EVALUATING THE EFFECTIVENESS OF PATIENT COUNSELLING SERVICES IN THE DELIVERY OF PHARMACEUTICAL CARE TO PATIENTS AT UTH.

A DISSERTATION SUBMITTED IN PARTIAL FUFILMENT OF REQUIREMENTS OF THE UNIVERSITY OF ZAMBIA FOR THE AWARD OF BACHELOR OF PHARMACY DEGREE.

March 2009

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ABSTRACT

Pharmacists are society's experts on drugs. Clinical pharmacy aims to help optimize drug efficacy, reduce drug toxicity and promote cost-effectiveness. To achieve this, pharmacists need to work as fully integrated members of the health care team. As members as well as being members of their own professional body, pharmacists are accountable to patients for the services which they provide. Prior to the development of clinical pharmacy, pharmacists were primarily involved in the supply of medicines. However, as pharmaceutical services have evolved, it is possible for pharmacists in all healthcare settings to develop clinical roles. The concept of clinical pharmacy can be delivered through activities known as 'pharmaceutical care' of which patient counselling is a very important aspect.[14]

The main objective of the study was to evaluate the effectiveness of patient counselling services in the delivery of pharmaceutical care to patients at UTH. The study was beneficial as it aimed at improving pharmaceutical care services and in particular patient counselling services for the betterment of health. The key variables of the study were patient counselling sessions, quality of pharmaceutical care being delivered through patient counselling, views of patients on counselling services, knowledge that patients are receiving from pharmacists, the major factors contributing to the prevailing standards of patient counselling services at UTH & medication counselling behaviour guidelines.

The study adopted a Descriptive cross-sectional method of research as it aimed at quantifying the distribution of certain variables in a study population. The main data collection instrument was a structured questionnaire as it enhanced data collection to a larger group of people within the short time that was available to the researcher. The study was conducted at the University Teaching Hospital in Lusaka and the study population included both hospital pharmacists and patients (in-patients and out-patients). Permission to undertake the study was sought from The University of Zambia, Department of Pharmacy.

The data collected through the self administered structured questionnaire was stored and checked for uniformity, completeness, accuracy and consistency. Data analysis was done by computer using statistical analysis software called *Statistical Package for Social Sciences* (SPSS 11.5 for Windows). Frequency tables and cross tabulations were then produced using SPSS while bar

charts and pie charts were also created using Microsoft-Excel in order to facilitate interpretation of data.

The study revealed the following findings: 55% of the patient respondents had been counselled while 45% had not been counselled by the pharmacist on the medicines they had acquired. The majority of those not counselled were inpatients as there were no pharmacists on the wards. Regarding the quality of pharmaceutical care being delivered by pharmacists through patient counselling services, the study revealed that pharmacists are generally delivering quality pharmaceutical care through patient counselling services. However, the majority of the patients counselled, indicated that the counselling services were unsatisfactory. In addition, it was found that the majority of the respondent patients (59%) were receiving inadequate knowledge on drug therapy followed by 33% receiving average knowledge and only 8% receiving adequate knowledge. These findings therefore reveal that despite patients being counselled and pharmacists delivering quality pharmaceutical care through patient counselling services, the effective delivery of these services is hindered by the following causative factors: limited number of pharmacists leading to a high patient – pharmacist ratio, time pressures, lack of counselling skills and techniques, language barriers, sensitivity to gender, lack of counselling rooms, lack of privacy/confidentiality and a busy pharmacy generally not specific to patient counselling. The study also revealed that hospital pharmacists generally do not have Medication counselling behaviour guidelines and that they felt it was necessary to have such guidelines in order to standardize and enhance patient counselling services.

ACKNOWLEDGEMENT

This research could not have been possible without the help and encouragement of a great many people. In particular, I wish to express my sincere thanks and gratitude to the following:

- Dr. L.T. Muungo (Dip. Pharm, PhD, MPSZ), my principal supervisor for his advice and supervision that enabled the successful completion of this research project.
- Dr. S.N. Kanyimba (MSc, MBChB, Bsc.HB), my co-supervisor for his supervision in putting the research proposal and also the research report together on time.
- Mrs. M.M. Chapema, Director of Pharmaceutical Services, UTH for allowing me to interview out-patients at the Main Pharmacy.
- The heads of department in: Internal medicine, Surgery and Obstetrics & Gynecology, for allowing me to interview in-patients in the named departments.
- All my friends and predecessors including Mr. C. Kalungia for their advice.
- Mr. David K. Lungu for his encouragement and material support.
- My family Mr. Frank & Mrs. Doreen Kalumba (parents), my sisters Alice, O'brien & Jemimah, my brothers Frank & David for their prayers, encouragement, financial and moral support. Thank you for always being there for me, you are my inspiration.
- Above all, I give all the glory and honor to the Almighty God.

DEDICATION:

I would like to dedicate this research to my parents, Mr. and Mrs. Kalumba, who have worked tirelessly to ensure that I attain university education and whose belief in me has motivated and inspired me to soldier on and aim high. I am thankful for their prayers, encouragement and not forgetting their unconditional love.

ACRONYMS

BAC: - British Association for Counselling.

FIP: - International Pharmaceutical Federation.

IPSF: - International Pharmaceutical Students' Federation.

MOH: - Ministry of Health.

NHS: - National Health Service of the United Kingdom.

OTC: - Over-the-Counter.

PSZ: - Pharmaceutical Society of Zambia.

UK: - United Kingdom.

USP: - United States Pharmacopoeia.

UTH: - University Teaching Hospital.

OPERATIONAL DEFINITIONS

Counselling: The dissemination or exchange of medicine information (including the skills required to safely and effectively administer the medicine) by the pharmacist to the patient. The information provided is directed to achieving safe and appropriate use of medicines, and adherence to the prescribed treatment regimen, with the intention of optimizing therapeutic outcomes.

Drug/Medicine: A pharmaceutical product, used in or on the human body for the prevention, diagnosis or treatment of the disease or for the modification of physiological function.

Health promotion: The process of enabling people to increase control over, and to improve, their health.

Pharmaceutical care: The responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life.

Pharmacist: A person professionally qualified in pharmacy, the branch of health sciences dealing with the preparation, dispensing and use of medicines. The role of the pharmacist has evolved from that of a provider medicine to that of a provider of patient–centered pharmaceutical care.

Pharmacy practice: The provision of medications and other health care products and services and to help people and society to make the best use of them.

Side effect: any unintended effect of a pharmaceutical product occurring at doses normally used in man, which is related to the pharmacological properties of the drug.

INTRODUCTION

Pharmacists are experts on the action and uses of drugs including their chemistry, the formulation of medicines and the way in which drugs are used to manage diseases. Pharmacists' raison d'etre is to use this expertise to improve patient care. Pharmacists are in close contact with patients so that they have an important role in assisting patients to make the best use of their prescribed medicines and in advising patients on the appropriate self management of self limiting and minor conditions. Increasingly this latter aspect includes over-the-counter prescribing of effective and potent treatments. Pharmacists are also in close working relationships with other members of the health care team - doctors, nurses, dentists and others, where they are able to give advice on a wide range of issues surrounding the use of medicines. Traditionally pharmacists have always given advice on the use of medicines. In 1986, the Nuffield Report recognized that there were some categories of individuals who certainly will need advice, help and encouragement in the handling of their medicines and that anyone who has to rely on a continuous drug regime should be a candidate for additional support and help from pharmacies. These statements highlight the importance placed on patient counselling in the Nuffield Report. Since the Nuffield Report there have been developments in the research, production and packaging of medicines together with changes in society's attitudes towards patient/professional relationships, which have led to advice/counselling becoming an even greater part of the role of the pharmacist.[14]

If patients/consumers are to get the best out of their medicines, then they need to know how to correctly use medicines in as safe a manner as possible with knowledge about side effects, interactions e.t.c. Pharmacists are in a better position than any other health care provider to provide such advice/counselling to patients/consumers. The British Association for Counselling (BAC) describes counselling as giving clients the opportunity explore, discover and clarify ways of living more resourcefully and towards greater well being. However counselling is more about giving information and guidance on medicines to patients and allowing the patient to make informed decisions but with the interests of the patient uppermost.[14]

Patient counselling is an important aspect of pharmaceutical care which is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve or maintain a patient's quality of life. These outcomes may include cure of disease, elimination or

amelioration of symptoms, arresting or slowing the disease process or preventing disease. It is a patient-oriented, outcome-oriented pharmacy practice that requires the pharmacist to work in concert with the other members of the health care team.[16]

The aims of counselling

The provision of information alone is not sufficient to enable patients to correctly take medicines or to change their existing behaviours and attitudes. Counselling as the definition from the BAC states, enables clients to explore their beliefs and to develop plans for behaviour change. Thus, the aims of patient counselling in addition to the provision of advice from the pharmacist could be to:

- Encourage patients to identify any problems they perceive with medicines and also any solutions to these problems.
- Encourage patients to develop their own action plan for taking /using medicines correctly.
- Gain an understanding of the patient's perspective.
- Respect the patient's beliefs and be non-judgmental of their use (or non-use) of medicines.[14]

Opportunities for counselling

The pharmacist is often the last health care professional whom a patient sees before starting drug therapy. It is at this stage that patient counselling should take place. Pharmacists should take a prominent and proactive role in counselling especially since some patients do not expect it. The opportunities for patient counselling are many, but the main opportunity is at the end of the dispensing or the sale of the medicine. In community pharmacy, patient counselling should be an integral part of the dispensing of a prescription. No patient should receive a dispensed medicine without the pharmacist making an assessment of the counselling needs of the patient. Similarly, there are many opportunities for hospital pharmacy to counsel patients. Hospital pharmacists unlike their community counterparts, have the advantage of access to a considerable amount of information about the patient. This information can include details of disease state, current therapy and home circumstances, all of which can be useful in providing counselling. Patients in hospital often have their medication changed during their stay and so should be made fully aware of any alterations on discharge. Out-patients and in-patients at discharge receiving dispensed

medicines will require the same sort of advice and counselling as patients receiving dispensed medicines from community pharmacies. Additionally, in-patients may require counselling on their medicines during admission.[14]

Counselling, wherever it occurs, should take place in a thoughtful, structured way. The pharmacist must possess not only a sound knowledge of the drugs and appliances being dispensed or sold, but also excellent communication skills. Pharmacists must have the ability to explain information clearly and unambiguously so that the recipient can understand. They must know which questions to ask and how to ask them. The counselling process should not be a monologue by the pharmacist giving a long list of information points. To be successful, it must be a two-way process. There should be ample opportunity for the patient to ask questions and importantly the pharmacist should know how to listen.[14]

Patients' expectations and knowledge of counselling services provided by pharmacists is also very important because many patients lack an understanding about the expanded counselling roles that pharmacists are prepared to provide. A predominant patient expectation of pharmacists is that of a supplier of prescription products rather than that of a concerned counsellor regarding medications. There is much more work to be done to inform patients about what their pharmacist is capable of doing in the health care system and how pharmacist services can add value to a patient's health care.[8]

"All too frequently the patient is met by a clerk, who delivers the prescription to the pharmacist, who resides in splendid isolation within a glass enclosure. After an inordinately long time the clerk returns with the medication and rings up the sale. This entire transaction may sometimes be completed without any verbal exchange whatsoever... Although this picture of the pharmacist is not universal it is common enough so that the pharmacist has lost professional stature with physicians and the public. Only when pharmacists really provide professional services and inform physicians and the public of their active role in patient care will the image improve." (Crosby D. J.)[4]

Over the last several decades, pharmacists have been trained in a more clinically-oriented fashion, researchers have established that patient counselling by pharmacists is important for improving appropriate medication use and achieving desired patient outcomes, pharmaceutical

care has been embraced as the mission of pharmacy and pharmacists have become required by law to provide patient counselling about medicines.[8]

Patient counselling is a primary duty of modern pharmacists therefore patient counselling and communication courses should be part of the pharmacists training. Counselling skills can also be developed in continuing education courses that are tailored to the participants needs. Key counselling skills required include listening, questioning, empathy, respect and negotiation.[17]

What constitutes good patient counselling?

There is no clear consensus on the content of good counselling in the literature or the profession. However, based on current knowledge counselling should be a two-way interactive communication process where participants are invited to respond and seek further information should they want it. According to the USP, medication counselling is an approach that focuses on enhancing the problem solving skills of the patient for the purpose of improving or maintaining quality of health and quality of life. The process emphasizes the role of the patient as an expert of his/her own medication. The physical, psychological, social, cultural, emotional and intellectual perspectives, as well the health beliefs and values of the patient must be respected. It is the health care professionals' responsibility to support the patient's efforts to develop medication management skills and to move in the direction of self responsibility with empathy, sincerity and patience. In medication counselling the level of information is detailed and tailored to the needs of the individual patient. The objective is to offer guidance to the patient in order to fulfill the needs in managing his or her medical condition and prescribed medication. The nature of this relationship is interactive and is a learning process for both the pharmacist and the patient.[17]

Benefits of patient counselling to the patient.

The patient:

- Understands why a medication is helpful to maintain or promote well being.
- Accepts the support from the Pharmacist in establishing a working relationship and foundation for continual interaction and consultation.
- Is able to make appropriate medication-related decisions concerning his/her medication regimen (prescription or non-prescription medicines).

- Improves strategies to manage medication side effects and drug interactions.
- Will become a more informed and active participant in disease treatment and self-care management.

Benefits of patient counselling to the pharmacist/pharmacy

- Satisfaction of having fulfilled his/her profession duty.
- Satisfaction of serving patients and their well being.
- Improves the patients' perception/confidence in the pharmacist and the pharmacy.
- Pharmacy is seen as a professional or caring pharmacy.
- Brings pharmacists and pharmacies closer to other healthcare services and providers.

LITERATURE REVIEW

Pharmacists worldwide are adopting new and expanded roles in the provision of pharmaceutical care. Pharmacists are among the most accessible and trusted of all health professionals, and patients frequently consult pharmacists for advice about medications. The development of professional cognitive pharmaceutical services has created new opportunities for pharmacists to improve medication management for patients. These services include health promotion, medication review, provision of medicines information, contribution to multidisciplinary care plans, and participation in health care conferences.[6]

Effectiveness of Pharmacists' Clinical Services

A USA publication **'welcome to the U.S Pharmacist'** published a detailed article entitled **"Effective patient counselling"** by Bruce Berger, Ph.D. professor, school of Pharmacy, Auburn University, Auburn, that indicated that effective patient counselling is not just simply the provision of information. Information is prerequisite to compliance, but the timing and organization of the counsel and the involvement of the patient are also critical in determining what the patient understands and remembers. The counselling/advising encounter should be thought of as an opportunity for information exchange. Pharmacists are experts on drug therapy, but the patients are experts on their daily routines, how they understand their illness and its treatment, whether they anticipate any problems taking the medicines as prescribed and so forth. Each of these points needs assessment if counselling/advising is to be effective.[2]

Morrison & Wertheimer (2001) in their study investigating the effectiveness of pharmacists' clinical services demonstrated that counselling of patients and their physicians by pharmacists can improve patient outcomes.[13]

Afolabi & Erhun (2003) in their study on patient's response to waiting time in an out-patient pharmacy in Nigeria found that total waiting time for a dispensing process averaged 17.09 minutes and 89.5% of this was due to delay components. Specifically, the major delay components included patient queues for billing prescription sheets and subsequent payments. Generally, patients were not satisfied with undue delay caused by dispensing procedure at the pharmacy. They therefore recommended attempts to be made to reduce the time on these components of the dispensing process so that more time could be devoted to patient counselling.[1]

Patients' expectations and knowledge of Patient counselling services provided by Pharmacists

Spencer in his study on patients' expectations and knowledge of patient counselling services provided by pharmacists reported low patient expectations of pharmacist counselling services may be a reason for the lack of communication between pharmacists and patients.[12] In a similar study Gagnon reported that patients rated the importance of most professional services given by a pharmacist less important on average than pharmacists did. He suggested that the patients may have been uninformed about the value of professional services given by pharmacists.[5]

According to the Schering Report XIV, only twenty seven percent of the patients surveyed reported that they thought a pharmacist should talk to them personally about their prescription every time a prescription is filled. Thirty six percent reported that the pharmacist should talk to them only if they ask and thirty two percent reported that the pharmacist should talk to them only if the pharmacist thinks it is necessary.[7]

A field study was conducted to identify participant and environment variables that affect patient counselling provided by pharmacists and test their effects in a range of community pharmacy practices. Data were collected through unobtrusive observation, patient interviews and pharmacist interviews in 12 Wisconsin community pharmacies. A total of 360 dispensing episodes were included for study. Pharmacist and patient expectations (role orientations) and environmental variables, lack of time, patient privacy, prescription transfer by the pharmacist, and importance of information were studied. The results showed that pharmacists, patients and pharmacy environments all are important for the provision of patient counselling provided by pharmacists.[9]

Pharmacists' role orientation for counselling, perceived time pressures and perceived importance of information were important determinants for whether pharmacists personally transferred prescriptions to patients, which in turn had a strong association with the occurrence of counselling taking place. Once counselling was initiated, patient's expectations for counselling and the perceived importance of information were important determinants for the length and content of counselling. These findings are consistent with results of an earlier study in which

pharmacists reported they primarily determine the amount and content of counselling they offer to patient based on a patient's desire and acceptance.[10]

Patients' expectations and knowledge of counselling services provided by pharmacists are important for the provision of this service. While pharmacists can offer counselling and even start to provide it at a superficial level patients influence the length and content of these interactions. The effect that patients' expectations can play in the provision of counselling services is important since potential positive outcomes that result from counselling could remain unrealized if patients do not attend to or comply with counselling.

Another study was conducted to investigate how patients; expectations can influence their evaluation of counselling services provided by pharmacists. The effects of normative expectations (what a patient believes should occur) and predictive expectations (what a patient believes will occur) on patients' evaluation of: (i) a specific counselling episode; (ii) counselling services overall and (iii) the trustworthiness of the pharmacist who provided the counselling were studied within the context of high and low performance levels of counselling.[11]

Normative expectations, predictive expectations and performance levels were manipulated experimentally using written scenarios and video taped counselling episodes. Multiple item measures were used for the dependent variables. The results showed that higher predictive expectations resulted in lower evaluation scores for a specific counselling episode but higher scores for counselling services overall. Also higher normative expectations resulted in lower evaluation scores or the trustworthiness of the pharmacist. These findings suggest that normative and predictive expectations play differential roles in patients' evaluation of counselling provided by pharmacists. For example, patients who expect that their pharmacist will provide counselling are more difficult to satisfy for a given encounter but also will view the services more favourably overall than those with lower predictive expectations. In addition, patients with high expectations that the pharmacist should provide counselling are more likely to lose trust in the pharmacist if the service is not provided than patients with lower expectations.[11]

Researchers conducted a study in Wisconsin and investigated patients' perceived barriers to receiving counselling from a pharmacist. The first and second most frequently reported barriers

to asking a pharmacist questions were "fear/intimidation" (don't want to ask a stupid question, embarrassed, shy) and "lack of awareness" (not aware pharmacist can answer questions).[3]

Many patients lack an understanding about the expanded counselling roles that pharmacists are prepared to provide. Thus, their expectations more likely portray the pharmacist as a supplier of prescription products rather than that of a concerned counsellor regarding medications. Many patients view the pharmacist's role as one that fits within their overall health care that is directed and controlled by their physician. There is much more work to be done to inform patients about what their pharmacist is capable of doing in the health care system and how pharmacist services can add value to a patient's health care above and beyond what the patient's physician can provide alone. Only when a patient is informed about services pharmacists are able to provide and about the fact that these services are not being provided by others will he/she come to have a view of pharmacists that is congruent with how pharmacists are viewing themselves. It might only be then that pharmacy practice can change from a product oriented to a patient oriented profession.

STATEMENT OF THE PROBLEM

Lack of communication with health care professionals, including pharmacists has been identified as one of the reasons why patients do not adhere to the prescribed medications. The pharmacist must realize the importance of patient counselling as of benefit to the patient as well as the pharmacist and the pharmacy he/she serves.[15]

The role of pharmacists in hospitals has an increasing emphasis on talking to patients and medical staff. Poor communication has the potential to cause a range of problems. For example, if there is incomplete communication with health care professionals on correct drug dosage or inappropriate or incomplete advice on the use of medication, improper drug use by the patient may occur. Thus, there is need for effective communication skills for pharmacists.[14]

The NHS Plan 2000 outlined the need for pharmacists to become more involved in helping patients to get the best from their medicines. The NHS Plan accepts that many patients are receiving less than optimum care because they find their medicines difficult to take or hard to remember, because they don't have anyone to talk to about their medicines, or because they have complicated medication regimens. According to the NHS Plan pharmacists should be able to give extra help to patients who have difficulty in using their medicines correctly. Additionally the NHS Plan aims to 'give patients the confidence that they are getting good advice when they consult a pharmacist'. In other words, the NHS Plan is advocating a greater role for pharmacists in counselling and advice giving to patients.[4]

In patient-centered health care, the first challenges are to identify and meet the changing needs of patients. Pharmacists need to ensure that people can access medicines or pharmaceutical advice easily and, as far as possible, in a way and at a time and place of their own choosing. They can empower patients by engaging them in dialogue to communicate knowledge which enables them to manage their own health and treatment. Although patients are exposed to wide range of information from package inserts, promotional materials, advertising in the media and through the internet, this information is not always accurate or complete. The pharmacist can help informed patients to become accurately informed patients by offering unbiased relevant evidence-based information and by pointing to reliable sources. Counselling on disease prevention and lifestyle modification will promote public health, while shared decision-making on how to take medicines through a concordant approach will optimize health outcomes, reduce

the number of medicine-related adverse effects, cut the amount of medicine which is wasted and improve adherence to medical treatment.[16]

Theoretical Analysis of the Research Problem*

Core Problem: Ineffectiveness of patient counselling services in the delivery of pharmaceutical care to patients.

Possible Causes/Factors influencing the Core Problem:

a) Pharmacist related Factors:
   - Shortage of pharmacists.
   - No predefined pharmaceutical roles and responsibilities.
   - Under utilization of pharmacists in hospitals.
   - Lack of confidence.
   - Lack of interest.
   - Laziness.
   - A feeling of being under pressure, especially time pressure.

b) Patient Factors:
   - Physical disabilities (Dealing with patients who have sight or hearing impairment will require the pharmacist to use additional communication skills.)
   - Comprehension difficulties.
   - Illiteracy.

c) Environmental factors:
   - A busy pharmacy.
   - Lack of privacy.
   - Noise.
   - Physical barriers

*Refer to Appendix 1 for Problem Analysis Diagram.

STUDY JUSTIFICATION

The study is of great significance as it aims at evaluating the effectiveness of patient counselling services in the delivery of pharmaceutical care to patients. In the Zambian scenario, there is a cross country requirement to improve the quality of pharmaceutical services in hospitals so as to add maximum benefit to the quality of health care to patients. In order to achieve this, pharmacists must ensure that the patient receives sufficient information and advice through patient counselling to enable the safe and effective use of medicines. It is generally accepted that some patients have difficulty taking their medications and complying with the dosage regimens hence the need for effective patient counselling by pharmacists. Evidence comes from compliance and wastage studies in which it has been estimated that up to 50% of older people do not take their medicines as intended. The scope of this problem can be seen when some facts are considered. It is estimated that 80% of over 75 year olds in the UK take at least one prescribed medicine and 36% take four or more medicines. Additionally research has shown that 50% of patients (not necessarily older people) with hypertension failed to take their medicines correctly and one in ten deaths were attributable to stroke. It has been suggested that counselling by pharmacists could lead to better compliance and hence less therapeutic failure and possible death.

The cost of unused medicines returned by patients to pharmacies has been estimated to be in excess of £100 million each year. Many of these unused and hence wasted medicines are because patients do not understand why their medicine has been prescribed or how to take or use it. Although many medicines are supplied with a patient information leaflet, many patients do not always understand the contents and require further explanation from the pharmacist. Pharmacists are in an ideal situation to provide additional information and counselling when prescription medicines are handed out and when OTC medicines are sold. It is therefore of prime importance to evaluate the effectiveness of patient counselling services because there are benefits of patient counselling to both the patient and the pharmacist/pharmacy.

Determining the effectiveness of patient counselling services in the delivery of pharmaceutical care would profoundly benefit pharmacy practice in the sense that high standards of practice would be promoted together with good health outcome of any treatment offered. Moreover, drug misuse would decrease, safety and correct use of drugs would be fostered and the patients'

confidence in the pharmacy professionals and their services would be highly recognized and regarded in high esteem.

STATEMENT OF HYPOTHESIS

NULL HYPOTHESIS: Patient counselling services being delivered at UTH are effective and patients are given adequate knowledge on drug therapy.

ALTERNATIVE HYPOTHESIS: Patient counselling services being delivered at UTH are ineffective and patients are not given adequate knowledge on drug therapy.

RESEARCH QUESTIONS

- Are patients being counselled by pharmacists on the medicines that they obtain?
- Are pharmacists delivering quality pharmaceutical care through effective patient counselling services?
- What are the patients' views on drug therapy & counselling services provided by pharmacists?
- How knowledgeable are the patients about drug therapy after being counselled by the pharmacist?
- What major factors are contributing to the standards of patient counselling services at UTH?
- Do pharmacists have medication counselling behaviour guidelines & is there need for such guidelines?

OBJECTIVES:

GENERAL OBJECTIVE:

To evaluate the effectiveness of patient counselling services in the delivery of pharmaceutical care to patients at UTH.

SPECIFIC OBJECTIVES:

1. To establish whether patients are counselled by pharmacists on the medicines they obtain.
2. To establish whether pharmacists are delivering quality pharmaceutical care through patient counselling.
3. To determine patient views on drug therapy and counselling services provided by pharmacists.
4. To determine the knowledge on drug therapy that patients are receiving from pharmacists.
5. To determine the major factors contributing to the prevailing standards of patient counselling services at UTH.
6. To establish whether pharmacists have medication counselling behaviour guidelines & if there is need for such guidelines.
7. To make appropriate recommendations to relevant authorities such as the PSZ and/or the MOH on how to improve counselling services & hence pharmaceutical care to patients.

METHODOLOGY

CONCEPTUAL FRAMEWORK: VARIABLES

Background variables:

- Age
- Sex
- Marital status
- Educational level
- Occupation

Dependent variable:

- Effectiveness of patient counselling in the delivery of pharmaceutical care.

Independent variables:

- Patient counselling services
- Patients' views of counselling services
- Knowledge & skills
- Pharmacist staffing & workload
- Conditions of practice & facilities

OBJECTIVE	VARIABLE(S) FOR MEASUREMENT	STUDY INDICATOR
To establish whether patients are counselled by pharmacists on the medicines they obtain.	**Patient counselling sessions**	- % of patients counselled by the pharmacist - % of patients not counselled by the pharmacist

To establish whether pharmacists are delivering quality pharmaceutical care through patient counselling.	**Quality of pharmaceutical care through patient counselling services.** -Assesses patient's needs and knowledge of medication. -Masters medication information. -Gives patient sufficient but customized information. -Gives reasons and explanations. -Uses language patient is likely to understand.	- > 4 satisfactory responses is good quality - 3 - 4 satisfactory responses is average quality - < 3 satisfactory responses is poor knowledge
To determine patient views on drug therapy and counselling services provided by pharmacists.	**Views of patients on counselling services**	-% of patients who find the services to be satisfactory -% of patients who find the services to be unsatisfactory
To determine the knowledge on drug therapy that patients are receiving from pharmacists.	**Knowledge on:** -Purpose of medicine. -Name of the medicine. -Condition the medicine is treating. -How to take the medicine. -How long the drug will take to show an effect. -Duration of taking the medicine -Refill. -Benefits of the medication. -Side effects & precautions. -Food, drinks & drug interactions. -Storage of medicines. -Missed dose.	-% of patients receiving adequate knowledge on drug therapy .i.e. 9 – 12 affirmative responses -% of patients receiving average knowledge on drug therapy .i.e. 5 – 8 affirmative responses -% of patients receiving inadequate knowledge on drug therapy .i.e. 0 – 4 affirmative responses
To determine the major factors contributing to the prevailing standards of patient counselling services at UTH.	**Major causative factors**	-Pharmacist related Factors -Patient factors -Environmental factors

To establish whether pharmacists have medication counselling behaviour guidelines & if there is need for such guidelines.	**Medication counselling behavoiur guidelines****	-% of pharmacists who agree. -% of pharmacists who disagree.

** Refer to Appendices 2 for the Medication Counselling Behaviour Guidelines (A New Evaluation Tool Developed by FIP/IPSF) adopted from: Counselling, Concordance & Communication, Wuliji T., Airaksinen M. (2005)[17]

STUDY TYPE

The study adopted a Descriptive cross-sectional method of research as it aimed at quantifying the distribution of certain variables in a study population.

STUDY DESIGN

Qualitative methods of primary data sources were used and these included a structured questionnaire which was complemented by interviews and/or observations.

STUDY SETTING

The study was conducted at the University Teaching Hospital in Lusaka, for a period of 30 days from 1st August to 31st August 2008.

STUDY POPULATION

The study targeted both in-patients and out-patients. The study also targeted hospital pharmacists and the selection of study subjects was highly dependent on them having worked as hospital pharmacists for at least one year.

SAMPLING METHOD

Simple convenient sampling which is a type of non-probability sampling was used to select the hospital pharmacists of the study. This is because only subjects who were available at the time of data collection were included in the study. On the other hand, statistical methods were used to select the number of patients that took part in the study.

SAMPLE SIZE

The sample size for the patients was calculated using statistical methods, using a confidence interval of 1.96, a prevalence of 90% and a standard error of 5%, by the equation below.

$$\frac{N = Z^2 P(Q-P)}{e^2}$$

where N = Sample size required

P = Prevalence = 90%

Q = Power estimation = 100%

Z = Confidence interval = 1.96

e = Standard error = 5%

$$N = \frac{1.96^2 \times 90(100-90)}{5^2} = 138$$

The sample size was rounded off to 100 for convenience sake and also due to constraints on resources and time. This sample was divided in a ratio of 3:7 for in-patients and out-patients respectively. For in-patients the sample was spread across three different departments at UTH i.e. 10 patients from Internal Medicine; 10 patients from Surgery; and 10 patients from Obstetrics & Gynaecology. According to the above ratio, 70 patients were interviewed from the out-patient department. A convenient sample size of 10 hospital pharmacists was targeted as subjects of this study. The selection criterion was based on the availability of hospital pharmacists at UTH.

Inclusion criteria

- In-patients and out-patients above the age of 18 years
- Hospital pharmacists

Exclusion criteria

- Patients below 18 years
- Patients with Dementia
- Patients unable to talk(dumb)

DATA COLLECTION TECHNIQUES

The main data collection instrument was a self administered structured questionnaire, as it enhanced data collection to a larger group of people within the short time that was available to the researcher. Two types of questionnaires were administered, one for the patients and another one for the hospital pharmacists.

METHOD OF DATA PROCESSING AND ANALYSIS

The data collected through the self administered structured questionnaire was stored and checked for uniformity, completeness, accuracy and consistency. The raw data collected was subject to coding and then it was entered manually into the computer by the researcher. Data analysis was done by computer using statistical analysis software called *Statistical Package for Social Sciences* (SPSS 11.5 for Windows). Frequency tables and cross tabulations were then produced using SPSS while bar charts and pie charts were also created using Microsoft-Excel in order to facilitate interpretation of data.

ETHICAL CONSIDERATIONS

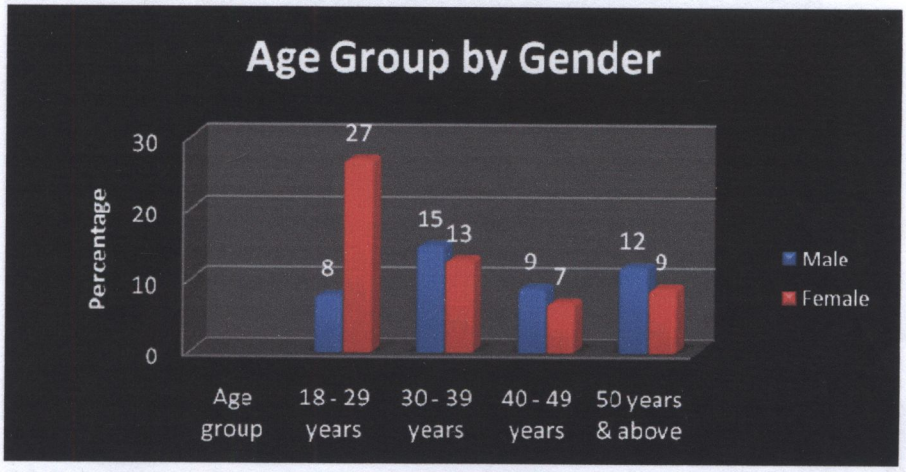
The researcher was given a go ahead to undertake the study from The University of Zambia, Department of Pharmacy as it was entirely for academic purposes. Introductory letters to each of the Departments at UTH that were involved in the study were also obtained. In the design of the questionnaire, the identity of the patients and the professionals who were subjects of the study was not included to maintain confidentiality. In addition, the respondents were assured that the information collected would be treated with maximum confidentiality and only respondents willing to participate were included in the study.

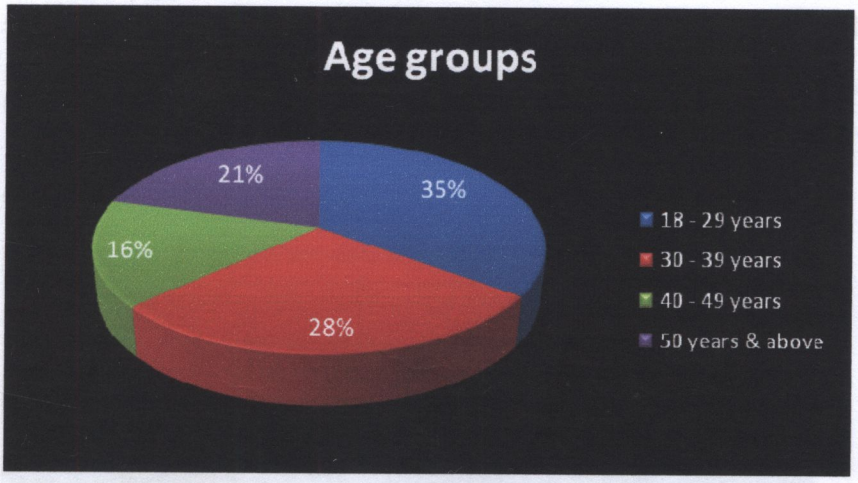
DATA ANALYSIS AND RESULTS

Demographic Distribution of Respondent Patients

A. Age and Gender distribution of the respondents

Figure 1: Respondent Age Groups by Gender



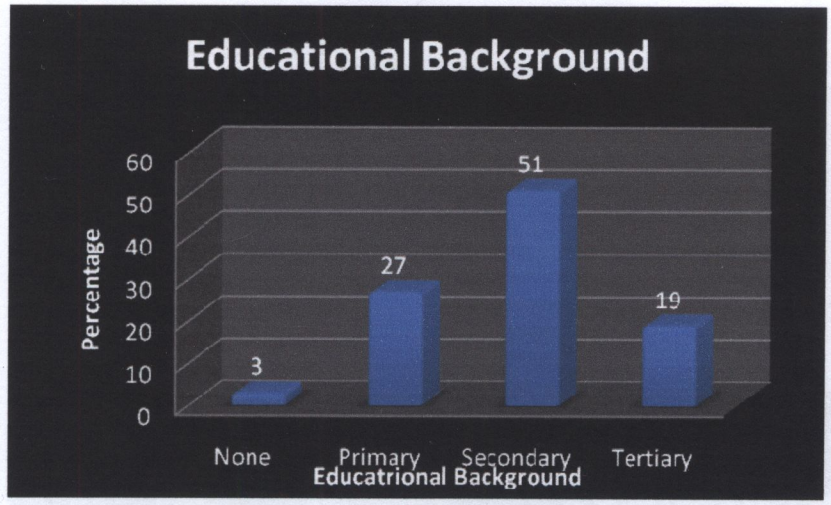


The total sample of 100 patients had more females than males i.e. 56% and 44% respectively. The age distribution ranged from 18 years to 50 years and above. The majority of the respondent patients (35%) were aged from 18 - 29 years, followed by 28% of the respondents aged from 30 - 39 years. The lowest proportion of respondents (16%) were in the age range of 40 - 49 years

while 21% of the respondents were aged from 50 years and above. This distribution therefore shows a skewed graph favouring the young population.

B. Educational Background of the respondents

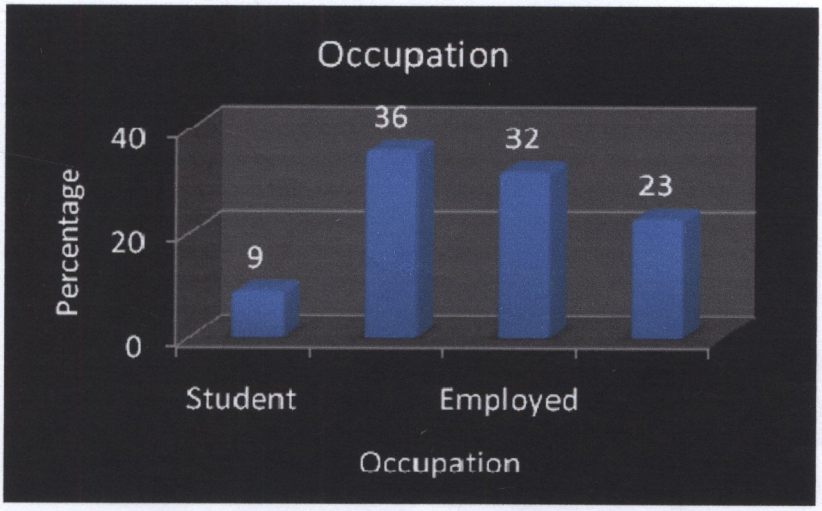
Figure 2: Educational background



Of the total number of respondent patients interviewed, 51% had gone up to secondary school, followed by 27% having gone up to the primary level of education. 19% of the respondents had achieved tertiary qualifications while the lowest proportion (3%) had not been to school at all.

C. Occupation of the respondents

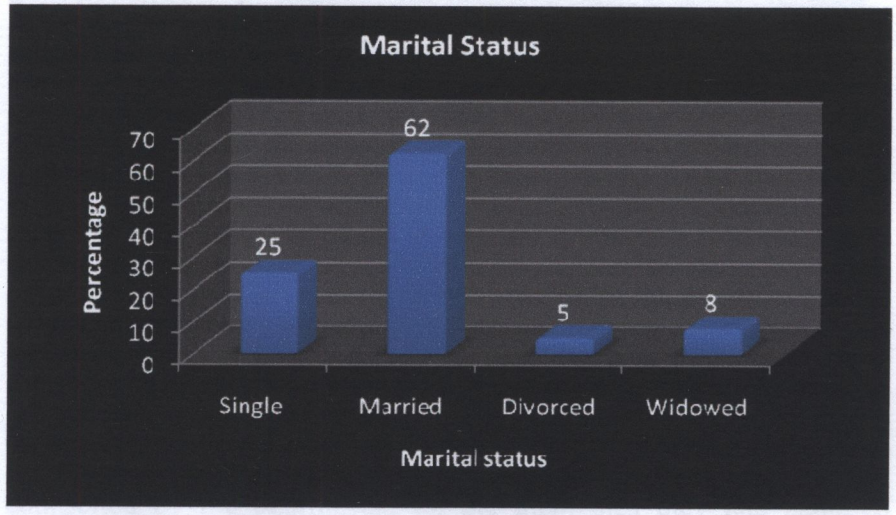
Figure 3: Occupation



The majority of the respondent patients interviewed ranged from being unemployed to being employed i.e. 36% and 32% respectively. 23% of the respondents were self employed while 9% were students.

D. Marital Status

Figure 4: Marital status

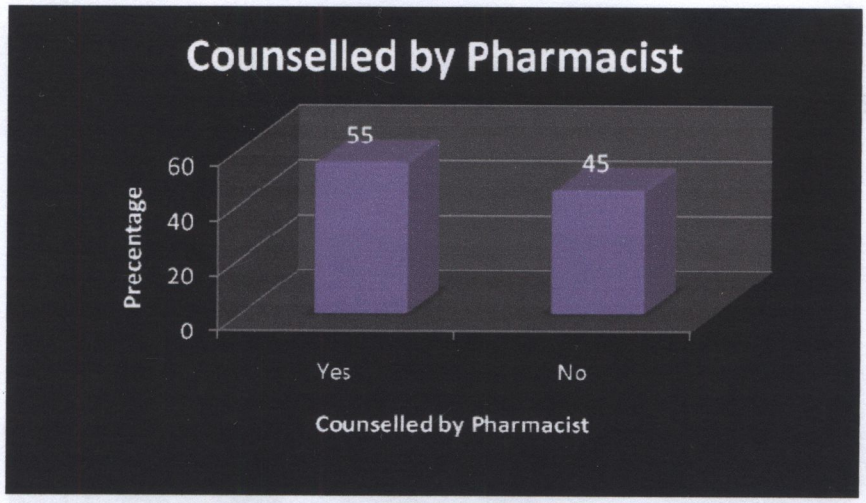


Of the total number of respondent patients interviewed, 62% were married followed by 25% being single. The lowest proportion of the respondents were widowed or divorced i.e. 8% and 5% respectively.

MAIN FINDINGS

A. Has the Pharmacist counselled you on the medicines that you have acquired?

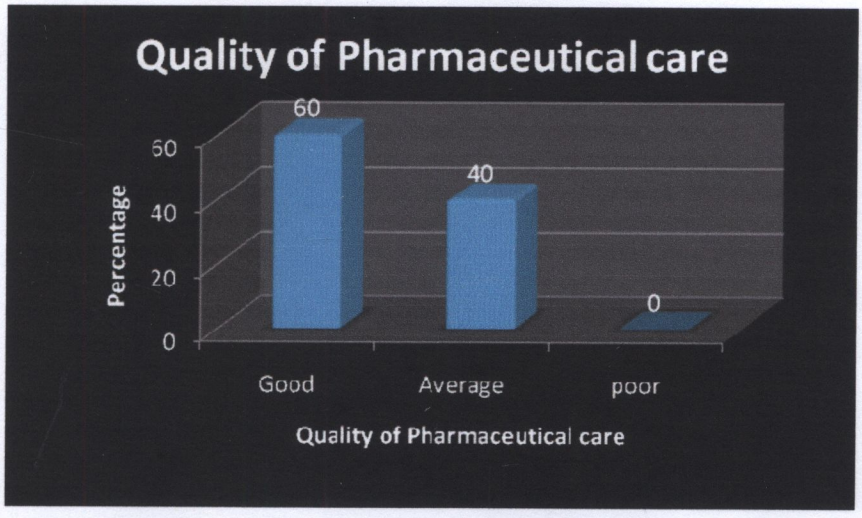
Figure 5: Counselled by Pharmacist



The frequency distribution of respondent patients with regards to whether they had been counselled by the pharmacist, on the medicines they had acquired shows that 55% of the respondents were counselled, the majority of whom were out patients. On the other hand, 45% of the respondent patients had not beeen counselled and the majority of these were in patients.

B. Quality of Pharmaceutical care delivered through patient counselling services.

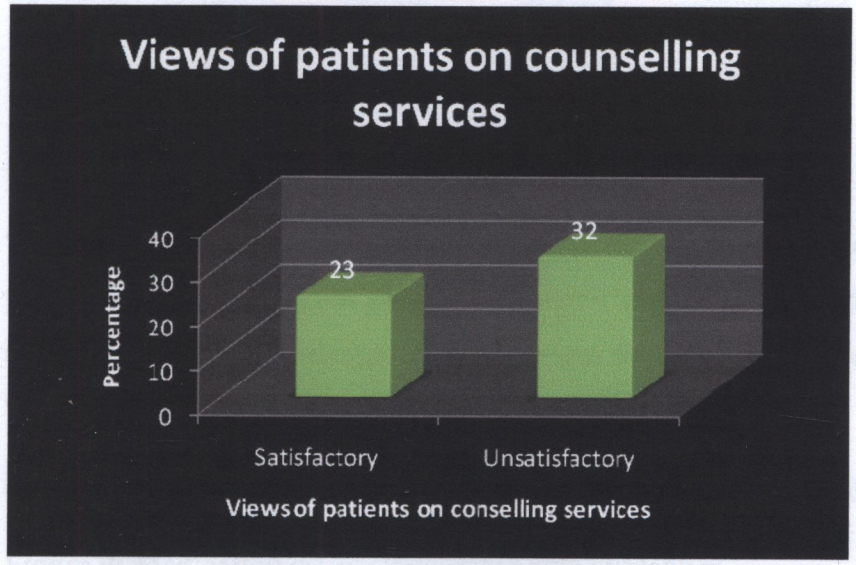
Figure 6: Quality of pharmaceutical care



The distribution of responses from respondent pharmacists with regards to the quality of pharmaceutical care delivered through patient counselling services reveals that the majority of pharmacists i.e. 60% were delivering good quality, followed by 40% delivering average quality and none of them were delivering poor quality pharmaceutical care through patient counselling services.

C. Patients' views on counselling services provided by pharmacists.

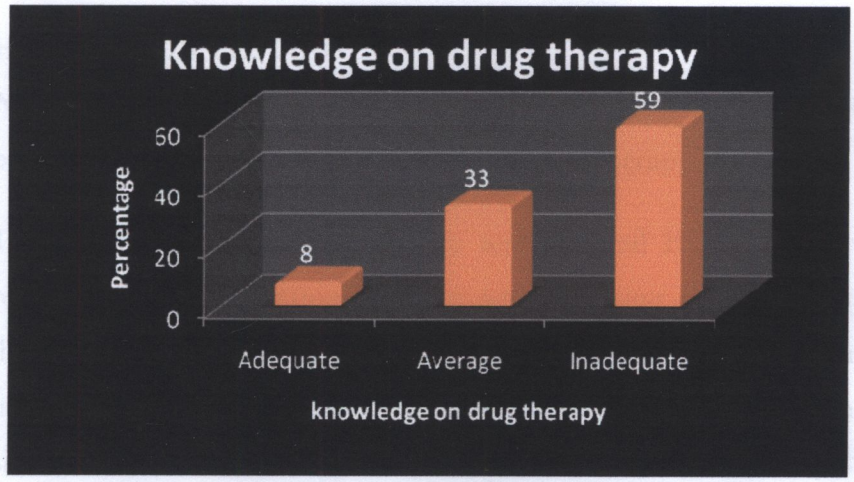
Figure 7: Patients' views on counselling services



The frequency distribution of responses with regards to the views of patients on the counselling services provided by pharmacists shows that the majority of the patients i.e. 32% found the services to be unsatisfactory while 23% found the services to be satisfactory. 45% of the respondent patients did not give any views on the counselling services due to the fact that they had not been counselled by the pharmacist.

D. Knowledge on drug therapy that patients are receiving from pharmacists.

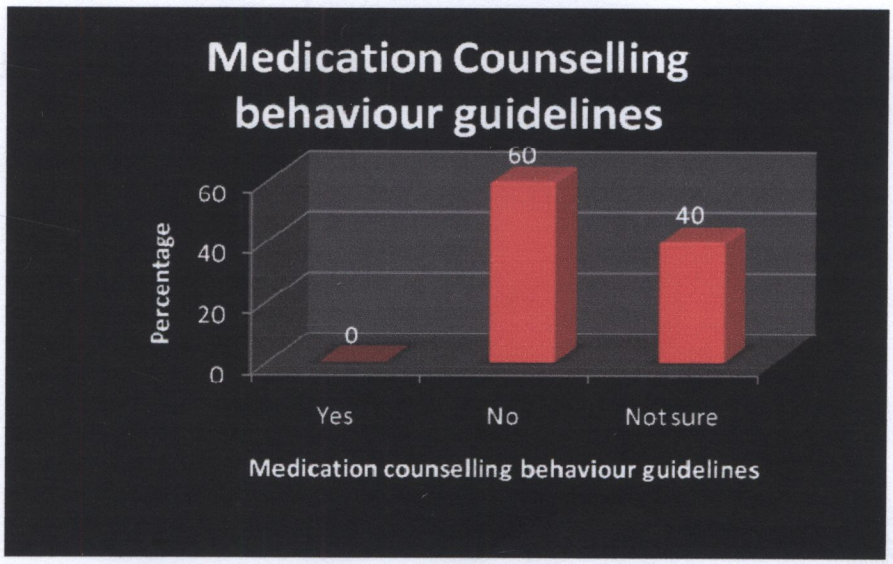
Figure 8: Knowledge on drug therapy



The frequency distribution of responses with regards to the knowledge on drug therapy that patients are receiving from pharmacists shows that only 8% of the respondent patients were receiving adequate knowledge on drug therapy, followed by 33% receiving average knowledge, while the majority (59%) were receiving inadequate knowledge.

E. Do pharmacists have Medication counselling behaviour guidelines?

Figure 9: Medication counselling behaviour guidelines



The frequency distribution of respondent pharmacists with regards to whether they have medication counselling behaviour guidelines shows that the majority of respondents (60%) disagreed that they had these guidelines while 40% were not sure. None of the pharmacists agreed that they had medication counselling behaviour guidelines.

HYPOTHESIS TESTING

NULL HYPOTHESIS: Patient counselling services being delivered at UTH are effective and patients are given adequate knowledge on drug therapy.

The *chi-square test* was applied to test the Null Hypothesis, which predicts that there is a relationship of association between patients being counselled and their knowledge on drug therapy. The *chi-square* is used to test whether two variables are significantly associated or independent. It was however difficult to obtain a significant test statistic due to the small sample size.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Counselled by Pharmacist * Knowledge on drug therapy that patients are receiving from Pharmaceutical personnel	100	100.0%	0	.0%	100	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.675[a]	2	.013
Likelihood Ratio	9.024	2	.011
Linear-by-Linear Association	3.572	1	.059
N of Valid Cases	100		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.60.

The *chi-square test* above shows that the p-value (2-sided) was 0.013. This value was considered significant as it was less than the significance level 0.05. For this reason the Null hypothesis is false and we reject it. We therefore settle for the Alternative Hypothesis which states that patient counselling services being delivered at UTH are ineffective and patients are not given adequate knowledge on drug therapy.

DISCUSSION

The study was aimed at evaluating the effectiveness of patient counselling services in the delivery of pharmaceutical care to patients at UTH. The study focused on collecting data from hospital pharmacists as well as patients (both in-patients and out-patients) at UTH. This is due to the fact that the pharmacist is often the last health care professional whom a patient sees before starting drug therapy and it is at this stage that patient counselling takes place.

The study was based on the following variables for measurement: Patient counselling sessions, quality of pharmaceutical care through patient counselling services, views of patients on counselling services, knowledge on drug therapy that patients are receiving from pharmacists, major causative factors contributing to the prevailing standards of patient counselling services at UTH and Medication counselling behaviour guidelines.

The demographic distribution of respondent patients revealed that the total sample of 100 patients had more females (56%) than males (44%). However, even if a gender balance was achieved it is unlikely that the results obtained would change. In addition, the majority of the respondents (63%) were aged between 18 & 39 years, while 47% were aged 40 years and above. The demographic distribution further revealed that 51% of the respondents had attained secondary levels of education followed by 27% and 19% having attained primary and tertiary levels of education respectively. Only 3% of the respondent patients had not been to school at all. The distribution of respondent patients with regards to their occupation revealed that 36% were unemployed while 33% and 23% were either employed or self employed respectively. The remainders (9%) were students. In addition the majority of respondent patients were either married or single i.e. 62% and 25% respectively, while the lowest proportion of respondents were either widowed (8%) or divorced (5%).

Patient counselling sessions

Patient counselling is a practice aimed at giving information and guidance on medicines to patients and allowing the patient to make informed decisions but with the interests of the patient uppermost. If patients are to get the best out of their medicines, they need to know how to correctly use these medicines in as safe a manner as possible, with knowledge about their benefits and side effects. Pharmacists are in an excellent position to provide such advice and

counselling to patients.[14] The study revealed that 55% of the respondent patients interviewed had been counselled, while 45% had not been counselled. The study further revealed that all of the inpatients interviewed had not been counselled, hence making up the majority of the 45%. This was due to the fact that there were no pharmacists on the wards and the patients obtained their medicines solely from the nurses. Patient counselling is thus well practiced for the out-patients but not for the in-patients.

Quality of pharmaceutical care that pharmacists are delivering through patient counselling services.

Pharmaceutical care being the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life is one of the means through which clinical pharmacy can be delivered. It encompasses a variety of services and functions which include patient counselling.[14] In this study it was found that 60% of the pharmacists interviewed were delivering good quality pharmaceutical care while 40% were delivering average quality pharmaceutical care through patient counselling services. None of the pharmacists were delivering poor quality pharmaceutical care through patient counselling services. The quality of pharmaceutical care that pharmacists are delivering through patient counselling services can thus be deemed as fair.

Patients' views on counselling services provided by pharmacists

According to the USP, patient counselling is an approach that focuses on enhancing the problem solving skills of the patient for the purpose of improving or maintaining quality of health and quality of life. It is the pharmacist's responsibility to support the patient's efforts to develop medication management skills and to move in the direction of self responsibility with empathy, sincerity and patience. The objective in patient counselling is to offer guidance to the patient in order to fulfil the needs in managing his/her medical condition and prescribed medication. The nature of this relationship is interactive and is a learning process for both the pharmacist and the patient.[17] Regarding the patients' views on counselling services provided by pharmacists, the study revealed that 32% of the respondents found the services to be unsatisfactory while 23% found them to be satisfactory. 45% of the respondent patients did not give any views on

counselling services due to the fact that they had not been counselled by the pharmacists. The counselling services were deemed to be unsatisfactory due to the following reasons:

- Inadequate information especially on side effects, duration of taking the medicine and what to do in case of missed dose.
- Very few pharmacists hence they do not have enough time to interact with patients.
- Pharmacists are too busy and in a hurry to clear patients.
- Negligence on the part of the pharmacists.

Knowledge on drug therapy that patients are receiving from pharmacists

In patient counselling, the level of information is detailed and tailored to the needs of the individual patient. Each situation and each patient will have different information needs, but as a general summary no patient who has been given information should leave a community or hospital pharmacy without knowing: how to take or use the medicine, when to take or use the medicine, how much to take or use, how long to continue to take or use, what to expect, e.g. immediate relief, no effect for several days, why the medicine is being taken or used, what to do if something goes wrong, e.g. if a dose is missed, how to recognize side-effects and minimize their incidence, lifestyle changes which need to be made, dietary changes which need to be made.[14] The study therefore revealed that 8% of the respondent patients received adequate knowledge while 33% received average knowledge. The majority of the respondent patients (59%) received inadequate knowledge due to the fact that the pharmacists were limited by time as there were very few pharmacists compared to the overwhelming patient load. This resulted in the delivery of only basic facts such as when and how to take the medicines. On the other hand, some patient respondents had inadequate knowledge on drug therapy due to the fact that they had not been counselled at all by the pharmacist.

Major causative factors contributing to the prevailing standards of patient counselling services at UTH

In a pharmacy setting, there are a number of factors which can be of benefit to, or can detract from, the quality of any communication. In this study, the majority (80%) of the respondent

pharmacists indicated that they did not effectively interact with patients and that they did not have enough time to do so. The study further revealed that although pharmacists are involved in patient counselling on a daily basis and on each encounter with a patient, the effective delivery of this service was hindered due to the following barriers:

i) Pharmacist related factors:

- Shortage of pharmacists i.e. patient – pharmacist ratio is too high
- Feeling of being under pressure especially time pressure
- Poor patient counselling skills and techniques as pharmacists mostly rely on theory from school
- No improvement in the practice of the profession i.e. still being practiced as it was in the past
- No access to up to date literature on latest therapies
- Shortage of drugs

ii) Patient factors:

- Patient load too high
- No reviews for out-patients
- Language barrier
- Sensitivity to gender

iii) Environmental factors:

- No adequate counselling space/rooms
- Lack of privacy/confidentiality
- A busy pharmacy not specific for patient counselling

With the identification of the above factors contributing to the prevailing standards of patient counselling services at UTH, it is important that something is done to address them and consequently improve the effectiveness of patient counselling services. It is also important to note that not all factors can immediately be dealt with as others require long term interventions such as developing patient counselling courses in order to improve the counselling skills and techniques of pharmacists and also building infrastructure to provide counselling rooms. On the other hand, not all barriers to good communication can be removed, but awareness that they exist and taking account of them will go a long way towards diminishing their negative impact.

The concept of Medication counselling behavior guidelines

These are guidelines developed for the purpose of accessing counselling performance and to bring the concept of patient counselling into the context of concordance and demonstrate the difference between monologue and dialogue. In the "concordance approach", the role of the pharmacist is to support the patient on constructing his/her own knowledge and attitudes towards the use of their medication. This study revealed that 60% of the respondent pharmacists stated that they did not have medication counselling behaviour guidelines while 40% were not sure. None of the respondent pharmacists agreed that they had medication counselling behavior guidelines. In addition those that stated that they did not have guidelines emphasized on the need for pharmacists to have these guidelines due to the following reasons:

- There is need for standardization of counselling
- Patient counselling would be easier if a format was followed
- The guidelines would help pharmacists not to leave out important information when counselling patients
- The guidelines would form part of standard operating procedures hence every pharmacist would observe them leading to enhanced patient counselling
- There is need to have a lot in common which can be used as a guide to follow and avoid if possible infringing on patients rights

STUDY LIMITATIONS

The study was limited to the University Teaching Hospital due to constraints of time and resources on the part of the researcher, however, such a study was supposed to be carried out in all Government hospitals were pharmacists are present in order to give a more representative picture.

Most of the questions in the interviewer's questionnaire for respondent patients were closed ended, thus the respondents' true convictions may have not been captured in this study as mostly only superficial answers were obtained.

In achieving the objectives of patients' views on counselling services and the knowledge that patients were obtaining from pharmacists, the findings were limited to out-patients and not representative of in-patients as they had not received any counselling from the pharmacist.

CONCLUSION

The following are the conclusions of the study based on the achievement of the objectives of the study and the results obtained.

Patient counselling as a service is delivered to out-patients but not to in-patients since there are no pharmacists on the wards to give advice and information to in-patients on their drug therapy.

The quality of pharmaceutical care being delivered through patient counselling services by pharmacists is fair.

Patients generally perceive the counselling services provided by pharmacists at UTH to be unsatisfactory and patients are not given adequate knowledge on drug therapy.

The effective delivery of patient counselling services is hindered by factors such as limited number of pharmacists leading to a high patient-pharmacist ratio, time pressures, lack of counselling skills and techniques, language barriers, sensitivity to gender, lack of counselling rooms, lack of privacy/confidentiality and a busy pharmacy generally not specific to patient counselling.

Pharmacists at UTH do not generally have medication counselling behaviour guidelines and the majority of them feel that there is need to have these guidelines in order to standardize and enhance patient counselling and also to avoid infringing on the rights of patients.

The above findings of the study confirm that patient counselling services being delivered at UTH are ineffective and patients are not given adequate knowledge on drug therapy.

RECOMMENDATIONS

The researcher having carried out the research and obtained the above convincing find ings makes the following recommendations to the relevant authorities such as the Ministry of Health and the Pharmaceutical Society of Zambia:

- In-patients at UTH are not counselled due to the non availability of pharmacists on the wards therefore, pharmacists should be employed onto the wards in order to extend the delivery of counselling services to in-patients as well.

- There is a very high patient-pharmacist ratio therefore, number of pharmacists at each dispensing point should be increased in order to reduce the patient-pharmacist ratio and allow effective interaction with patients.

- Pharmacists have poor patient counselling skills and techniques as they mostly rely on theory from school therefore, patient counselling courses at both the undergraduate and postgraduate levels should be developed for pharmacists in order to improve their counselling skills and techniques.

- Privacy and confidentiality are lacking as there are no counselling rooms hence the entire infrastructure of pharmacy should be upgraded to include counselling rooms and increase the number of dispensing points so as to ensure privacy and confidentiality.

- Some patients are not aware that pharmacists should counsel them when they obtain medicines therefore, something should be done to create awareness to patients as regards to the role of pharmacists in health care.

- Pharmacists at UTH do not have medication counselling beaviour guidelines therefore, there is need to introduce such guidelines so as to standardize and enhance patient counselling as they would form part of the standard operating procedures for pharmacists. These guidelines can be adopted from the USP Medication counselling behaviour guidelines. (See Appendix 2).

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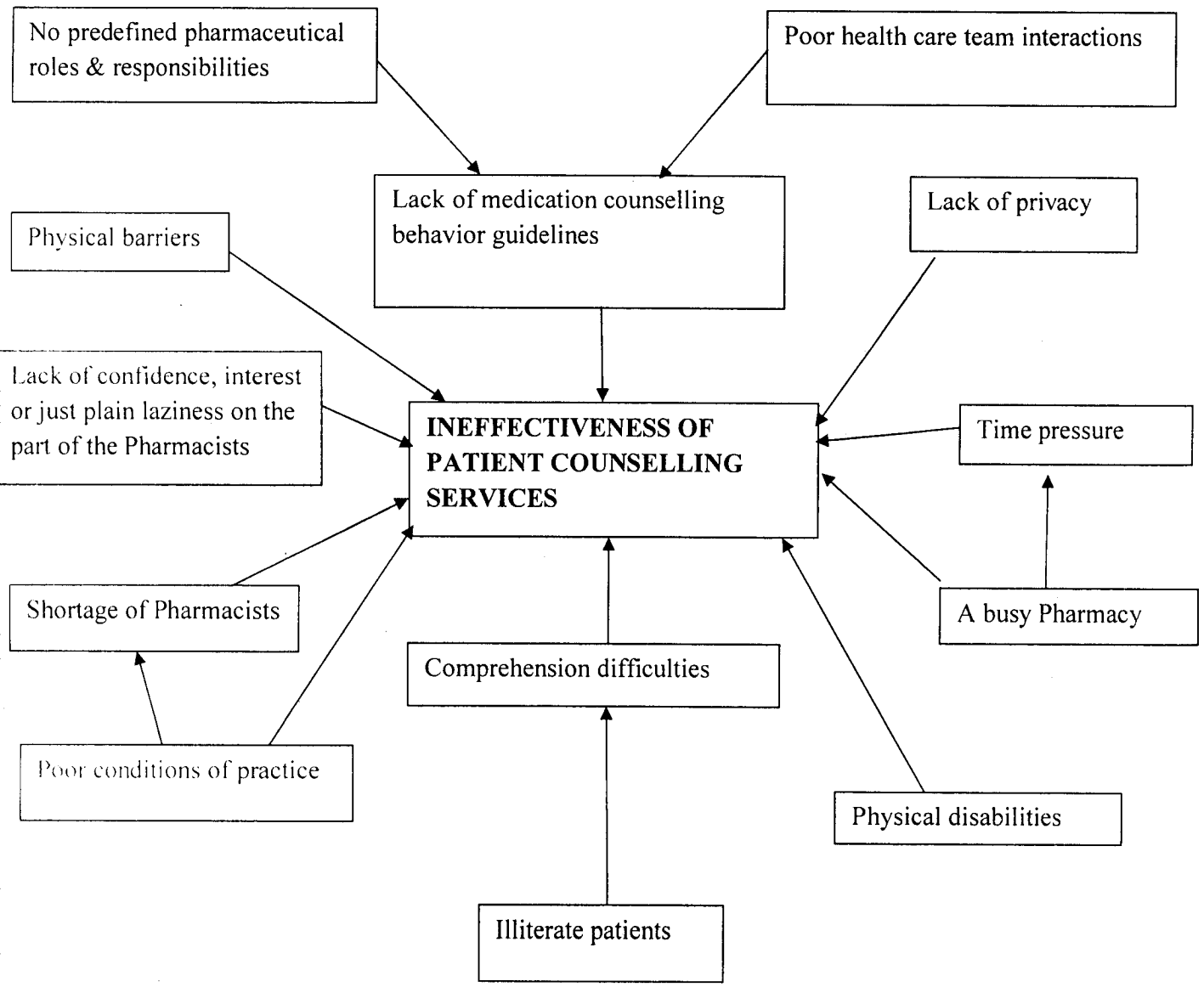
APPENDIX 1: PROBLEM ANALYSIS DIAGRAM



APPENDIX 2: MEDICATION COUNSELLING BEHAVIOUR GUIDELINES***

Making contact

- Approach the patient.
- Explain the purpose of the counselling session.

Needs assessment

Assess the patient's needs, beliefs, feelings, concerns, knowledge about the medication, and patient's expectations for the counselling session by:

- Using patient history appropriately.
- Taking the patient's medical history into account.
- Openly exploring how the patient is using prescription, non-prescription medication or alternative therapies.
- Establishing whether the patient is both willing and able to adhere to the medication and what practical support may be needed.
- Determine whether the information provided by the patient is evidence based or subjective.

Providing information

Provide information in manageable parts and aim to provide solutions to potential problems through covering:

- Indication.
- Adoption of the dosage regimen, scheduling and duration, into a daily routine.
- How long will it take for the drug to show an effect.
- Interactions (food, drug, disease).
- Side effects.
- Precautions and contraindications (e.g. CNS).
- Recommendations (e.g. storage, shake well).
- When the patient is due back for a refill/repeat.
- Other information if needed.

Summarise and review

Summarise the information and advice discussed, check how much the patient has understood and gain feedback. In closing, ensure that:

- An opportunity for final concerns and questions is provided.
- There is an opportunity for follow up.
- Agreed actions are reinforced.
- Prescribers are followed up with when required.
- Monitoring where necessary is arranged.

Communication

- Use easily understandable language and avoid jargon.
- Use counselling aids to develop understanding.
- Use non-verbal communication techniques to facilitate the counseling process towards dialogue-based negotiation.
- Control and direct the counselling session to maintain logical flow and relevance.
- Use open ended questions where relevant and employ good questioning techniques.
- Avoid being aggressive or forceful in approach.
- Facilitate responses and listen to the patient.
- Be perceptive to the patient's verbal and non-verbal cues.
- Demonstrate empathy, concern, understanding and patience.

●●●●●●●●●●●●●

***Adopted from the USP Medication Counselling Behaviour Guidelines (www.ipsf.org): Counselling, Concordance & Communication, Wuliji T., Airaksinen M. (2005)

APPENDIX 3: FREQUENCY TABLES

Table 1: Age * Gender Cross tabulation

Count

		Gender		Total
		male	female	
Age	18 – 29 years	8	27	35
	30 – 39 years	15	13	28
	40 – 49 years	9	7	16
	50 years & above	12	9	21
Total		44	56	100

Table 2: Educational background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	3	3.0	3.0	3.0
	Primary	27	27.0	27.0	30.0
	Secondary	51	51.0	51.0	81.0
	Tertiary	19	19.0	19.0	100.0
	Total	100	100.0	100.0	

Table 3: Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	9	9.0	9.0	9.0
	unemployed	36	36.0	36.0	45.0
	employed	32	32.0	32.0	77.0
	self employed	23	23.0	23.0	100.0
	Total	100	100.0	100.0	

Table 4: Marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	single	25	25.0	25.0	25.0
	married	62	62.0	62.0	87.0
	divorced	5	5.0	5.0	92.0
	Widowed	8	8.0	8.0	100.0
	Total	100	100.0	100.0	

Table 5: Counselled by Pharmacist

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	55	55.0	55.0	55.0
	no	45	45.0	45.0	100.0
	Total	100	100.0	100.0	

Table 6: Quality of pharmaceutical care

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	6	60.0	60.0	60.0
	Average	4	40.0	40.0	100.0
	Poor	0	0	0	100.0
	Total	10	100.0	100.0	

Table 7: Patients' views on counselling services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	satisfactory	23	23.0	23.0	23.0
	unsatisfactory	32	32.0	32.0	55.0
	none	45	45.0	45.0	100.0
	Total	100	100.0	100.0	

Table 8: Knowledge on drug therapy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	adequate	8	8.0	8.0	8.0
	average	33	33.0	33.0	41.0
	inadequate	59	59.0	59.0	100.0
	Total	100	100.0	100.0	

Table 9: Medication counselling behaviour guidelines

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	0	0.0	0.0	0.0
	no	6	60.0	60.0	60.0
	not sure	4	40.0	40.0	100.0
	Total	10	100.0	100.0	

APPENDIX 4: QUESTIONNAIRES

INTERVIEWERS QUESTIONNAIRE FOR PATIENTS

SECTION A: General Information

1. Gender. Male..... Female.....

2. Age.

a) 18 - 29years..... b) 30 – 39years.....

c) 40 - 49 years..... d) 50years & above.....

3. Educational Background

a) Primary..... b) Secondary.....

c) Tertiary (College & University)..... d) None.....

4. Occupation

a) Employed..... b) Self employed.....

c) Unemployed..... d) Student.....

5. Marital status

a) Single..... b) Married.....

c) Divorced..... d) Widowed.....

SECTION B: Counselling Data

1. As a patient do you know that pharmacists have a role of counselling you on any type of medicines that to obtain? Yes..... No.....

2. Has the pharmacist counselled you on the medicines that you have acquired?

Yes..... No.....

3. Is the counselling adequate to make you know anything about the drugs that you have acquired? Yes..... No.....

4. What type of instructions are you offered by the pharmacist?

Written on the label of the medicine Yes..... No.....

Verbal Yes..... No.....

SECTION C: Knowledge on drug therapy

1. Have you been told why the medicine has been given to you?

Yes..... No.....

2. Have you been told the name of the medicine?

Yes..... No.....

3. Have you been told what condition the medicine is treating?

Yes..... No.....

4. Have you been told how to take the medicine?

Yes..... No.....

5. Have you been told how long the drug will take to show an effect?

Yes..... No.....

6. Have you been told how long you will be taking the medicine?

Yes..... No.....

7. Have you been told when to go back for a refill & the no. of refills needed?

Yes..... No.....

8. Have you been told the benefits of the medication & why the course must be completed?

Yes..... No.....

9. Have you been advised on the side effects, precautions (e.g. activities to avoid) & beneficial activities (e.g. exercise)

Yes..... No.....

10. Have you been told which food, drinks or drugs to avoid while on the medication?

Yes..... No.....

11. Have you been advised on how to store the medicines?

Yes..... No.....

12. Have you been advised what to do incase you miss a dose?

Yes..... No.....

13. What are your views & comments on the counselling that you received from the pharmacist?

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QUESTIONNAIRE FOR PHARMACY PERSONNEL

SECTION A: General Information (Please tick on the space provided)

1. Gender. Male..... Female.....

2. Age.

a) 21 – 25 years..... b) 26 - 35years.....

c) 36 – 45 years..... d) 46 years & above.....

3. How long have you been practicing as a pharmacist?

a) Less than a year..... b) 1 – 5 years.....

c) 6 – 10 years..... d) Over 10 years.....

SECTION B: Provision of Counselling Services

1. What do you understand by patient counselling?

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2. In your opinion, is patient counselling well established as a norm of practice at this hospital?

Yes..... No.....

3. Do pharmacists at this hospital effectively interact with patients and do they have enough time to do so? Yes..... No.....

4. How do you think the pharmacist – patient interaction can best be improved?

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5. As a pharmacist are you involved in patient counselling on a daily basis and on each encounter with a patient?

Yes..... No.....

6. Is the counselling in accordance with individual patient needs?

Yes..... No.....

7. Do you assess the patient's needs and knowledge of the medication thoroughly?

Yes..... No.....

8. Do you master the medication information?

Yes..... No.....

9. Do you give the patient sufficient but customized information to assure safe use of medication? Yes..... No.....

10. Do you give reasons and explanations instead of giving basic facts and orders?

Yes..... No.....

11. Do you use the language the customer is likely to understand?

Yes..... No.....

12. Is the environment and are the facilities favourable to conduct counselling sessions?

Yes..... No.....

13. If No. What makes them unfavourable?

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14. What aspects of patient counselling should a pharmacist consider very important?

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15. What factors can you identify that are contributing to the prevailing standards of patient counselling services?

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16. Do pharmacists at this hospital have medication counselling behaviour guidelines?

Yes..... No.....

17. If No. Do you think there is need to have medication counselling behavior guidelines?

Yes..... No.....

Reason.....

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