age of the respondents was 46.5 years ± 7.3 (range was 29 years, minimum age was 35 years and maximum age was 64 years). Majority of the respondents 26 (31.7%) were between the ages of 45 and 49 years. Fifty-three (64.6%) of the respondents were males while 29 (35.4%) were females giving a male to female ratio of 1.8:1. Majority 72 (87.8%) of the respondents were Yoruba while six (7.3%) were from other tribes such as Ijaw, Ishan, and Ibibio. Most of the respondents 79 (96.3%) were Christians and 77 (93.9%) were married. With respect to the duration of years of experience as a doctor, it was found that about half of the respondents (51.2%) had 15-24 years experience as a doctor while only four (4.9%) had 35-44 years experience. The mean number of years of experience was 21.9 years ± 7.0 (range was

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31 years, minimum years of experience was nine years and maximum years of experience was 40 years).

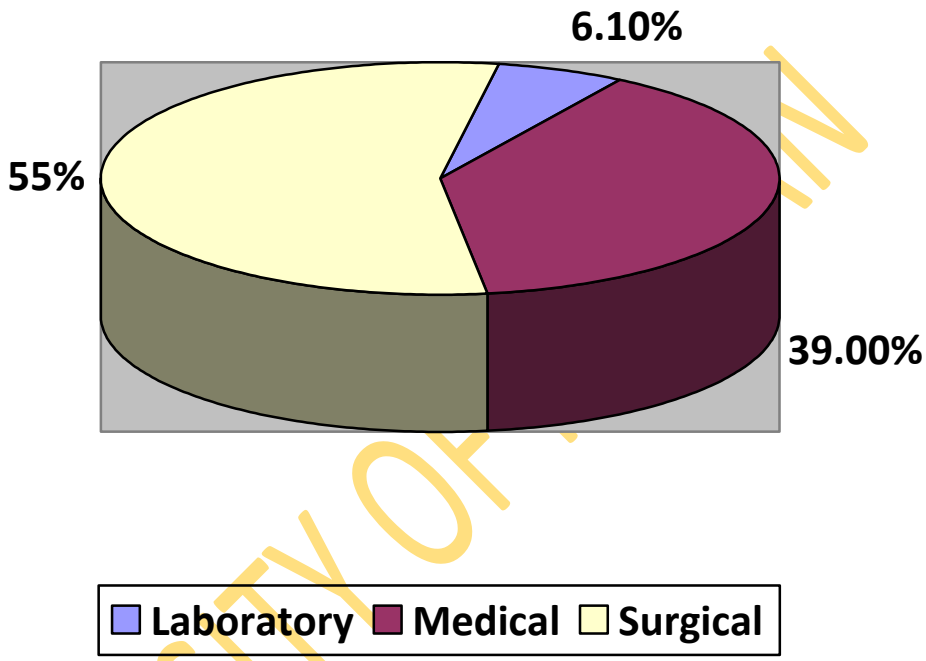
TABLE 1: Socio-demographic characteristics

N = 82

Socio-demographic characteristics	Frequency (%)
Age group (years)	
35-39	14(17.1)
40-44	19(23.2)
45-49	26(31.7)
50-54	10(12.2)
55-59	6(7.3)
60-64	7(8.5)
Sex	
Male	53(64.6)
Female	29(35.4)
Ethnic group	
Yoruba	72(87.8)
Igbo	4(4.9)
Others	6(7.3)
Religion	
Christianity	79(96.3)
Islam	3(3.7)
Marital status	
Married	77(93.9)
Single	5(6.1)
Duration of years of experience(years)	
≤14	14(17.1)
15-24	42(51.2)
25-34	22(26.8)
35-44	4(4.9)

As shown in figure 1, majority (54.9%) of the respondents were surgical specialists while only five (6.1%) were Laboratory specialists.

FIGURE 1: Distribution of respondents by specialty



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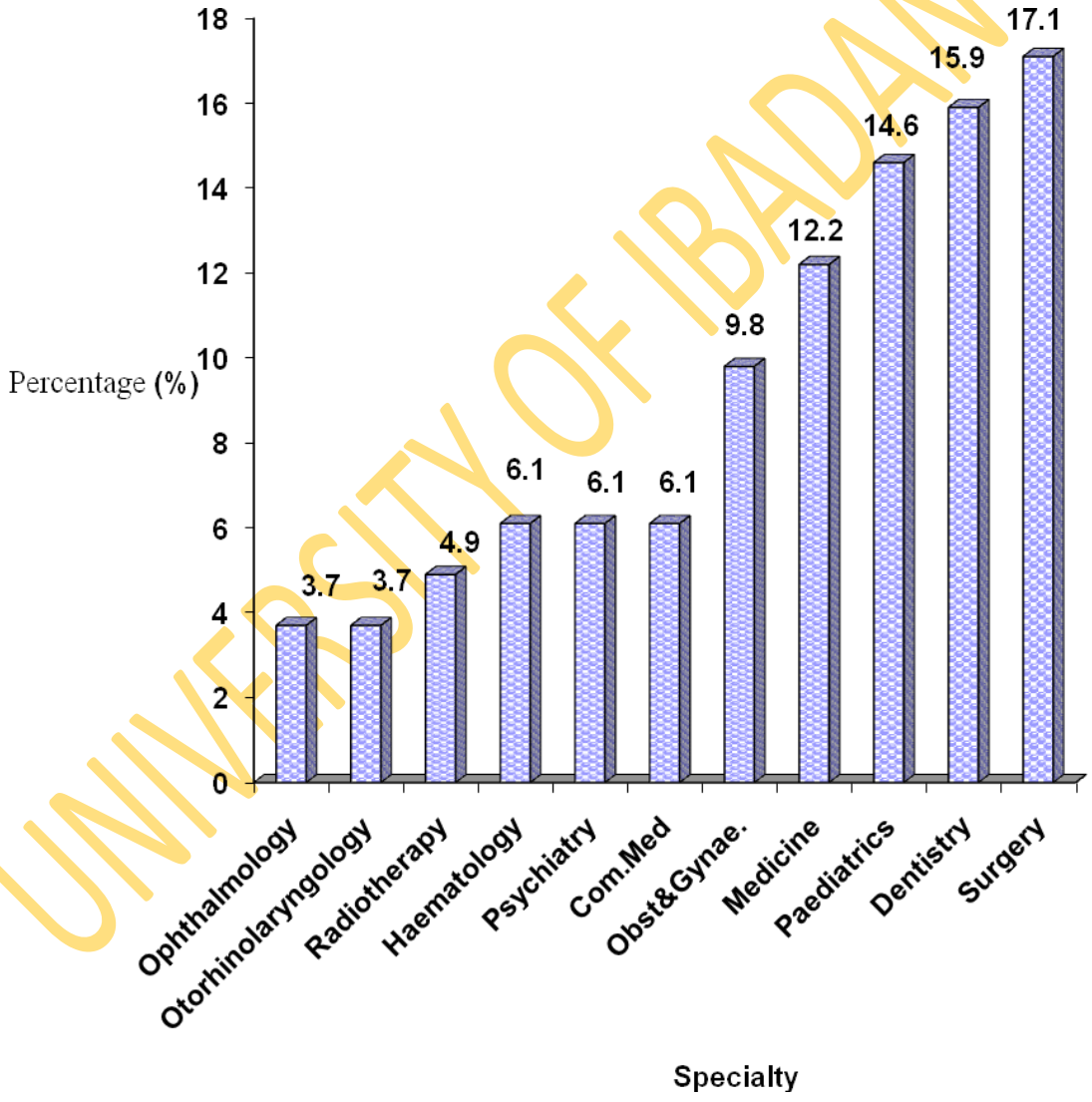
A greater percentage (17.1%) of the respondents were surgeons while ophthalmologists and otorhinolaryngologists each accounted for 3.7% of the total number of consultants and were the least in number. This is shown in figure 2.

FIGURE 2: Distribution of respondents by specialty.



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4.2. KNOWLEDGE OF THE MEDICAL CONSULTANTS ABOUT THE REFERRAL SYSTEM

As shown in table 2, 78 (95.1%) respondents claimed to have heard about the term three-tiered health system while four (4.9%) claimed not to be aware of the term. Also, 74 (90.2%) respondents claimed to have heard about the two-way referral system while eight (9.8%) said they have never heard about it.

TABLE 2: Awareness about the three-tiered health system and the two-way referral system among respondents

Variables	Yes (%)	No (%)	Total (%)
Has heard about the three-tiered health system	78(95.1)	4(4.9)	82(100.0)
Has heard about the two-way referral system.	74(90.2)	8(9.8)	82(100.0)

Of the 78 respondents who were aware of the three-tiered health system, only 70 (89.7%) could define the term correctly while five (6.4%) gave incorrect definitions. And of those who were aware of the two-way referral system, only 65(87.8%) were able to define the term correctly while 4.1% gave wrong definitions (Table 3).

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TABLE 3: Ability to define the three-tiered health system and the two-way referral system among respondents

Variables	Incorrect (%)	Partially correct (%)	Correct (%)	Total (%)
Ability to define the three-tiered health system	5(6.4)	3(3.8)	70(89.7)	78(100.0)
Ability to define the two-way referral system	3(4.1)	6(8.1)	65(87.8)	74(100.0)

The number of advantages of a two-way referral system that can be stated by the respondents is shown in table 4. Sixty-one (74.4%) of the respondents were able to state correctly two advantages of a two-way referral system, nine (11.0%) were able to state one while 12 (14.6%) were not able to state any. Majority of the respondent stated that the two-way referral system allows for better education of health care givers representing 53.7% while thirty-one (37.8%) stated that it helps to optimize patient's care. Other commonly mentioned advantages are that it helps to decongest the various levels of care of patients they cannot or should not be managing (18.3%) and also gives opportunity for follow-up care at a lower level which may be in patient's home environment (13.4%).

TABLE 4: Frequency distribution of respondents by number of advantages of a two-way referral system

Number of advantages	Frequency	Percentage (%)
None	12	14.6
One	9	11.0
Two	61	74.4
Total	82	100.0

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Table 5 shows the respondents' knowledge about the feedback process in the two-way referral system. Their knowledge was scored using their perceived definition of a three-tiered health system and the two-way referral system as well as the advantages of a two-way referral system. Each of the parameters was awarded a maximum score of two points. Correct answers were awarded a score of two points, partially correct answers were awarded a score of one point while incorrect answers were awarded zero point and the knowledge was assessed further. Good knowledge about the feedback system was indicated by a score range between 5 and 8, while the knowledge was judged as being poor with a score of 4 points and below. Sixty-nine (84.1%) had good knowledge score, while 13 (15.9%) had poor knowledge score.

TABLE 5: Knowledge of the feedback process of the referral system by respondents using average knowledge score

Knowledge scores	Frequency	Percentage (%)
Good (5-8)	69	84.1
Poor (0-4)	13	15.9
Total	82	100.0

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Table 6 below shows that a larger percentage of the respondents 46 (56.1%) had not received any training on the two-way referral system. Only 36 of the respondents have received training on the two-way referral system representing 43.9%.

TABLE 6: Distribution of respondents on training of the two-way referral system.

Training on the referral system.	Frequency	Percentage (%)
Yes	36	43.9
No	46	56.1
Total	82	100.0

As shown in table 7 below, out of the 36 respondents who had received trainings on the two-way referral system, 30 (83.3%) picked it up during the course of their job while 15 (41.7%) had formal lectures on the subject while in training. Two (5.6%) respondents acquired the skills through the internet and by reading.

TABLE 7: Distribution of respondents on mode of training on the two-way referral system*

n = 36

Kind of training	Frequency	Percentage (%)
Picked up during the course of the job	30	83.3
Formal lectures during medical training	15	41.7
Seminars/Symposia/Workshop	6	16.7
Other kinds of training	2	5.6

*multiple responses

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The relationship between the specialties and the number of advantages of the two-way referral system known by the respondents is shown in table 8. There was no statistical association between the specialty and the number of advantages.

TABLE 8: Relationship between specialty and number of advantages of the two-way referral system known by respondents

Specialty	**Number of advantages**			**Chi square (X^2)**	**P value**
	None (%)	One (%)	Two (%)		
Medical	5(15.6)	2(6.2)	25(78.1)	5.475	0.242
Surgical	7(15.6)	5(11.1)	33(73.3)		
Laboratory	0(0.0)	2(40.0)	3(60.0)		

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4.3 THE TWO- WAY REFERRAL PRACTICES OF THE MEDICAL CONSULTANTS.

As shown in table 9, the commonest mode of receipt of a referral was via a standard referral form 72 (87.8%) while 26 (32.1%) was via a formal referral letter. Most respondents (91.5%) reported that the patients were commonly referred from the general outpatient department of the hospital while the least (51.2%) were referred from health centres. Nine (11.0%) were from other sources like outreach centres, churches, non-governmental organizations or even self referral. Majority of the respondents (97.6%) reported that the patients referred to them were referred by physicians. Just over three-quarters (76.8%) of the respondents received referral very often while only one (1.2%) received referrals rarely. Thirty-six (43.9%) respondents do not send feedback to the referrals they receive while 46 (56.1%) send feedbacks to the referrals they receive. Majority (65.2%) of those who send feedbacks to the referral they receive do so using a formal referral letter written on a letter headed paper while 26.1% do so using informal notes. Others (10.9%) use other means like text messages, phone calls and e-mails to send feedbacks to the received referrals.

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TABLE 9: The two-way referral practices of respondents

Variables	Frequency (%)
Mode of receiving referral*	
Standard referral form	72(87.8)
Informal note	48(58.5)
Verbally	27(32.1)
Formal referral letter	26(32.1)
Others	4(4.9)
Common sources of referral*	
GOPD, UCH	75(91.5)
Other departments in UCH	71(86.6)
Private hospitals	66(80.5)
General hospitals	65(79.3)
Another tertiary institution	58(70.1)
Health centres	42(51.2)
Others	9(11.0)
Cadre of persons referring patient	
Physician	80(97.6)
Nurse	1(1.2)
Friend	1(1.2)
Receipt of referrals	
Very often	63(76.8)
Sometimes	18(22.0)
Rarely	1(1.2)
Send feedbacks to the received referrals	
Yes	46(56.1)
No	36(43.9)
Modes of sending feedbacks*	
Formal referral letter	30(65.2)
Verbally	18(39.1)
Standard back referral form	17(37.0)
Referral form (not standard)	15(32.6)
Continuation sheet	13(28.3)
Informal note	12(26.1)
Others	5(10.9)

*multiple responses

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The common reasons for referral are shown in Table 10 below. The commonest was for specialized care (100%), 62.2% was for diagnostic services while 36.6% was for convenience of follow up.

TABLE 10: Frequency distribution of common reasons for referral*

Common reasons for referral	Frequency (%)
More specialized care	82(100.0)
Diagnostic services	51(62.2)
Convenience of follow up	30(36.6)
Others	10(12.1)

*multiple responses

As shown in table 11, sixty-one (74.4%) of the respondents stated that there was nobody who coordinates the incoming referrals in their clinic while just above a quarter (25.6%) on the other hand stated there was someone who does this. Only thirteen (15.9%) of the respondents claimed that there was someone who coordinates the feedbacks to the referrals received in their clinic while sixty-nine (84.1%) said there was no one who does this in their clinic.

TABLE 11: Frequency distribution of coordination of incoming referrals and feedbacks*

Variables	Frequency (%)
Coordination of incoming referrals	
Yes	21(25.6)
No	61(74.4)
Coordination of feedbacks	
Yes	13(15.9)
No	69(84.1)

* N = 82

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Table 12 below shows that the gender, specialty, duration of experience and training on the two-way referral system were not significantly associated with the knowledge of the two-way referral system.

TABLE 12: Relationships between knowledge of the two-way referral system and gender, specialty, duration of experience, training.

Variable	Knowledge		Chi square (X^2)	P value
	Good No (%)	Poor No (%)		
Specialty				
Medical	27(84.4)	5(15.6)		
Surgical	38(84.4)	7(15.6)		
Laboratory	4(20.0)	1(20.0)	0.069	0.966
Duration of experience (years)				
≤ 14yrs	13(92.9)	1(7.1)		
15-24yrs	34(81.0)	8(19.0)		
25-34yrs	18(81.8)	4(18.2)		
35-44yrs	4(100.0)	0(0.0)	1.960	0.581
Training on the two-way referral				
Yes	32(88.9)	4(11.1)		
No	37(80.4)	9(19.6)	1.082	0.298
			Fisher's exact test	
Gender				
Male	45(84.9)	8(15.1)		
Female	24(82.8)	5(17.2)	0.065	

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As shown in table 13, the specialty, duration of experience and number of advantages that could be stated were not significantly associated with training on the two-way referral system.

TABLE 13: Bivariate associations between training on the two-way referral system and specialties, duration of experience and ability to give advantages.

Variable	Training on the two-way referral system		Chi square (X^2)	P value
	Yes (%)	No (%)		
Specialty				
Medical	18(56.2)	14(43.8)		
Surgical	15(33.3)	30(66.7)		
Laboratory	3(60.0)	2(40.0)	4.548	0.103
Duration of experience (years)				
≤ 14yrs	7(50.0)	7(50.0)		
15-24yrs	18(42.9)	24(57.1)		
25-34yrs	9(40.9)	13(59.1)		
35-44yrs	2(50.0)	2(50.0)	0.370	0.946
Number of advantages				
None	3(25.0)	9(75.0)		
One	3(33.3)	6(66.7)		
Two	30(49.2)	31(50.8)	2.839	0.242

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Table 14 shows the relationships between the practice of sending of feedbacks and gender, specialty, duration of experience, training on the two-way referral system, knowledge, coordination of incoming referrals, and coordination of feedbacks. Significant association was found between the practice of sending feedbacks and the duration of experience, those with 25-34 working years experience being more likely to send feedbacks ($p<0.05$). Consultants who have good knowledge about the two-way referral system were more likely to send feedbacks to the referrals they received ($p<0.05$). Significant associations were also found between the practice of sending feedbacks and the existence of a coordinating system for incoming referrals ($p<0.05$) and the existence of a coordinating system for sending feedbacks ($p<0.05$).There was no significant association between gender, specialty, training on the two-way referral system and the practice of sending feedbacks.

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TABLE 14: Relationships between sending of feedbacks and gender, specialty, duration of experience, training on the two-way referral system, knowledge, coordination of incoming referrals, and coordination of feedbacks.

Variable	Send feedbacks		Chi square (X^2)	P value
	Yes (%)	No (%)		
Gender				
Male	32(60.4)	21(39.6)		
Female	14(48.3)	15(51.7)	1.115	0.291
Specialty				
Medical	18(56.20)	14(43.8)		
Surgical	27(60.0)	18(40.0)		
Laboratory	1(20.0)	4(80.0)	2.924	0.232
Duration of experience (years)				
≤ 14yrs	7(50.0)	7(50.0)		
15-24yrs	19(45.2)	23(54.8)		
25-34yrs	18(81.8)	4(18.2)		
35-44yrs	2(50.0)	2(50.0)	8.19	0.042
Training on the two-way referral				
Yes	22(61.1)	14(38.9)		
No	24(52.2)	22(47.8)	0.655	0.418
Knowledge				
Good	42(60.9)	27(39.1)		
Poor	4(30.8)	9(69.2)	4.024	0.045
Coordination of incoming referrals				
Yes	17(81.0)	4(19.0)		
No	29(47.5)	32(52.5)	7.081	0.008
Coordination of feedbacks				
Yes	11(84.6)	2(15.4)		
No	35(50.7)	34(49.3)	5.102	0.024

4.4 FACTORS INFLUENCING THE PRACTICE OF THE FEEDBACK PROCESS BY MEDICAL CONSULTANTS

As shown in table 15, half (50.0%) of the consultants reported that a direct or personal contact with the person referring or his representative influences their decision to send feedback, 35 (42.7%) said that the reason for the referral influences it while 32.9% reported that the detail of clinical information supplied influences it too. Twenty-two (26.8%) reported other factors like "request by the referring physician or patient", "continuing education of the referring physician", and "for follow up purposes".

TABLE 15: Factors influencing the decision to send feedbacks*

Factors	Frequency	Percentage (%)
Direct or personal contact with person or representative of person referring	41	50.0
Reason for referral	35	42.7
Detail of clinical information supplied	27	32.9
Person referring the patient	26	31.7
Others	22	26.8

*multiple responses

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Table 16 shows that borderline significant relationship existed between the practice of sending feedbacks and the detail of clinical information supplied by the referring physician as well as the reason for referral. There was no significant association between the practice of sending feedbacks and a direct or personal contact with the person or representative of the referring person and the personality of the person referring the patient.

TABLE 16: Relationship between the practice of sending feedbacks and the factors perceived to influence feedbacks.

Variables	Send feedbacks		Chi square (X^2)	P value
	Yes (%)	No (%)		
Direct or personal contact with person or representative of person referring				
Yes	26(63.4)	15(36.6)		
No	20(48.8)	21(51.2)	1.783	0.182
Detail of clinical information supplied				
Yes	19(70.4)	8(29.6)		
No	27(49.1)	28(50.9)	3.330	0.068
Person referring the patient				
Yes	15(57.7)	11(42.3)		
No	31(55.4)	25(44.6)	0.039	1.000
Reason for referral				
Yes	24(68.6)	11(31.4)		
No	22(46.8)	25(53.2)	3.858	0.050

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Respondents were asked if the two-way referral system in their hospital was effective and efficient. Quite a large percentage (89.0%) of the respondents agreed that the two-way referral process in their hospital was not effective and efficient. Five (6.1%) reported that it was while four (4.9%) stated that they did not know.

Respondents were also asked about the reasons why they think the two-way referral system in their hospital was ineffective and inefficient (table 17). Slightly more than one-fifth (23.2%) of the respondents said there was actually no feedback system. Twelve (14.6%) however stated that most doctors seem unaware of the existence of the feedback system so do not practice it, hence its ineffectiveness and inefficiency. Eleven (13.4%) said it had not been enforced over time; hence, health care personnel were not committed to its practice. Nine (11.0%) attributed inadequate resources as a reason for its ineffectiveness and inefficiency while eight (9.8%) stated that the heavy patient load as well as time factor is another reason. Another reason proffered is that of a poor communication/delivery system (8.5%).

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TABLE 17: Reasons why the respondents think the feedback process in the two-way referral system is not effective and efficient

Reasons	Frequency	Percentage (%)
There is usually no feedback	19	23.2
Most doctors seem unaware of its existence	12	14.6
Has not been enforced overtime, hence, health care personnel are not committed to its practice	11	13.4
Inadequate resources - secretarial staff, fund, stationery, light etc	9	11.0
Time factor/Heavy patient load	8	9.8
Poor/ineffective communication/delivery system	7	8.5
Patient`s preference for continued specialist care	5	6.1
The health care system in the country is in shambles	4	4.9
The referral system is not well structured	4	4.9
Referrals not properly written – no name of referring health personnel, no name of referring institution or unit etc	2	2.4
General problem of the administration.	2	2.4
Wrong attitude of doctors towards giving feedback to lower centres	2	2.4
Medical record system is very poor and underdeveloped	2	2.4
Many patients are not referred i.e. Self referral	1	1.2
The primary health care is not capable to continue management of most patients seen	1	1.2
Poor logistics	1	1.2
The referring doctor is not given the opportunity to know the final diagnosis, thereby learning from the patient.	1	1.2
Others	3	3.7
I don`t know	4	4.9

Almost all (97.6%) of the respondents think that the feedback system needs to be improved, one (1.2%) stated that he does not think it needs improvement while one (1.2%) said he does not know.

Several recommendations were given on how the feedback system can be improved as shown in table 18. These included the training and re training of the health care providers on the referral system as stated by 29 (35.4%) respondents, provision of adequate resources and logistics as stated by 17 (20.7%) respondents, designing of standard referral forms and feedback forms as stated by 16 (19.5%) respondents, having a system in place to monitor incoming referral and prompt feedback in each department as stated by 12 (14.6%) respondents and adding it to inpatient/outpatient discharge protocols as stated by nine (11.0%) respondents. Other recommendations included an improved communication system (7.3%), proper structuring and organization of the referral system (7.3%), health care system strengthening at all the three tiers of the health system (6.1%) and an improved medical record system (3.7%).

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TABLE 18: Recommendations on how the feedback process in the two-way referral system can be improved

Recommendation	Frequency	Percentage (%)
Training and re-training of health care providers on the referral system	29	35.4
Provision of adequate resources and logistics-secretarial, stationery, fund etc.	17	20.7
Standard referral forms & feedback forms should be designed	16	19.5
Having a system in place to monitor incoming referrals and prompt feedback in each department	12	14.6
It should be added to inpatient/outpatient discharge protocols	9	11.0
Improved communication system-telephone, e-mail, good postal services etc.	6	7.3
The referral system should be well structured and organised i.e. develop a referral network for each locality	6	7.3
Health care system strengthening at all the three tiers of the health system	5	6.1
Referring health care provider should request for a feedback	3	3.7
Improve the medical record system	3	3.7
Improved standard of working	2	2.4
Reduction in patient work load	2	2.4
Auditing and regular publishing of departmental performance on two-way referral in hospital bulletin	2	2.4
Introduction of penalties or encouragement as the case may be	1	1.2
Each region should have its own health service rather than each tier being managed at different levels of government	1	1.2
It should be made a policy of the hospital	1	1.2
Others	1	1.2
I don`t know	1	1.2

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Multivariate analysis using logistic regression as shown in table 19 below showed that there were no significant predictors of the practice of sending feedbacks to referrals received by medical consultants.

TABLE 19: Predictors of the practice of sending feedbacks

Variables		OR	95% CI (Lower)	95% CI (Upper)	P value
Duration of experience (years)	≤ 14	1.000			
	10-24	0.793	0.217	2.891	0.725
	25-34	4.213	0.797	22.266	0.090
	35-44	1.004	0.107	9.432	0.997
Knowledge	Poor	1.000			
	Good	4.399	0.983	19.696	0.053
Coordination of incoming referrals	No	1.000			
	Yes	2.397	0.393	14.624	0.344
Coordination of feedacks	No	1.000			
	Yes	2.014	0.189	21.496	0.562

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4.5 REVIEW OF RECORDS

As shown in table 20, the highest number of case notes reviewed - 304 (25.2%) were of patients seen in the department of Surgery while the least, three, (2%) were of patients seen in the Community Medicine department.

TABLE 20: Departmental distribution of case notes of patients seen during the month of January, 2008

Department	Frequency	Percentage (%)
Surgery	304	25.2
Internal Medicine	240	19.9
O & G	192	15.9
Ophthalmology	163	13.5
Paediatric	105	8.7
ENT	74	6.1
Radiotherapy	48	4.0
Dentistry	34	2.8
Haematology	15	1.2
Psychiatry	29	2.4
Community Medicine	3	0.2
Total	1,207	100.0

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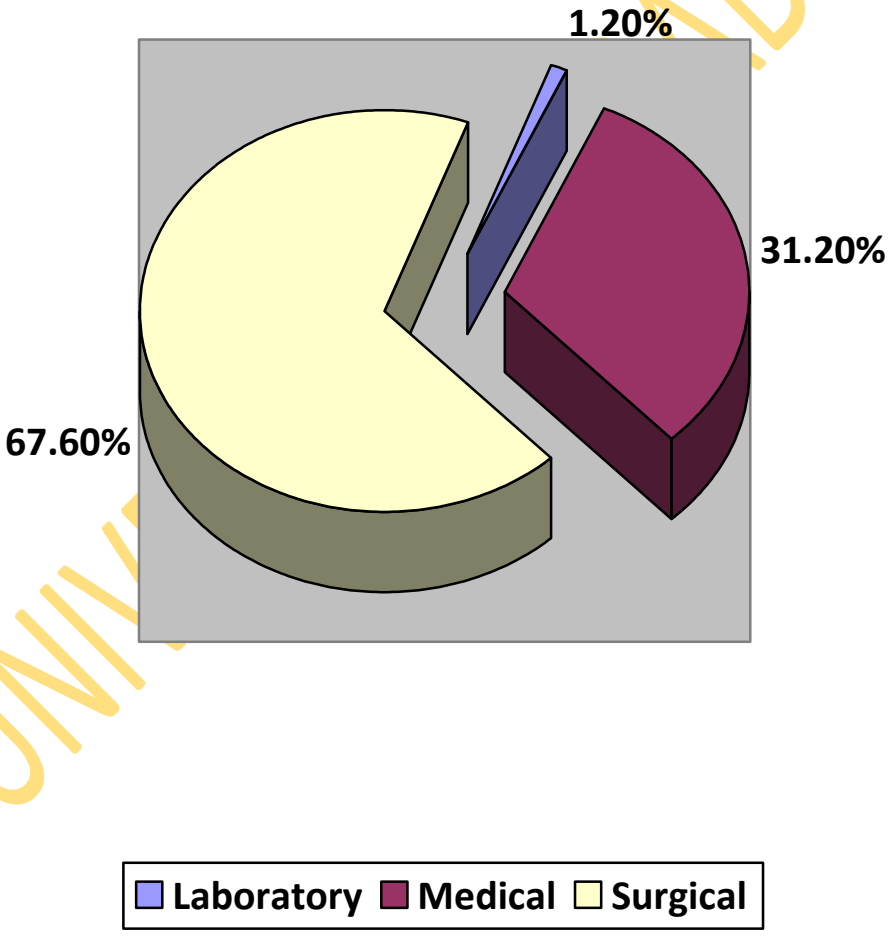
Figure 3 shows that the highest number of case notes of patients reviewed 815 (67.6%) were case notes of patients seen at the surgical departments while the least 15(1.2%) were those of patients seen at the laboratory department.

FIGURE 3: Departmental distribution of case notes of patients seen during the month of January, 2008



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As shown in table 21, a total of 1,207 case notes of new patients seen in January 2008 were reviewed. Majority of the patients (73.3%) were seen on an outpatient basis while 26.7% were seen as inpatients. Majority (20.1%) of the patients whose case notes were reviewed were in the 30-39 years age group while the least (1.3%) were 80 years of age or more. The mean age was 34.45 years with a standard deviation of 21.18. Five hundred and forty-five (45.2%) male patients' case notes were reviewed while 662(54.8%) case notes of female patients were reviewed with a male to female ratio of 0.8:1

TABLE 21: Demographic characteristics of patients whose case notes were reviewed in January, 2008

N=1,207

Variable	Frequency (%)
Patient category	
Out patient	885(73.3)
Inpatient	322(26.7)
Age group (years)	
<10	190(15.7)
10-19	102(8.5)
20-29	220(18.2)
30-39	243(20.1)
40-49	156(12.9)
50-59	106(8.8)
60-69	101(8.4)
70-79	73(6.0)
≥80	16(1.3)
Sex	
Female	662(54.8)
Male	545(4.2)

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Table 22 shows that the largest percentage (91.9%) of patients were referred by physicians while five (0.4%) were referred by others comprising of the deputy director of haematology and a school principal. Eighty-seven (7.2%) case notes had no details of the person referring. Out of the 1,207 case notes reviewed, the bulk of the referrals, 782 (64.8%) were referrals from within the University College Hospital, Ibadan. From the 1,207 case notes reviewed, the highest number of referrals 426(35.3%) came from the General Outpatient department of the hospital while 53(4.4%) came from other tertiary institutions. Among the 412 referrals from outside UCH, majority (46.6%) were from private hospitals, 20.9% were from general hospitals, 12.9% were from other tertiary institutions while 5.8% were from other sources like military hospitals and non-governmental organisations. Majority (88.9%) of the referring institutions are located within Ibadan, 121 (10.0%) are located outside Ibadan but within Nigeria, none was referred from outside Nigeria. Among the 121 referring institutions that are located outside Ibadan, 12.4% are located within Oyo state and the rest are located in seventeen other states in Nigeria, but mainly Ogun (33.88%), Osun (16.53%) and Lagos (8.26%) states. Most (59.4%) of the referrals were written using a continuation sheet, 183 (15.2%) were written with letter headed paper while only122 (10.1%) were written using standard referral forms. Other mode of referrals included the use of non standard referral forms (6.2%) and sheet of papers (3.1%).

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TABLE 22: Referral characteristics of case notes reviewed

N=1,207

Variable	Frequency (%)
Referring personnel	
Physician	1,109(91.9)
Nurse	6(0.5)
Others	5(0.4)
No data	87(7.2)
Referring institution	
GOPD, UCH	426(35.3)
Other departments within UCH	267(22.1)
Private hospital	192(15.9)
A and E, UCH	89(7.4)
General hospital	86(7.1)
Health centres	57(4.7)
Another tertiary institution	53(4.4)
Others	24(2.0)
No data	13(1.1)
Location of referring institution	
Within Ibadan	1,073(88.9)
Outside Ibadan but within Nigeria	121(10.0)
No data	13(1.1)
Mode of referral	
Continuation sheet	717(59.4)
Formal referral letter with letter headed paper	183(15.2)
Standard referral form	122(10.1)
Referral form (but not standard)	75(6.2)
Sheet of paper	37(3.1)
Treatment sheet	18(1.5)
Prescription sheet	13(1.1)
Medical students note	12(1.0)
Informal note	1(0.1)
Others	29(2.4)

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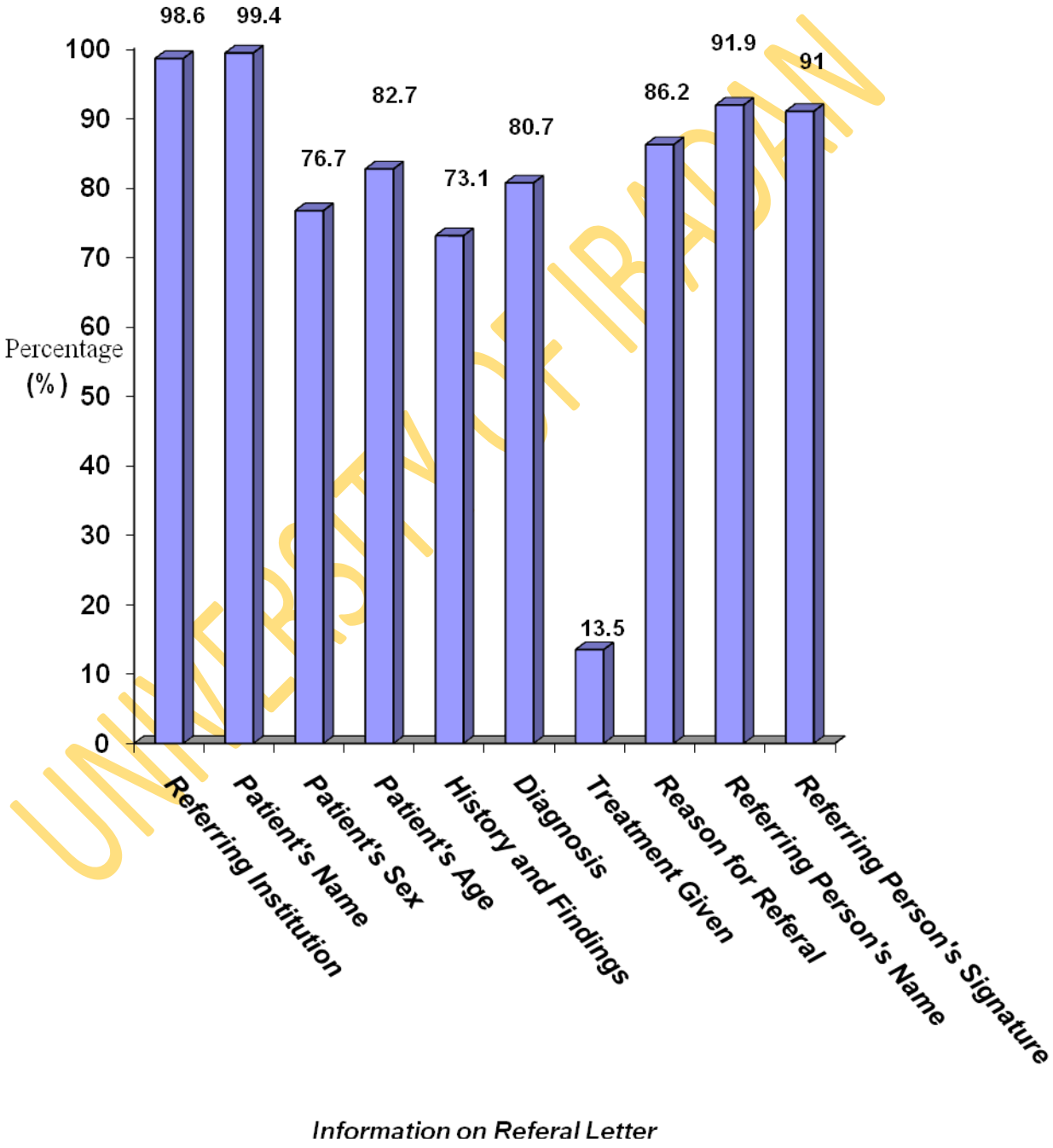
Figure 4 shows that majority of the referrals had the name of the patient (99.4%), name of the referring institution (98.6%), reasons for referrals (86.2%), age of the patient (82.7%), diagnosis (80.7%), sex of the patient (76.7%) and history and findings (73.1%). Only 13.5% had details of the treatment that was given.

FIGURE 4: Percentage distribution of information on referral letter.



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Most (22.9%) of the cases referred had an initial non-specific diagnosis (i.e. symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified in the ICD-10) by the referring physician. Other commonly referred cases were malignant neoplasm (11.1%) and diseases of the eye and adnexa (9.1%).

Most (13.6%) of the cases referred had neoplasm as their final diagnosis by the consultants closely followed by diseases of the eye and adnexa (12.1%) and diseases of the genitourinary system (8.5%).

There was a concordance between the initial diagnosis by the referring physician and the final diagnosis by the consultant in the majority (61.7%) of the patients' case notes reviewed while 38.3% had no concordance in diagnosis.

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Only 117 (9.7%) of the case notes reviewed showed that there was a feedback to the referring institution while majority (90.3%) had no evidence of a feedback as shown in figure 5.

FIGURE 5: Distribution of evidence of feedback to the referring institution

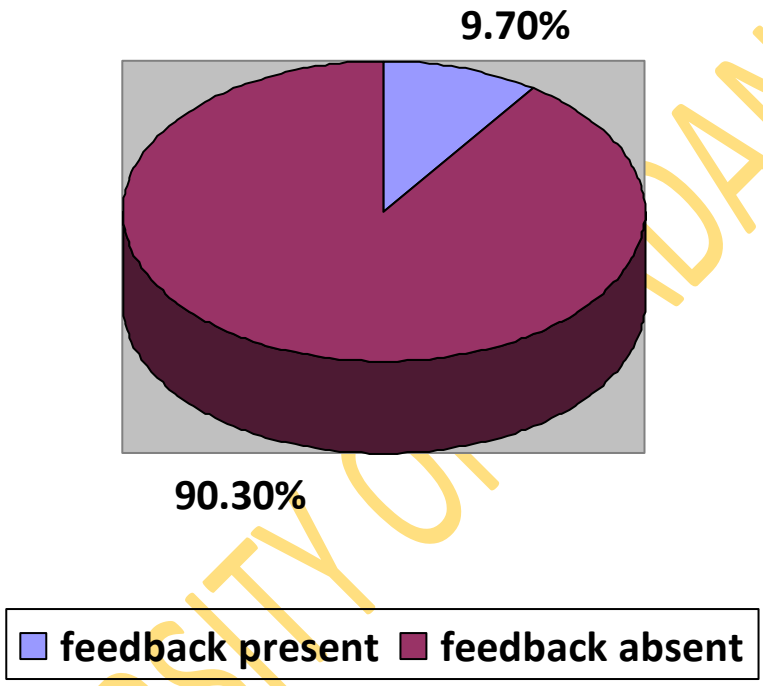

Table 23 shows that outpatients compared with inpatients were more likely to have feedbacks given to the referring institution (p<0.001)

TABLE 23: Category of patient by feedback to the referring institution

Patient category	Feedback		Chi square (X^2)	P value
	Yes (%)	No (%)		
Outpatient	105(11.9)	780(88.1)	17.86	0.000
Inpatient	12(3.7)	310(96.3)		

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As shown in table 24, Consultants in the surgical departments compared to consultants in the other departments were more likely to send feedbacks to the referrals they received ($p<0.001$). Ophthalmologists compared to the other consultants were significantly more likely to send feedbacks to the referrals they received ($p<0.001$).

TABLE 24: Departments by feedback to the referring institution

Variable	Feedback		Chi square (X^2)	P value
	Yes (%)	No (%)		
Department				
Medical	5(1.3)	372(98.7)		
Surgical	111(13.6)	704(86.4)		
Laboratory	1(6.7)	14(93.3)	44.660	0.000
Department				
Surgery	26(8.6)	278(91.4)		
Internal Medicine	5(2.1)	235(97.9)		
Haematology	5(6.7)	14(93.3)		
Psychiatry	0(0.0)	29(100.0)		
Community Medicine	0(0.0)	3(100.0)		
Ophthalmology	79(48.5)	84(51.5)		
ENT	2(2.7)	72(97.3)		
Paediatrics	0(0.0)	105(100.0)		
O&G	0(0.0)	192(100.0)		
Radiotherapy	4(8.3)	44(91.7)		
Dentistry	0(0.0)	34(100.0)	339.6 1	0.000

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Table 25 shows that a feedback to the referring institution was more likely if the patients were referred from the general outpatient department and other departments from within the hospital compared with other sources of referral (P<0.05).. There was no significant association between the referring personnel, location of referring institution and a feedback to the referring institution.

TABLE 25: Referral characteristics of case notes reviewed by feedback to the referring institution

Variable	Feedback to referring institution		Chi square (X^2)	P value
	Yes (%)	No (%)		
Referring personnel				
Physician	109(93.2)	1,000(91.7)		
Nurse	0(0.0)	6(0.6)		
Others	0(0.0)	5(0.5)		
No data	8(6.8)	79(7.2)	1.229	0.746
Referring institution				
Another tertiary institution	7(6.0)	46(4.2)		
GOPD, UCH	58(49.6)	368(33.8)		
A and E, UCH	0(0.0)	89(8.2)		
Other departments within UCH	30(25.6)	237(21.8)		
General hospital	4(3.4)	82(7.4)		
Private hospital	11(9.4)	181(16.6)		
Health centres	6(5.1)	51(4.7)		
Others	1(0.9)	23(2.1)		
No data	0(0.0)	13(1.2)	26.73	0.001
Location of referring institution				
Within Ibadan	101(86.3)	972(89.3)		
Outside Ibadan but within Nigeria	16(13.7)	105(9.6)		
No data	0(0.0)	13(1.2)	3.214	0.200

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Table 26 shows the relationships between the information contained in the referral letter and a feedback to the referring institution. The practice of sending feedbacks was more likely if the information on the referral letter contains the history and findings ($p<0.05$), a diagnosis ($p<0.05$), treatment given ($p<0.05$), and the reason for referral ($p<0.001$). Other information on the referral letter was not significantly related.

TABLE 26: Information on referral letter by feedback to the referring institution

Information on referral letter	Feedback to referring institution		Fisher's exact test	
	Yes (%)	No (%)		
Name of referring institution				
Yes	116(99.1)	1074(98.5)		
No	1(0.9)	16(1.5)	0.286	
Name of patient				
Yes	116(99.1)	1084(99.4)		
No	1(0.9)	6(0.6)	0.170	
			Chi square (X^2)	P value
Sex of patient				
Yes	87(74.4)	839(77.0)		
No	30(25.6)	251(23.0)	0.404	0.528
Age of patient				
Yes	94(80.3)	904(82.9)		
No	23(19.7)	186(17.1)	0.497	0.424
History and findings				
Yes	74(63.2)	808(74.1)		
No	43(36.8)	282(25.9)	6.357	0.012
Diagnosis				
Yes	83(70.9)	891(81.7)		
No	34(29.1)	199(18.3)	7.916	0.005
Treatment given				
Yes	6(5.1)	157(14.4)		
No	111(94.9)	933(85.6)	7.782	0.006
Reason for referral				
Yes	87(74.4)	953(87.4)		
No	30(25.6)	137(12.6)	15.145	0.000
Name of person referring the patient				
Yes	112(95.7)	997(91.5)		
No	5(4.3)	93(8.5)	2.569	0.109

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Table 27 shows that there were significantly more surgical outpatients and inpatients compared with other departments ($p<0.001$).

TABLE 27: Department by category of patient

Department	Category of patient		Chi square (X^2)	P value
	Outpatient (%)	Inpatient (%)		
Department				
Medical	246(27.8)	131(40.7)		
Surgical	632(71.4)	183(56.8)		
Laboratory	7(0.8)	8(2.5)	25.434	0.000
Department				
Surgery	194(21.9)	110(34.2)		
Internal Medicine	168(19.0)	72(22.4)		
Haematology	7(0.8)	8(2.5)		
Psychiatry	24(2.7)	5(1.6)		
Community Medicine	3(0.3)	0(0.0)		
Ophthalmology	147(16.6)	16(5.0)		
ENT	70(7.9)	4(1.2)		
Paediatrics	51(5.8)	54(16.8)		
O&G	145(16.4)	47(14.6)		
Radiotherapy	46(5.2)	2(0.6)	113.7	0.000
Dentistry	30(3.4)	4(1.2)		

Table 28 shows a statistically significant association between the location of the referring institution and the department to which patients are been referred ($p<0.001$). More of the patients referred from outside Ibadan but within Nigeria were radiotherapy patients while majority of the patients referred from within Ibadan were surgical patients.

TABLE 28: Departments by location of referring institution

Department	Location of referring institution			Chi square (X^2)	P value
	Ibadan	Outside Ibadan but within Nigeria	No data		
Surgery	271(25.3)	33(27.3)	0(0.0)	331.47	0.000
Internal Medicine	215(20.0)	19(15.7)	6(46.2)		
Haematology	13(1.2)	1(0.8)	1(7.7)		
Psychiatry	27(2.5)	1(0.8)	1(7.7)		
Community medicine	2(0.2)	0(0.0)	1(7.7)		
Ophthalmology	151(14.1)	11(9.1)	1(7.7)		
ENT	67(6.2)	6(5.0)	1(7.7)		
Paediatrics'	99(9.2)	6(5.0)	0(0.0)		
O&G	189(17.6)	3(2.5)	0(0.0)		
Radiotherapy	8(0.7)	38(31.4)	2(15.4)		
Dentistry	31(2.9)	3(2.5)	0(0.0)		

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As shown in table 29, there was a significant association between a concordance in diagnosis and the department to which patients had been referred as the department of radiotherapy was more likely to have a concordance in verdict with respect to the initial diagnosis by the referring physician and the final diagnosis by the consultants when compared with other departments ($p<0.001$). There was no significant association between concordance in diagnosis and the practice of sending feedbacks to the referring institution.

TABLE 29: Department and feedback to the referring institution by concordance in diagnosis

Variable	Concordance in diagnosis		Chi square (X^2)	P value
	Yes (%)	No (%)		
Department				
Surgery	197(64.8%)	107(35.2%)		
Internal Medicine	132(55.0%)	108(45.0%)		
Haematology	8(53.3%)	7(46.7%)		
Psychiatry	10(34.5%)	19(65.5%)		
Community medicine	1(33.3%)	2(66.7)		
Ophthalmology	97(59.5%)	66(40.5%)		
ENT	34(45.9%)	40(54.1%)		
Paediatrics	59(56.2%)	46(43.8%)		
O&G	152(79.2%)	40(20.8%)		
Radiotherapy	46(95.8%)	2(4.2%)		
Dentistry	9(26.5%)	25(73.5%)	92.137	0.000
Feedback				
Yes	69(59.0%)	48(41.0%)		
No	676(62.0%)	414(38.0%)	0.414	0.520

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Multivariate analysis using logistic regression as shown in table 30 below revealed that the significant predictors of the practice of sending feedbacks were been an outpatient and a referral letter containing the diagnosis ($p < 0.05$). Patients seen on outpatient basis were twice as likely to have a feedback sent to their referrals compared with inpatients.

TABLE 30: Predictors of the practice of sending feedbacks

Variables		OR	95% CI (Lower)	95% CI (Upper)	P value
Category of patient	Inpatient	1.000			
	Outpatient	2.696	1.436	5.062	0.002
Department	Laboratory	1.000			
	Medical	0.140	0.015	1.326	0.087
	Surgical	1.372	0.172	10.933	0.765
Information on referral letter					
History and findings	No	1.000			
	Yes	0.703	0.440	1.123	0.140
Diagnosis	No	1.000			
	Yes	0.528	0.334	0.834	0.006
Treatment given	No	1.000			
	Yes	0.454	0.188	1.093	0.078
Reason for referral	No	1.000			
	Yes	0.600	0.353	1.020	0.059

CHAPTER FIVE

DISCUSSION

5.1.1 Demographic characteristics.

Of the 98 eligible medical consultants, 82 completed and returned the questionnaire giving a response rate of 83.7%. This response rate is however higher when compared with the 48% reported in a regional physician survey in New England for generalists-subspecialist communication for children with chronic conditions (Stille et al, 2003) and an average of 54% reported in an analysis of surveys published in medical journals in 1991 (Asch et al, 1997). Possible explanation for the low response rates among physicians includes the fact that the consultants have very busy and tight schedule or that they have less potential interest in the research topic.

5.1.2 The two-way referral knowledge of medical consultants

Knowledge on the two-way referral system was, expectedly, high as 84.1% had good knowledge. This may be adduced to the high intelligence quotient of the respondents.

Although 95.1% of the respondents were aware of the term three-tiered health system, only 89.7% of these were able to define the term correctly. Also 90.2% of the respondents were aware of the two-way referral system but only 87.8% of these were able to define the term correctly. This may be due to inability to communicate accurately and not to an actual lack of knowledge. Unlike the findings in this study, Daramola (2006) found that only 7% of the respondents recognized the two-way pattern of the referral pathway. This difference could be explained by the fact that the respondents in the previous study included other cadres of health workers like nurses,

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community health officers and community health extension workers whereas the respondents in this study were all medical consultants.

The commonly reported advantage of the two-way referral system found in this study was that it allows for better education of healthcare givers (53.1%). This is much higher than the 1.2% reported by Daramola (2006). To a lesser extent, other advantages mentioned were that it helps to optimize patient's care (37.8%) and decongestion of the various levels of care (18.3%). The low awareness about the advantages of the two-way referral system is an indication that more training and re-training is needed to re-orientate doctors about it. This is further made obvious by the fact that only 43.9% of the respondents have received training on the two-way referral system and that most of these trainings were picked up during the course of their job (83.3%).

5.1.3 The two-way referral practices and the factors perceived to affect it

This study found a low reported feedback practice (56.1%) in a higher level facility. This is consistent with previously published data (Cummins et al, 1980, McPhee et al, 1984 and Forrest et al, 2000). McPhee et al reported that referring physicians stated that they received consultation results in only 55% of cases, Forrest et al reported that referring generalists reported receipt of communication from subspecialists 51% of the time within three months after a referral was made while Cummins et al found that consultants provided follow-up information for only 62% of the patient referrals and for only 54% of the patients who required further care by the referring physician. Several possible explanations can account for the poor feedback practice in this study.

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The lack of a coordinating system for incoming referrals and feedbacks which were significantly associated with a poor feedback is a possible explanation. This agrees with Cummins et al (1980) who found out that poor communication from two university medical centres to general practitioners may be because the responsibility for communication with the referring physician is either not defined or not supervised. This finding points out that without clear coordination of tasks, delays in care can occur, and there is potential for medical error as well as duplication and omission of services. This is not a new concept (Palfrey et al, 1980), although good solutions have yet to be implemented. Therefore establishing areas of responsibility must become more precise and explicit and not left, as at present, in the realm of uncertainty. A team of people, to include a doctor in the managing unit, a secretary and the record staffs may need to be put in place for the coordination of incoming referrals and feedbacks.

Also, 65.2%, of the respondents who send feedbacks in this study do so via a formal referral letter written on a letter headed paper in agreement with other related studies (Tanielien et al, 2000 and Gandhi et al, 2000) which also reported that a letter was the most common mode of communication from the specialists to the referring physician. The author of this dissertation believes that unavailability of a standard referral form may also account for the poor feedback practice as more time is spent trying to write or draft a letter than filling a standard form which contains all the necessary details at a glance. This is in accordance with the findings of Byrd et al (1987) which agreed that dictation of a letter is time consuming. They believed that consultants should be encouraged to use a form, even as a preliminary note. Also, Omaha et al (1998) reported that there was feedback in only 1.4% of referrals to upper level institutions

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and that the non-existence of a standard reply form is a likely reason for this. Standard referral forms for requesting and replying may need to be provided to improve the feedback practice.

A longer duration of working years experience as a doctor was significantly associated with the practice of sending feedback in this study. This is similar to the findings of Daramola (2006) in Ibadan, which also showed that there was a statistically significant association between the number of years the respondents have spent in service and their practice of referral. A possible explanation for this is that the younger consultants did not have enough training on the referral system either as an undergraduate or during residency training, so most of the skills were picked up with increasing duration of years of practice. This is corroborated by another finding in this study which showed that 83.3% of those who have received training on the two-way referral system reported picking it up during the course of their job while 41.7% reported having formal lectures while in training.

A large percentage (89.0%) of the respondents agreed that the two-way referral process in the hospital was not effective and efficient. Several reasons were adduced for this. Inadequate resources (11.0%) and a heavy patient load (9.8%) were identified by respondents as some of the challenges of the two-way referral system as documented by previous studies (McCue and Beach, 1994 and American Academy of Paediatrics, 2002). Other challenges include ignorance of the existence of a feedback system and lack of commitment to the practice of sending feedbacks as reported by 14.6% and 13.4% of the respondents respectively.

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5.1.4 Review of records

Unlike a prior study which found a high rate of admission among the referred patient to the referral hospital in Kilombero district, Southern Tanzania suggesting that the decision to refer was generally appropriate (Font et al, 2002), this study showed that majority (73.3%) of the patients whose case notes were reviewed were managed on an outpatient basis while only 26.7% were cared for on an inpatient basis. The higher percentage of outpatients seen in this study may be due to the factors which influence the decision to admit patients such as availability of bed spaces and not necessarily due to whether the referral was appropriate or not.

The most frequently consulted specialists were surgeons in agreement with some previous studies (McPhee et al, 1984; Font et al, 1999). This may suggest that the most common reason for referrals from the lower level facilities is the need to obtain for the patient skills and resources of therapy not possessed by the referring physician.

The bulk of the referrals were from the General Outpatient department (35.3%) to other departments within the hospital. This is slightly smaller compared to the result obtained by Akande in Ilorin who showed that 41.9% of all referred patients to the hospital were from the General Outpatient to other departments in a study of the referral system in a tertiary facility (Akande, 2004) and is slightly higher compared to the result of Dunmade et al(2010) who showed that 31.7% of all patients referred to the Otolaryngologists within the study period were from the General Outpatient department in a study of Otolaryngologic referrals in a Nigerian tertiary hospital. This may suggest that the first point of contact with the health services for quite a number of patients in Nigeria are frequently the tertiary hospitals, which in turn implies that

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the referral system which is closely linked to primary health care is functioning below expectation. An alternative explanation is that the initial referral letter to the tertiary institution through any of the entry points (General Outpatient department, Accident and Emergency or even the other specialty clinics) may have been misplaced or discarded, may not have been attached to the consultation request to the specialist or that the consultation request to the specialist may not contain any information about the initial referral. This implies a poor record keeping system which might have a negative effect on the patient's management.

Further inquiry into the mode of referral revealed that only 10.0% of the patients were referred on a standard referral form which is slightly lower than the 15.0% reported by Siddiqi et al (2001) in Pakistan and the 31% reported by Navarro et al (2002) in a study to compare the content of standard and non-standard referral letters. Seventy-five (6.2%) were referred on a referral form that was not standard. Majority were received as letters written on a continuation sheet. Others were received as letters on letter headed papers, medical students' notes, prescription sheets, treatment sheets, plain sheet of paper or any other sheet of paper at their disposal. It was somewhat distressing to note that some physicians used any available sheet at their disposal (prescription sheet, treatment sheet, medical students' notes etc) to write a referral letter. The author believes that this is due to laziness on the part of the referring physicians. Alternatively, it might be due to unavailability of the appropriate form.

The review of the patients' records further verifies the poor feedback practice from the higher level facilities. Although medical consultants indicated that they send feedbacks to the referral they receive in 56.1% of cases, only 9.7% of case notes

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reviewed showed that there was a feedback to the referring institution from medical records. This finding suggests that the medical consultants present a favourable picture to their practice of sending feedbacks or alternatively, inadequate documentation may result in incomplete records. Whatever the reason, the feedback practice from the higher level facilities is poor. The feedback practices found from the review of records in this study is higher than that of Daramola (2006) who reported that not a single referral was seen to have been conducted down the referral pathway in a study of the appraisal of the two-way referral system between state government owned primary and secondary care facilities in Ibadan.

The review of records showed that factors such as being an outpatient, referring patients to the surgical department (Ophthalmology), information on the referral letter containing the history and findings, diagnosis, treatment given and reason for referral as well as referring patients from the general outpatient department and other departments from within were significantly associated with the practice of sending feedbacks. The significant predictors of the practice of sending feedbacks however were being an outpatient and a referral letter containing information on the diagnosis.

Unlike a prior study, which found that the lowest responding consultants in terms of a feedback to the referring physician were ophthalmologists (McPhee et al, 1984), this study found that the ophthalmologists were significantly associated with the practice of sending feedbacks to the referring physician. The reason for this is unclear. Further research is needed to elucidate why this is so.

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It was found that more outpatients than inpatients had feedback given to the referring institution. A possible explanation for this may be that patients on admission, seen on a daily basis, has a bulkier case note to be summarised compared with a patient seen on an outpatient basis, who is seen on his or her appointment days, with a smaller case note in terms of volume.

Referral letters, from the referring physicians, which had information on the history and findings, diagnosis, treatment given and the reason for referral were significantly associated with the practice of sending feedback. This effect suggests that interventions to facilitate good and detailed communication could have an impact on the two-way referral system.

Majority of the patients referred from outside Ibadan were radiotherapy patients closely followed by surgical patients (neurosurgical patients precisely). This finding, which is significant, may suggest that these specialties and their necessary facilities are not well distributed across the country. This further implies that radiotherapy and neurosurgical patients may need to travel long distances before they can access care for their ailments and may be more prone to increased mortalities.

Patients referred to the department of radiotherapy were more likely than other patients to have a concordance between the initial and final diagnosis. This may indicate that radiotherapy cases are easier to diagnose but not many are skilled in the management or have facilities for treatment.

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5.2 CONCLUSION

Majority of the respondents in this study were surgeons and 51.2% had 15-24 years working experience as a doctor.

Generally, the knowledge about the two-way referral system was high among medical consultants at the University College Hospital, Ibadan. But this high level of knowledge did not translate into a good practice of the feedback process. Though a large number of the consultants were aware of the two-way referral system, the commonly reported advantages were that it allows for better education and for optimization of patients' care despite the other numerous advantages of the two-way referral system. Coupled with the fact that only 43.9% of the study population had received training on the two-way referral system, most of which were picked up during the course of the job, more training and re-training is needed to re-orientate the medical consultants about the two-way referral system.

The bulk of the referrals received by the study population in this study were from the general outpatient department within the hospital suggesting that the first point of contact with the health services for a good number of patients from this study are frequently the tertiary hospitals. The reported feedback practice by the study population was low (56.1%) and this was further verified by the review of case notes which showed a far lower feedback practice (9.7%). All these points to the fact that the referral system in Nigeria is functioning below expectation as patients are not managed at the lowest level of care and cost possible. It further implies that primary health care, as well, is functioning below expectation.

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The study result showed quite a number of factors associated with the poor feedback practice. The lack of a coordinating system for incoming referrals and the feedbacks is one. Inadequate resources are another. The duration of working experience also contributes to it. The detail of clinical information supplied by the referring physician was also associated with the practice of sending feedbacks especially when the referral letter contained the history and findings, the diagnosis, treatment given and the reason for referral. More attention should be paid towards these factors in other to have a better two-way referral practice which is more effective and efficient.

5.3 RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

1. The governments at all levels should:

    a. provide standardized referral forms which could help facilitate written communications.

    b. employ more manpower resources in terms of doctors, to help decongest the overburdened clinics which will in turn allow the doctors to have time to give appropriate feedbacks to the referring physicians.

2. The tertiary hospitals should:

    a. introduce coordinating systems to monitor the referral process and ensure its completion.

3. Medical Schools and Postgraduate Medical Colleges should:

    a. include education of medical students and resident doctors about the referral process as an essential part of their training at both undergraduate and postgraduate levels.

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5.4 LIMITATIONS OF THE STUDY

Several factors limit the generalizability of this study. The response rate from the consultants (83.7%) was sub-optimal although it was typical of other published physician surveys (Field et al, 2002 and Stille et al, 2003).

It is also possible that consultants presented an overly favourable picture with regard to their own actions particularly, with regard to the feedback to the referring physicians because this is not necessarily what the records revealed.

The study population was smaller than the estimated minimum sample size for a study such as this. The total population of all the consultants that fulfilled the inclusion criteria was thus surveyed.

Inadequate documentation is a limitation which should be acknowledged in this study as these resulted in incomplete records.

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APPENDIX 1

QUESTIONNAIRE

INFORMED CONSENT FORM

IRB Research approval number……
This approval will elapse on ……

THE REFERRAL SYSTEM AND FEEDBACK PROCESS BY MEDICAL CONSULTANTS AT THE UNIVERSITY COLLEGE HOSPITAL, IBADAN.

Dear sir/ma,

This study is been conducted by Dr. Victoria Oluwabunmi OLADOYIN, a Master of Public Health student of the University of Ibadan, Department of Community Medicine, Faculty of Clinical sciences. The purpose of this study is to assess the knowledge and level of practice of the feedback process in the two-way referral system as well as factors influencing its practice.

A 29-itemed questionnaire will be administered to you by the researcher. This questionnaire will contain some questions that you will answer in your own words. The questionnaire can be completed in about 10 minutes.

All information collected in the course of this study will be kept confidential. No information given will be traced to any respondent because you are not required to write any form of identification on the questionnaire. Also, all information given will be coded.

Findings from this research will be submitted to the Heads of each clinical department as well as published in journals of repute.

Participation in this research is voluntary and it will not cost you anything. Refusal to answer any question will not be harmful and you are free to withdraw your consent at any stage in the research process.

I do hope that findings from this study will help to improve the referral system especially the feedback process. This will in turn help to ensure a close relationship between all levels of the health care system as well as ensuring that patients receive the best possible care closest to home.

Thank you.

I have fully explained this research to……
and have given enough information to make an informed decision.

Date…… Researcher's signature…….
Researcher's name…….....

Date …….. Respondent's signature……

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THE REFERRAL SYSTEM AND FEEDBACK PROCESS BY MEDICAL CONSULTANTS AT THE UNIVERSITY COLLEGE HOSPITAL, IBADAN.

QUESTIONNAIRE

Date……..
Serial no……

SECTION A: SOCIO – DEMOGRAPHIC DATA

Please tick the most appropriate answer.

1. Age as at last birthday (in years) …… (Please specify)

2. Sex
    1. Male
    2. Female

3. Ethnic group
    1. Yoruba
    2. Igbo
    3. Hausa
    4. Others (specify)……..

4. Religion
    1. Christianity
    2. Islam
    3. Traditional
    4. Others (specify)……..

5. Marital Status
    1. Single
    2. Married
    3. Divorced
    4. Separated
    5. Widow
    6. Cohabiting

6. Number of years of experience as a doctor…….. (Please specify)

7. Specialty…… (Please specify)

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SECTION B: KNOWLEDGE OF THE TWO-WAY REFERRAL SYSTEM

8. Have you ever heard of the term three-tiered health system?
    1. Yes
    2. No

If No, jump to question 10.

9. What do you understand by a three-tiered health system? ……..

…. . ……

10. Have you ever heard of the term two-way referral system?
    1. Yes
    2. No

11. What do you understand by a two-way referral system? ……..... …… . . .

……

……

12. List two advantages of a two-way referral system? ……

……

……

……

……

13. Have you ever received any training on the referral system?
    1. Yes
    2. No

14. If Yes, what kind of training? (You can tick more than one answer)

Kind of training on the referral system	1. Yes	2. No
1. Formal lectures while in training		
2. Seminars/Symposia/Workshops		
3. Picked up during the course of your job		
4. Others (specify)		

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15. What do you think a proper referral letter should contain? (You can tick more than one answer)

Information on a proper referral letter.	1. Yes	2. No
1. Name of referring institution		
2. Name of patient		
3. Sex of patient		
4. Age of patient		
5. History and findings		
6. Diagnosis		
7. Treatment given		
8. Reason for referral		
9. Name and/or signature of persons who referred the patient		

SECTION C: LEVEL OF PRACTICE OF THE TWO-WAY REFERRAL SYSTEM

16. What are the common modes of referral to your clinic? (You can tick more than one answer)

Common modes of referral	1.Yes	2. No
1.Standard referral form		
2. Verbally		
3.Informal note		
4. Formal referral Letter/Letter headed paper		
5. Others (specify)		

17. Tick the common sources of referrals to your clinic.

Most common sources of referrals	1. Yes	2. No
1. Another tertiary institution		
2. General Outpatient Department		
3. Other departments in U.C.H.		
4. General hospitals		

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5. Private hospitals		
6. Health centres		
7. Others (specify)		

18. Who usually refers patients to you?

    1. Physician
    2. Nurse
    3. I don't know
    4. Others (specify)

19. What are the common reasons for referral to your clinic (you can tick more than one answer)

Common reasons for referral	1.Yes	2.No
1. More specialized care		
2. Diagnostic services		
3. Convenience of follow up		
4. Others (specify)		

20. How often do you receive referrals?

    1. Very often
    2. Sometimes
    3. Rarely
    4. Never

21. Do you send feedbacks to the referrals you receive?

    1. Yes
    2. No

If No, jump to question 24.

22. How often do you send feedbacks to the referrals?

    1. Very often

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2. Sometimes

3. Rarely

4. Never

23. What are the common modes of sending feedback to the referrals you receive?

Common modes of sending feedback to referrals received	1. Yes	2. No
1. Standard referral form		
2.Referral form (not standard)		
3. Verbally		
4. Informal note		
5. Continuation sheet		
6. Formal referral letter/Letter headed paper		
7. Others (specify)		

24. Is there someone who coordinates the incoming referrals in your clinic?

1. Yes

2. No

3. I don't know.

25. Is there someone who coordinates the feedbacks to the referrals in your clinic?

1. Yes

2. No

3. I don't know

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SECTION D: FACTORS INFLUENCING THE PRACTICE OF THE FEEDBACK PROCESS IN THE TWO-WAY REFERRAL SYSTEM.

26. What informs your decision to send feedbacks to the referrals you receive?

What informs your decision to send feedback to the referrals you receive?	1. Yes	2.No
1. Direct or personal contact with person or representative of person referring		
2. Detail of Clinical information supplied		
3. Person referring the patient		
4. Reason for referral		
5. Others (specify)		

27. Do you think the feedback process of the two-way referral system in this hospital is effective and efficient?

1. Yes
2. No
3. I don't know

28. If No, please give two reasons why you think it is not effective and efficient

……

……..

.....

29. Do you think the feedback process of the two-way referral system needs to be improved?

1. Yes
2. No
3. I don't know

30. If Yes, please give two recommendations on how it can be improved…….....

……

……

……

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APPENDIX 2

THE REFERRAL SYSTEM AND FEEDBACK PROCESS BY MEDICAL CONSULTANTS AT THE UNIVERSITY COLLEGE HOSPITAL, IBADAN.

CHECKLIST FOR REVIEW OF RECORDS

Serial no ……....

Department ……

Clinic code ……

(1) Age of patient (years / months / days) ……

(2) Sex of patient

1. Male
2. Female

(3) Who referred the patient?

1. Physician
2. Nurse
3. Others (specify)
4. No data

(4) Referring Institution

1. Another tertiary hospital
2. General Out Patient Department U.C.H.
3. Accident and Emergency Department U.C.H.
4. Other departments within U.C.H.
5. General hospital
6. Private hospital
7. Health centres
8. Others (specify)
9. No data

(5) Location of referring institution

1. Ibadan
2. Outside Ibadan, but within Nigeria (specify)
3. Outside Nigeria (specify)
4. No data

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(6) Mode of Referral

1. Standard referral form
2. Verbal
3. Informal note
4. Continuation sheet
5. Letter headed paper
6. Medical students note
7. Prescription sheet
8. Treatment sheet
9. Sheet of paper
10. Referral form (not standard)
11. Others (specify)

(7) Information on the referral letter

Information on the referral letter	1.Yes	2.No
1. Name of referring institution		
2. Name of patient		
3. Sex of patient		
4. Age of patient		
5. History and findings		
6. Diagnosis		
7. Treatment given		
8. Reason for referral		
9. Name of persons who referred the patient		
10. Signature of person who referred the patient		

(8) Diagnosis on Referral……

(9) Final diagnosis……

(10) Concordance in diagnosis

1. Yes 2. No

(11) Feedback/Reply to referring Institution

1. Yes 2. No

(12) Category of patient

1. Outpatient 2. Inpatient

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