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ASSESSMENT OF THE LEVEL OF PHARMACEUTICAL CARE PRACTICE AMONG COMMUNITY PHARMACISTS IN ENUGU STATE, NIGERIA

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ABSTRACT

Pharmaceutical care requires pharmacists to incorporate new behaviours into their practices including documentation, patient assessment, determination of therapeutic objectives, implementation of monitoring plans, patients counseling, screening of patients' records, evaluation of patients and possible referral. The study aimed at assessing the extent to which community pharmacists in Enugu State conform to the pharmaceutical care guidelines and the level of importance attached to the practice. A 25 item questionnaires, which was divided into 2 parts to reflect the major aspects of pharmaceutical care, were distributed to selected community pharmacies to determine potential for pharmaceutical care in terms of facilities available, and how the pharmacists discharged their professional duties on day-to-day basis. Z test statistics was used as a statistical parameter. It was found that some shops (23.81%) were too small in size and some do not have the facilities required for adequate provision of pharmaceutical care. Again, the pharmacists were found to be more interested in economic pursuit than pharmaceutical care. Most of the pharmacists were not providing pharmaceutical care and records were poorly kept and maintained. Continuing Education for pharmacists was a necessity for pharmacists to interact more with their patients while maintaining adequate facilities and environments like counseling rooms for optimal provision of pharmaceutical care.

Key words: Pharmaceutical care, community pharmacists, Enugu.

INTRODUCTION

The practice of pharmacy has undergone series of changes with time, as it tries to meet up with the dynamics of health care provision and changes in legal and regulatory aspects as well as technology of health care provision. [1] identified five stages of evolution of pharmacy profession. They are the apothecary, industrial revolution, distribution, clinical pharmacy and currently the pharmaceutical care stage.

The concept of pharmaceutical care.

The philosophy of pharmaceutical care has existed for more than two decades. This is in line with the new professional mission of pharmacy, which is to transit from dispensing medications to dispensing care.

Pharmaceutical care is a professional strategy dealing with detection and assessment of medicine- related problems in a systematic way according to [2]. [3] described pharmaceutical care as the care that a given patient requires and receives which assures rational drug use. Many other definitions have been proposed since the first edition by Mikael et al, according to [4], pharmaceutical care includes determination of drug needs for a given individual and the provision of not only the drug required but also necessary services before, during and after treatment to ensure optimally safe and effective therapy. It includes feedback mechanism as a means of facilitating continuity of care by those who provide it. [5] said that pharmaceutical care is a covenanted relationship between a pharmacist and a patient in which the pharmacist performs drug use control functions (with appropriate knowledge and skill), governed by awareness of and commitment to the patient's interest. [6] saw pharmaceutical care as that component of pharmacy practice , which entails the direct interaction with the patient for the purpose of caring for that patient's drug related needs. However, the most widely accepted definition of pharmaceutical care is that given by [7]. They defined pharmaceutical care as the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve the patient's quality of life.

Most of these definitions failed to highlight

a) The role of the patient and his needs;
b) The commitment of the pharmacists to the patient;
c) Present pharmaceutical care as a practice philosophy solely for the pharmacists.

[8] came out with a definition of these in a statement on the professional standards adopted by its Council at a meeting in Hague, the Netherlands on 4th September 1988 which now appears to be the most widely used.

"Pharmaceutical care is the responsible provision of pharmacotherapy for the purpose of achieving definite outcomes that improve or maintain a patient's quality of life. It is a collaborative process that aims to prevent or identify and solve medicinal problems ".

The major aim of pharmaceutical care is to satisfy drug related needs of patients with particular attention to detecting, preventing or resolving drug- related problems. Research shows that drug- related problems occur on a large scale with considerable impact on the economic system and on the morbidity and mortality of the society. The claim by [9] reported by [10] showed that drug- related problems cost the United States of America seventy billion dollars in 1995 while prescription medicines that year amounted to four billion dollars. It means that for every dollar spent on provision of pharmacotherapy, another dollar must be spent on the problem arising from the use of the therapy, even though, the detection and prevention of drug- related problems are being championed by pharmacists. [11] pointed out that the controlling bodies of nurses and doctors appear to have recognized this serious problem and proposed that the nurses and doctors have the capacity to reduce these problems.

The pharmaceutical care process

[12] Identified a number of criteria essential for the achievement of goals of pharmaceutical care. These include

a) A professional relationship between the pharmacist and the patient must be established and maintained on the basis of care, open communication and mutual decision making;
b) Records of medication provided to the patient must be collected. The pharmacist decides which data are necessary to perform a critical appraisal of the patient's problem.
c) Patient specific medical information must be evaluated, and in case of prescribed medicine, a therapy plan must be developed involving the patient and the prescriber.
d) Pharmacists should be adequately remunerated for these additional services.

[13] described pharmaceutical care as a nine-step process while [14] identified three basic components of pharmaceutical care, which include: assessment of patient's needs; development of a care plan; and follow up evaluation. However, [1] described six steps that should be followed to achieve a successful pharmaceutical care.

They are:

i. Establishment of a therapeutics or professional relationship.

The pharmacist must interact with the patient one-on-one. A therapeutic relationship is initiated by greeting a patient, showing empathy and asking the patient how he/she feels. This relationship makes it easier for the patient to grant authority to the pharmacist to undertake a responsibility on his/her behalf.

ii. Collection of patient's specific data

Patient specific data include;

a) Patient's demographics: - name, age, gender, contact address etc.
b) Diagnosis and past medical history: present medication and medication history including herbal medicines, medication allergies/intolerances, drug use history e.g. smoking, alcohol, caffeine or other drug use.
c) Abnormal laboratory and physical examination results e.g. liver and kidney functions.

Sources of these pieces of information include: patient interview; interview of other health care givers or health providers; patient's relatives or friends; review of existing medical records; laboratory results and physical assessments using the skills of inspection, palpitation, percussion and auscultation.

The interview must be organized, professional, and meets with the patient's needs for confidentiality and privacy. Adequate time is devoted to assure that questions and answers can be fully developed without either party feeling uncomfortable or hurried. Then interview is used to collect a patient's specific subjective information and to initiate pharmacy records which include information and data regarding the patient's general health and activity, status, past medical history, medication history, and history of present illness. The record should include his thought or feelings and perceptions of his/her condition or disease. The pharmacist uses health/physical assessment techniques (blood pressure monitoring etc) appropriately and as necessary to acquire necessary patient specific objective information. The pharmacist then creates record for the patient and records accurately the information collected.

Pharmacist ensures that the patient's record is appropriately organized, kept current and reflects all pharmacist-patient encounters.

The information is guarded carefully for security and confidentiality and can only be provided to others upon the authorization of the patient or as required by law.

iii. Evaluation of the data to identify health and drug therapy problem.

This step needs a critical thinking and problem solving ability. The patient's diagnosis is compared with the treatment to ensure that every drug is managing a condition and every condition is being managed with or without a drug. Where a drug is prescribed, it is assessed for the indication, safety, efficacy, compliance, and appropriate dosage form and dosage regimen.

Problems associated with pharmacotherapy should be identified and described. The severity should be assessed and prioritized to determine whether an intervention is necessary immediately, lately or not really needed. Adequate evidence must be provided in support of the existence of the problem such as in primary literature; and also to be stated is the therapeutic principle that will be used to solve the problem. The pharmacist finally discusses the conclusion with the patient as necessary and appropriate and assures an appropriate understanding of the nature of the condition or illness and what might be expected with respect to its management.

iv. Develop and implement pharmaceutical care plan (pharmacist's intervention).

These interventions, according to [13], may be one or more of the following: (a) additional drug therapy (untreated indication), (b) unnecessary drug therapy (duplication of therapy) (c) wrong drugs including dosage forms, (d) adverse drug reaction of any type.

Pharmaceutical care plan is a means of solving identified problem. The first step is to write down the goals of the interaction, that is, what is to be done, and this should not be confused with the method (how?).

The Pharmacist, in concert with other health care providers, chooses the most appropriate actions to (a) improve and or ensure the safety, effectiveness and/or cost effectiveness of current or planned drug therapy. (b) Minimize current or potential future health related problems.

The pharmacist formulates plans to achieve the desired outcome. The plan may include but not limited to: work with the patient as well as with other care givers to develop a patient specific drug therapy protocol or to modify prescribed drug therapy, develop and/ or

implement drug therapy monitoring mechanism, recommend nutrition or dietary modification and non-prescription medication or non-drug treatment, refer the patient to an appropriate source of care or institute an existing drug therapy protocol.

These goals should be achievable, measurable and consistent with the professional responsibility of the pharmacist. Two major types of intervention have been identified: patient focused and drug focused interventions.

Patient focused intervention include:- assisting the patient with compliance problem, patient education and counseling, monitoring the patient, implementing non-drug therapy and patient referral.

Drug focused intervention includes:- adding a new drug; discontinuing medication; changing medication; dose, intervals, duration or dosage form and monitoring parameters.

Monitoring parameters include laboratory test, clinical measurement, generic/satisfaction questionnaire and observation that are to be followed in order to provide feedback on the status of health of the patient and drug therapy problem. Cooperation of the prescriber is needed in making drug focused intervention. The pharmacist should also make sure that the patient has all drug supplies and information needed for him to comply.

Vii Documentation

Documentation provides evidence for what was done, audit trials and continuity of care when another person is on duty and also helps in research. This must be done in appropriate data form.

Requirement for effective pharmaceutical care

Pharmaceutical care is a process of drug therapy management that requires a change in the orientation of traditional professional attitude and the re-engineering of the traditional pharmacy environment. Certain elements of structure must be in place to provide quality pharmaceutical care. Some of these elements listed by American Pharmaceutical Association pharmaceutical care guidelines advisory committee are: [1] knowledge, skill and function of personnel. [2] Systems for data collection, documentation and transfer of information. [3] Efficient workflow process. [4] References, resources and equipment. [5] Communication skill and [6] commitment to quality improvement and assessment procedures.

Expected pharmaceutical care in community pharmacies

The community pharmacists are health professionals most accessible to the public in that they can be consulted at no cost. In addition to traditional dispensing of prescriptions written by medical practitioners and counseling patients on medication, the community pharmacist will have a better future if they can provide better pharmaceutical care in the form described below [15].

(a) Dispensing: Dispensing remains the core role of community pharmacy. The focus of dispensing now rests not only on supply of accurate medicines but on checking that the medications are appropriate for the patients, and counseling the patients on their appropriate use.

Another emerging role of the pharmacist is the management of repeat prescriptions. Research has shown that when given this responsibility, community pharmacist can identify previously unrecognized side effects, adverse drug reactions and drug interactions as well as saving almost a fifth of the cost of drugs prescribed.

The clinical input at the point of dispensing is also passing through stages of development in a way that those patients with targeted chronic conditions such as coronary heart disease can have formal regular review with the community pharmacists of their medications and other diseases related behaviours.

(ii) Effective prescribing

Many people do rely on the community pharmacist for the diagnosis and treatment of minor self- limiting ailments. The pharmacist can recommend, dispense, and administer an appropriate medicine with advice for the patients to consult medical practitioners if the symptoms persist for more than two days.

(iii) Monitoring patient's health

Monitoring the health status of a patient will help in developing public confidence in the pharmacy profession. The Pharmacist needs to be informed and be up to date so that they can identify and interpret signs and symptoms. There is the need to distinguish those symptoms which may be indication of serious diseases requiring instant medical attention from those minor illnesses for which over the counter prescription might be appropriate.

(iv). Patient counseling

The community pharmacist should at all times make sure that patients fully understand the direction and any associated warnings or instructions on the defined use of any dispensed drugs or medical advice.

(v) Provision of first aid

In the event of any illness or accident, member of the public will often go to nearby pharmacy in the absence of the doctor. The community pharmacist should therefore be competent in provision of the required first aid for community encountered accidents and medical emergencies.

Training in provision of first aid and cardiopulmonary resuscitation by appropriate organization such as Red Cross, St. John's ambulance etc. is desirable for community pharmacists.

(vi). Health promotion and Health education:

A significant number of people pass through community pharmacies on daily basis. In United Kingdom (UK), it is said that about six million people visit community pharmacy per day. [16] The public also has unrestricted access to community pharmacist. This places the community pharmacist in a vantage position to provide health promotion information and health education to the public. Health education should be provided both verbally and through visual aids. Use of visual aids such as posters, and leaflets are very helpful. The community pharmacist should be able to take part or initiate health promotion campaigns on a wide range of health related topics such as

- The promotion of anti-smoking programs
- Nutritional advice
- Current health topics such as HIV/AIDS, severe acute respiratory syndrome (SARS), avian influenza (bird-flu) etc
- Family planning (child spacing methods)
- Control/prevention of sexually transmitted diseases (STD's)
- Promotion of baby friendly programs
- Promotion of roll back malaria programs, etc
- Drug related topics such as drug abuse, drug use in pregnancy and lactation, and rational use of drugs.
- Campaign on disease prevention such as National programme on Immunization (NPI).

- Blindness prevention programme

(vii) Provision of diagnostic services:

Additional services relevant to health promotion, diagnosis and screening in primary health care are being rendered in community pharmacies. These are necessary for them to remain relevant.

However, care should be taken to avoid error in measurement and interpretation of results, which can cause unnecessary worry for some patients. When an abnormality is suspected, the patient should be advised to consult a medical practitioner.

Typical services that can be carried in a community pharmacy include:- blood pressure management, determining of body mass index, pregnancy test etc.

(viii) Extemporaneous/compounding of medicines"

Pharmacist, when necessary, can embark on preparation of medicine in the pharmacies as a way of individualizing the formulation of medicines for the patients. However, this should be done in accordance with current good manufacturing and good distribution practice guidelines.

(ix) Supply of veterinary medicine:

Veterinary drugs like vitamins, vaccines, antihelminthics, antibiotics etc, should form part of community pharmacy drug inventory. In pharmacies where they are stocked, it is advisable to have separate shelf for veterinary drugs to avoid mixing up with dispensing drugs.

(x). Administration of community pharmacy:

The computer and information communication technology (ICT's) should be used in the daily routine duties in the community pharmacies to make administration easier and to reduce stress to a minimal and increase efficiency in discharge of duties. These could be used in maintenance of patient medication records, inventory control, storage and fast retrieval of other important information, etc. ICT's could be used in form of electronic business (E-business),like online banking and shopping, for professional development and monitoring of drugs, medical devices, etc.

Quality of pharmaceutical services and quality indicators

The United States of America office of Technology Assessment defined quality health care as the degree to which process of care increases the probability of outcomes desired by patients

and reduces the probability of undesired outcomes given the current state of knowledge. [17] The emphasis on pharmaceutical care is mainly on the outcome, which is closely linked with the process.

It is worthy of note that the existence of health care services on its own does not provide a reliable indicator of quality unless there are total appropriate process indicators linked to the services. Also, the process indicators on their own, are not acceptable measure of quality health care unless there is a clear link between the process and the outcome and the causal relationship between them has been validated.

[18] used as a basic guide, the seven pillars of quality identified by [19]. These clarified many issues in terms of the practice of pharmaceutical care and provided guidance about the indicators to be measured when examining the different environment in which pharmacy operates.

The seven Donabedian pillars of quality are:

1. Efficacy
2. Effectiveness } Humanistic outcomes
3. Efficiency
4. Acceptability

5. Optimality
6. Equity } society outcomes
7. Legitimacy

1. Efficacy: this is familiar word in pharmacy and deals with controlled environment and examines what is possible. It sets an upper boundary for quality and establishes the ideal to which all should aspire. The laboratory, as we know, is different from the real world.

2. Effectiveness: This means the extent to which the services achieve the intended outcome in the real world environment. Social, economic, and individual factors influence the selection of quality indicators. Indicators such as socially effective, cost effective, and individually effective have been in use though the way of measurement is not always universally agreed upon.

3. Efficiency: This examines to what extent scarce resources are used to derive the greatest benefit with the least waste. It is measured by examining the ratio between the cost and

benefit of a service and comparing these with others who are providing the same or similar service. It is used to select a service, which will result in reduced cost.

4. Acceptability: This is the usefulness of the service to the patient and its perception on his/her quality of life. It takes into consideration patient's preferences regarding access to the services (e.g. advice, relationship with health service providers (e.g. trust, confidentially), the amenities in which the service is provided, the cost utility relationship).

5. Optimality: From the point of view of society and economic system, it is necessary to ensure that optimum allocation of resources is achieved relative to the benefits derived from the services provided. Techniques, such as costs/ benefits analyses and marginal costing are used to identify the optimum point of resources allocation. These indices concern neither the patient nor the service provider.

6. Equity: The society is concerned with fact that every person should receive equal treatment or at best fair treatment. Equity is compromised when the quality of the service or even the range of services is determined by ability of the patient to pay for the service.

7. Legitimacy: This is similar to the concept of acceptability except that the preferences and values for legitimacy are expressed through a societal rather than an individual perspective. [18] The society will accept that the pharmacists have legitimate right to be paid for services if they are convinced that the benefit provided exceeds the accompanying cost to the society. The society requires evidence to make this judgment, which is of macro-nature. As with equity, there is no suitable indicator for measurement of legitimacy.

Assessment of quality pharmaceutical care and their limitations

[18] introduced the well-known structure, process, outcome (SPO) model of assessment. Although he believed outcomes to be the ultimate measures of quality, he urged that in addition to outcomes, measures should be made of structure and process.

Structure refers to systems and facilities deemed to be essential for quality care. Processes are those actions, which occur in order to deliver health care products and services. The quality of outcomes can be predicted if structural and process variables are in accordance with standards and/or guidelines. However, if the structural variables and processes do not conform with the norms, standard, and protocols, it is unlikely that the outcomes of acceptable quality will be achieved.

Structure and process indicators are much easier to measure than outcomes and for this reason they are usually selected ahead of outcome indicators. For example, it is easy for an inspector to check on schedule 2 register, the display of schedule 2 products etc. It is difficult to assess whether patients outcome are being achieved, if patients are being appropriately educated or if drug related problems are caused by inadequate patient education. However, having an appropriate consulting room or a dispensing protocol does not indicate that appropriate outcomes will be achieved.

The outcome of an intervention must be the most reliable way of measuring its quality. However, from point of view of health care it makes good sense to assess structure and process since a fixation of the outcome is not always in the interest of the patient.

For example, if we consider the role of preventive therapy such as birth control, vaccination or health education, it would be more appropriate to measure quality by checking on structure and process than waiting to find out if the intervention succeeded.

Other limitation of outcomes measures is that it is difficult to show a causal link between the health care intervention and an outcome since many environmental influences exist which are difficult to control (e.g. diet, style). Meaningful outcomes are often difficult to define and measure and require large samples to ensure that valid results are obtained e.g. quality life study.

Pharmaceutical care in Enugu State

Enugu State is in southern part of Nigeria and was carved out of the old Anambra State in 1991. The capital is at Enugu, popularly known as ‘coal city’ because of the huge natural coal deposits and coal mines. Other towns that make up the State are mainly rural in nature with the exception of Nsukka, where the University of Nigeria, Nsukka is situated.

The population of the State is about three million according to the 1991 census. Enugu State has seventy-three pharmaceutical premises registered by the Pharmacists Council of Nigeria (PCN) as at December 2005. Out of these, 8 premises were involved in manufacturing and distribution of drugs while 65 premises provided community pharmaceutical services. The distribution was: Enugu 57 community pharmacies, Nsukka 5, Enugu Ezike 2, and Obollo-Afor 1. All the manufacturing companies and wholesalers are located at Enugu.

The practice of pharmacy in Enugu, as in any other part of the country, is controlled by the Pharmacists Council of Nigeria (PCN). However, there are lots of illegal premises providing pharmaceutical services. Also Enugu state has so many open drug markets notably the Ogbete market, Nsukka market, Orba and Obollo-Afor markets. It shall also be noted that the PCN in 2005 released a four-part compendium of minimum standards for the assurance of pharmaceutical care in Nigeria. It is part of the aim of this work to find out to what extent those involved in community practice are complying with these minimum standards.

MATERIALS AND METHODS

Materials: The most important materials for the study were the instruments for data collection i.e., the questionnaires and the sources of the data i.e. the community pharmacists.

The questionnaire

Guided by the literature review, a 25-item questionnaire was developed. This was divided in two parts namely: part one and part two representing pharmacy structural/independent variables and dependent variables respectively. A summated or Likert-type of rating scale was used in constructing the questionnaire. For part 1, questions 1-6 consist of a three point scale while for questions 7 and 8, 7-point and 4-point scale were used.

In part 11 of the questionnaire a 4-point scale was used in constructing questions 9-25. Using this graduated response options; a respondent was expected to indicate his degree of agreement or disagreement with the statements. These response options were weighted (assigned numerical values) and by summing up individual responses to all the statements, a total score was obtained which helped to determine the person's performance on the variables or attributes being measured. The scale is therefore called summated rating scale. Since all the statements were arranged in one direction from the lowest to the highest (in order of agreement with pharmaceutical care principles), a higher value correlates with the higher level of pharmaceutical care practice.

Respondent (community Pharmacists)

Community pharmacists who were superintendent pharmacists in their pharmacies were used for the survey. About 50 pharmacists were randomly selected in Enugu state in a manner that covered important towns and geographical areas of the State.

METHODS

A retrospective survey method was used to collect the necessary information from the respondents. The questionnaire was pre-tested on community pharmacists to determine its clarity, and amendments were made based on comments received from selected community pharmacists. The questionnaire was then distributed personally to all the 50 pharmacies selected for the study.

Two weeks was given to allow them enough time to study the questionnaire and respond to the questions and statements appropriately. After the two weeks, the questionnaires were collected for analysis.

RESULTS

Of the 50 questionnaires sent out, only 42 were received as duly completed. Others claimed that they did not have enough time to look at it and respond appropriately. Response rate therefore was 84% as at the time of collection, which was two weeks after the questionnaires were given out.

Table1 shows the key structural elements surveyed in the pharmacies and their scores; table 2 also shows the dates MCPD were organized and the percentage of attendance recorded.

Table 1 Summary of key structural elements in the pharmacies surveyed:

	Key structural elements	Score
I	Presence of patients waiting area	72%
II	Size of pharmacy	
	Small size (<9m^2)	23.81
	Medium (9.5-14m^{2-})	16.67%
	Large (> 14m^2)	59.52

Table 2 Last Mandatory Continuing Professional Development (MCPD) attended.

Percent attendance	Data attnded
% Attendance	Date attended
23.81%	2004
33.33%	2005
42.56%	2006

Other results of the survey are as shown in Tables 3 to 6

Table 3 Patients care services provided

Care services	Percentage score
Immunization	0%
Checking blood pressure	71.11%
Patients counseling	100%
Pregnancy test	26.20%
Blood glucose test	21.45%

Table 4 Concern about future of community practice.

Concern of pharmacists	Comments
52%	Optimistic
40.48%	Worried
7.14%	Pressimistic

Table 5 Pharmaceutical care score distribution of community pharmacies

Score	frequency
47-49	2
50-52	3
53-55	2
56-58	4
59-61	4
62-64	2
65-67	1
68-70	3
71-73	5
74-76	3
77-79	4
80-82	3
83-85	3
86-88	2
89-91	1

Mean = 68.57 SD = ± 11.90

Comparison of pharmaceutical care score of the 3 categories of patients

The main scores of the three categories of patients were compared using z test statistics:

(i) Patients with prescription: mean score was 12.59; SD -2.92

(ii) Patients presenting with symptoms: mean score -15.07; SD - 2.99

(iii) Patients requesting for medications: mean score -14.88; SD - 2.76

At 0.05 level of significance i.e.

$$Z = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\frac{S_1^2}{n1} + \frac{S_2^2}{n2}}}$$

S_1 and S_2 are respective standard deviations, n_1 and n_2 are sample numbers.

It was found that the difference between the mean scores of the patients with prescription , patients presenting with symptoms and patients requesting for medications was not significant $p>0.05$. However, there was no significant difference in the mean of patients presenting with symptoms and those requesting for medications, $p<0.05$.

Table 6 Pearson product moment correlation coefficient (r) = 0.726493

X(score) FX(frequency)		Y(score) FY(frequency)	
13 – 14	3	30 – 33	2
15 – 16	5	34 – 37	2
17 – 18	10	38 – 41	7
19 – 20	10	42 – 45	5
21 – 22	5	46 – 49	5
23 – 24	5	50 – 53	5
25 – 26	2	54 – 57	6
27 – 28	1	58 – 61	7
29 – 30	0	62 – 65	3

Using the formula (r) = $\frac{\sum (X - X)(Y - Y)}{\sqrt{\sum (x - x)^2 (Y - Y)^2}}$

DISCUSSION

In order to clarify and integrate all the information resulting from the survey, the following themes that reflect the results more correctly were concentrated upon.

(a) Barrier to pharmaceutical care practices: the barrier to practice pharmaceutical care identified, fell into three different categories namely:

(i) Where there was lack of capacity terms of facilities, resources, and space necessary for adequate provision of pharmaceutical care.

(ii) The second barrier noted was lack of understanding of the concept, process and competence required to deliver pharmaceutical care services. Thirdly, pharmacists were reluctant to record their interventions (assessment, patient care plan and monitoring plan).

It should be noted that 23.81% of the pharmacies were very small (<9m2) (Table 1). 16.67 % had the size of 9.5-14m2. Most of these shops that are small in size were able to carve very small consultation rooms that are inadequate for two persons just to enable them get registered. This was observed mostly in pharmacies around the University of Nigeria Teaching Hospital, Enugu (UNTH). This might be because (in an attempt to stay close to the hospital) pharmacists make use of any available accommodation around the hospital. Such consulting rooms do not provide conducive environment for realistic communication with the patients.

The little room for patients counseling showed that pharmacists were primarily concerned with technical and supervisory functions and spent less time interacting with the patients as reported by [20].

The lack of understanding and competence in provision of pharmaceutical care is supported by the fact that not all pharmacists attended recent mandatory continuing professional development provided by the Pharmacists Council of Nigeria (Table2). In fact, 66.66% of the respondents graduated before 1990 when the concept of pharmaceutical care had not taken off as a policy of the Pharmacists Council of Nigeria. It is therefore assumed that only continuing education can equip them with the necessary skills for provision of pharmaceutical care.

There was reluctance to record assessment, intervention, patient care plan and monitoring plans. Only 14.2% have patient medication record. Out of all the shops visited, only three had computer that helped them in keeping records. It implies that pharmacists are not easily amenable to change. This finding is in tandem with the work of [21] who reported that 88% of the pharmacists keep no records of the services rendered by them.

(iii) Relationship with other health care providers: even though all pharmacists or respondents reported referring some patients to other health care givers, the relationship from the research result was not adequate. Most pharmacists still feel that doctors should be responsible and accountable for drug therapy problems. This was observed from the reluctance in assessing patient's need when responding to presentation of prescription by the patients. Patients with prescription, had the least mean score of 12.78% (as already mentioned under results) in the pharmaceutical care scale. This might indicate low level of interaction with doctors. (iv). Communication with patients: pharmacist's traditional mode of communication has been informing the patients what to do instead of entering into dialogue with patients. The respondents were asking more questions or interacting more with patients when handling patients presenting with symptoms than when attending to patients with prescriptions or requesting for medications. Respondents were mostly concerned with dispensing and informing rather than checking the appropriateness and safety of drugs prescribed. The work of [22] supported this view. He reported that only 10% of customers requesting for medications were attended to independently by the pharmacists.

(v) Relationship between structural elements and the performance of pharmacists: There was a positive relationship between the two variables (Table 1). The Pearson product moment correlation coefficient (r) was found to be 0.73 (Table 6) which implied that better facilities improve pharmaceutical care outcomes. Respondents are still not providing enough patient care services. None of the community pharmacists was taking part in immunization (Table 3). 71.11% were checking blood pressure of patients, 21.45% carry out blood glucose test and 26.20% normally carry out pregnancy test when necessary. They are therefore yet to find any specific role in primary health care delivery.

The philosophy of pharmaceutical care requires that pharmacists should have positive attitude so as to be more assertive in their work and in their relationship with other care givers. It is their positive attitude that will lead to the desire for change which pharmacists are lacking in. Only 52.38% of the respondents were optimistic (Table 4). Others were either worried or pessimistic about the future of their practice.

CONCLUSION

It should be noted that data generated by this study were from a small sample of community pharmacists in Enugu state. Generalizing about the perceptions and behaviour of pharmacists in Nigeria from these results may not be realistic. However, the findings are similar to studies

carried out by other researchers. It is therefore reasonable to assume that the conclusion reached and recommendations made will be applicable to Nigerian pharmacists.

The following conclusions were reached

a) Most pharmacists are not providing adequate pharmaceutical care because they are more preoccupied with economic pursuit rather than the pursuit of professional survival. Practice is therefore more influenced by economic pressure than professional ethics.
b) Most of the respondents kept no record of their professional ethics due to lack of time and pursuit of money. The rate of record keeping was found to be the same for all categories of patients.
c) Continuing education was found to be necessary as the only way through which pharmacists can update their knowledge, get more skill and competence.
d) It was found that adequate facilities and environment such as good counseling room are necessary for optimal provision of pharmaceutical care.
e) It was good that community pharmacists interact more with patients requesting for medications and patients presenting with symptoms than those with prescriptions. This may be because pharmacists feel more responsible for the health of patients requesting medications from them and those presentjng with symptoms than those with prescriptions written by other health care providers.

RECOMMENDATIONS

These recommendations were drawn from issues arising from the discussion and literature review (carried out before the study). For pharmaceutical care to take root in community practice the following recommendations may be of help

1. The Pharmacists Council of Nigeria (PCN) should encourage pharmacy schools to research into the extent to which pharmacists are meeting up with the principles of pharmaceutical care.
2. The Council should develop a self-assessment instrument for pharmacists to evaluate and improve on the quality of their performance.
3. There is need for pharmacists to record their interventions and activities.

Association of Community Pharmacists of Nigeria (ACPN) has helped in this regard by providing “medichart”- a patient-drug medication chart for community pharmacists intervention and patients records. The use of computers for keeping records also should be encouraged because it makes the storage and retrieval of information easier.

4. The Mandatory Continuing Professional Development (MCPD) should be broadened to include courses that are relevant to the philosophy of pharmaceutical care. Every pharmacist in practice needs to attend it at least once a year to remain relevant and keep abreast of latest developments in the profession.

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REFERENCES

1. Opara CA. Pharmaceutical Care. The Right of the Patient. West Afr. J. Pharm. 2004; 18CD: 3- 10.
2. Rossing C. The Practice of Pharmaceutical Care in Denmark:- A Quantitative Approach. A Ph.D. Thesis 1999; (available at www.dfn.df/c/phd/defence/charlotte rossing.htm accessed on 05/04/06.
3. Larson JW. Patients Satisfaction with Delivery of Product and Information by an Ambulatory Pharmacy. Am. J. Health syst. Pharm. 1998; Vol. 55: 1025 – 1029.
4. Brodie DC, Parish PA , Poston J.W. Societal Needs for Drugs and Services. AM. J. Pharm. Education. 1980; 44: 276-278.
5. Helper CD. Third Ware in Pharmaceutical Education and Environment Movement. Am. J. Pharm. Educ. 1987; 52: 369 – 385.
6. Strand L. Building Practice in Pharmaceutical Care. Pharm. J. 1992; 260: 874 – 876.
7. Helper CD , Strand, LN. Opportunities and Responsibilities in Pharmaceutical Care. Am . Pharm. Educ. 1990; 47: 533 – 543.
8. International Pharmaceutical Federation (FIP). Statement on Pharmaceutical Care (available on www.fip.nl/pdf/pharma care.pdf accessed on 21 Feb. 2006).
9. Johnson JA, Bootman JL. Drug Related Morbidity and Mortality and the Economic Impact of Pharmaceutical Care. Am. J. Health. 1997; 54. 554 – 558.
10. Futher B, Burton S. Quality Assurance in Community Practice. A Publication of Pharmacy Council of South Africa. (available at www.ru.ac.za/academic/department/[pharmacy/pap/pubi/quality/parti.htm accessed on 08/01/2006 Pharmacother. 1998; 27 (11); 68-73.

11. Smith FJ, salkind MR, Jolly BC. Community Pharmacy: A Method of Assessing Quality Care. Soc. Sci.med.vol. 1990; 3 (5) 603 – 607.
12. Sarpong K. Thrust of 21st Century Practice of Pharmaceutical Care. West.Afr. J. pharm. 2004; 18(1) 3 – 10.
13. Ciprolle RJ, Strand LN, Morley PC. Pharmaceutical Care Practice. Maidenhead Mc Grow – Hill, 1998.
14. Nelson AA, Selnio RN , Beno, CE. Clinical Pharmacy Services for the chemically ill Patient in the Community Practice Environment. J. Health Care Mark 1983; 3: 29 – 45.
15. Pharmacists Council of Nigeria. Four- part Compendium of Minimum Standards for the Assurance of Pharmaceutical Care in Nigeria. Garki, Abuja 2005.
16. Winfred AJ, Richards, RME. Pharmaceutical Practice 93rd ed), Church Hill Livingstone, U.K, 2004.
17. Holdford S, Smith S. Improving the Quality Outcomes Research Involving Pharmaceutical Services. Am. J. Health Sys. Pharm. 1997; 54: 1434 – 42.
18. Fairris KB , Kirking, DM. Assessing the Quality of Pharmaceutical Care. Ann.1993.
19. Donabedian A. The Seven Pillars of Quality. Arch .Pathol. lab. Med. 1980; 114. 115-8.
20. Jansen RK, Murphy CM, Kenuziersk DU, Brown PH, Carter BC, Furmago EL, Schoen MD, Worker DR. Ambulatory Care Certificate Programme. Am. J. Health Sys. Pharm. 1996 Vol. 1018 – 22.
21. Duwiejua M, Dodoo A, Plange R. Quality Counseling on Salbutamol Metered Dose Inhalers in Community Pharmacies in Kumasi Ghana. Pharm. J. 2001; 20 (11): 20-23.
22. Bissel P, Ward PR, Noyce PR. Variations within Community Pharmacy: Responding to request for over-the-counter medicines. J. Soc. Sci. and Admin. Pharm. 1997; 14:15