

Research Article

Identification of Standards for Pharmaceutical Care in Benin City

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Abstract

Purpose: *Pharmaceutical care (PC) is still a theoretical statement in Nigeria and not operational. The goal of this study is to identify practice standards that can be effectively applied in the implementation of pharmaceutical care in Nigeria.*

Method: *The survey instrument (a pre-tested self-administered questionnaire) was distributed to pharmacists in Benin City. Each questionnaire contained the 52 suggested practice standards obtained from round one discussion by the Delphi panel of PC experts. The pharmacists were requested to indicate in the questionnaire whether or not each of the standards was feasible, relevant, being currently applied or intend to be apply it in their practice setting. Analysis of the responses on "being currently applied or intend to apply it" excluded the pharmacists in academia since nearly all of them were full-time University Lecturers.*

Result: *Of the 150 copies of the questionnaire distributed, 119 (79.3%) responded. The average proportion of pharmacists who gave positive response to each of the standards were as follows: feasibility (71.3% ± 9.2%), relevance (72.0% ± 8.0%), currently apply it (18.2% ± 20.2%) and intend to apply it (10.8% ± 6.7%). The 95% confidence intervals of the responses were: feasibility (68.7% – 73.9%), relevance (69.7% - 74.4%), currently apply it (12.5% - 23.8%), and intend to apply it (8.9% - 12.6%). Neither the age, years of professional experience, qualification nor area of practice significantly influenced the pharmacists responses. Forty-seven (47) of the 52 standards were identified for application by the pharmacists.*

Conclusion: *PC standards that can be effectively applied in improving effective pharmaceutical services in Benin City have been identified. The identified 47 standards are most likely to stimulate the widespread implementation of PC in Nigeria if seriously addressed by the Pharmacists Council of Nigeria, the Pharmaceutical Society of Nigeria and Nigeria pharmacists.*

Keywords: *Benin City, pharmaceutical care, practice standards*

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Introduction

Pharmaceutical care is a process in which a pharmacist co-operates with a patient and other professionals in designing, implementing and monitoring a therapeutic plan that will produce specific therapeutic outcomes for the patient. These outcomes are: cure of a disease, elimination or reduction of a patient's symptoms, arresting or slowing a disease process or preventing a disease or symptoms¹. Pharmaceutical care involves identifying, resolving and preventing drug-related problems. Since it was first defined by Hepler and Strand¹ in 1990 as "the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life, the care has taken on a wide variety of meanings to researchers and pharmacy practitioners and the operational definition range from the mandatory counseling to patient assessment and the development of patient care plans². Many more definitions have now emerged and Cipolle and his colleagues have redefined it as "a practice in which the practitioner takes responsibility for a patient's drug-related needs and is held accountable for this commitment³. This latter definition has three components which are: (1) a philosophy of practice, (2) a patient care process, and (3) a practice management system. Most major pharmacy organizations in developed countries (e.g., the American Pharmaceutical Association [AphA]⁴ and the American Society of Health-System Pharmacists⁵) have since adopted the pharmaceutical care philosophy.

Pharmaceutical care evolved from clinical pharmacy practice (which evidently emerged in Nigeria in the 1980's with the introduction of clinical pharmacy courses in the Faculty of Pharmacy, University of Benin, Benin City). The philosophy has achieved great successes in the care of patients in the United States and elsewhere. Patients now get better care from pharmacists, and the pharmacists, the patients and health care managers are delighted about the initiative. However, among the pharmacists in Nigeria,

pharmaceutical care is often discussed in continuing professional education programmes and in conferences, and it is only yet considered as a model that needs to be implemented in the health care system.

Admittedly, the standard of pharmacy practice in Nigeria is not the same as it is in most other countries. If nothing else, the practice settings are different. One of the interesting things about health care in Nigeria is that private patients entering the hospitals have to pay for their own food, bedding, bandages, medical supplies, drugs and other products essential to proper care and healing. In many cases, patients or their families have no money to pay for drugs and other necessities. Other factors that are potential barriers to pharmaceutical care are those already identified and include: (1) not enough time to talk with patients, (2) lack of private counseling area in the pharmacy, (3) inadequate training, (4) pharmacist's perception that patients are not willing to pay for this intensive level of care and (5) trepidation regarding the reaction of physicians⁶⁻¹⁰. These factors are not only compromising the early implementation of pharmaceutical care in hospitals and community pharmacies in Nigeria but have also had negative consequences on the impact of clinical pharmacy practice in the health care system in the country. Despite these problems, pharmaceutical care poses great challenges before the pharmacy profession in Nigeria. The challenges need to be addressed in order to move the care from a theoretical statement in Nigeria (as it is now) to an operational level.

If all pharmacists are expected to universally deliver pharmaceutical care, they should adopt practice standards that provide meaning to the term and enable a holistic view of patient care. The answer to a fundamental question on whether the standards should be consistent regardless of various practice settings is that although the goals of pharmaceutical care exist independent of practice setting, the specific content of standards may vary from setting

to setting¹. Also, lack of standards for pharmacists to conform to in daily practice has been identified as a primary obstruction to widespread implementation of pharmaceutical care². Already, a Delphi panel of pharmaceutical care experts has suggested 52 practice standards² upon which a consensus was arrived at in the United States. This opens a lead way for the identification of standards that can effectively be applied in pharmacy practice in Nigeria.

The primary intent of this study was to identify standards that can be effectively applied in implementing pharmaceutical care practice in Nigeria. The specific objectives are (1) to identify pharmaceutical care practice standards that can be effectively applied in Benin City, and (2) assess which of the practice standards are feasible, relevant and currently being applied or intended to be applied in Benin City. With the introduction of the Doctor of Pharmacy programmes in the training of pharmacists in Nigeria (which has already taken-off in the University of Benin, Benin City), the outcome of this study should create new knowledge with both theoretical and practical implications. In addition to reporting opinions or judgements, the study will provide a basis for changes in pharmacy practice and a framework for the implementation of pharmaceutical care practice in Nigeria.

Method

This study was carried out in Benin City, a large metropolitan city located in the south-south geopolitical zone of Nigeria. The city has a projected population of about 1.2 million. There are three tertiary health care facilities; a 550-bed University of Benin Teaching Hospital (UBTH), a 400-bed Edo State Government controlled Specialist Hospital and a Psychiatric Hospital. Each of these facilities has pharmacy departments under the control of registered pharmacists. There is also a Military Hospital and at least 150 registered community pharmacies, providing pharmaceutical services to the population under the supervision of

pharmacists. At the time of this study (January to June 2002), there were about 211 registered pharmacists in Benin City. There are several other health care facilities including private hospitals, doctor's clinics or surgeries, maternity homes and herbal homes where pharmaceutical services are not being provided by qualified pharmacists. In all the health care facilities, the pharmaceutical care practice is not currently being effectively applied and clinical pharmacy practice is only marginally evident in the tertiary health care facilities. Apart from one community pharmacy where clinical pharmacy practice is obvious, all the community pharmacies engage in traditional drug retailing and distribution.

The survey instrument (pre-tested self-administered questionnaire) for this study was constructed based on the 52 suggested practice standards obtained from the round one discussion by the Delphi panel of pharmaceutical care experts (see Appendix)². The questionnaire contained the initial 52 suggested practice standards with spaces provided for indicating age, gender, qualification, practice area and year of experience, and whether each standard was feasible or not feasible, relevant or not relevant, currently applied in his/her establishment or not currently applied, and there was plan to implement it in his/her establishment or not. One hundred and fifty (150) copies of the questionnaire were distributed to qualified pharmacists who were in academics, hospital practice or community practice. Academic pharmacists were included in this study because they are involved in the training of pharmacy undergraduates and continuing professional education of qualified pharmacists. They are also frequently involved in the development of guidelines and standards of practice in pharmacy. The questions were distributed to the pharmacists in their offices. The researchers discussed the purpose of the study with each of the participating pharmacists, and educated them on the

questionnaire format and how to indicate the desired response in the appropriate space provided in the questionnaire in order to prevent errors in responses. The copies of the questionnaire were left with the pharmacists who voluntarily accepted to participate in the study and retrieved from them within a period of two weeks after one to three visits. Those who were unable to fill the questionnaire by the third visit were considered as non-respondents because of time considerations.

Each questionnaire used in this study was coded for easy reference. The responses from the study were fed into computer software, Epi Info 2000 (CDC, USA/WHO, Geneva) and double-checked to ensure accurate data entry. The data were analysed in terms of demographic characteristics, professional experience, qualification and practice areas (academic, hospital or community practice) using frequencies and percentages as appropriate. In analyzing the responses on current application and intention to apply the practice standards, only responses from pharmacists working in hospitals and community pharmacies were considered. This approach was adopted to prevent bias as nearly all the pharmacists in academia were full-time University Lecturers not involved in patient care. Chi-square test was adopted in estimating possible differences in proportions. Analysis of variance was used to determine differences between the age of the pharmacists, years of professional experience, qualification, practice areas and the responses to the suggested practice standards. For this purpose, the frequencies of responses for each suggested standard were determined based on age, years of experience, qualification and practice areas. At a confidence interval of 95%, a 2-tailed probability (p) value less than or equal to 0.05 was considered to be significant. Statistical comparisons were made using a software called InStat (GraphPad Inc., USA).

Result

Of the 150 copies of the questionnaire distributed to the pharmacists, 119 completed and returned the questionnaire, giving a response rate of 79.3%. All PhD holders were in academic setting and responded to the questionnaire. The age and sex distribution of the responding pharmacists are given in Table 1. A statistical gender balance was not achieved in this study ($p < 0.04$). The highest proportion (30.3%) of the respondents were aged from 31 – 40 years while the lowest proportion were in the age range of 51 – 60 years.

Table 1: Age and gender distribution of responding pharmacists

Age (yr)	Male (%)	Female (%)
21 - 30	18 (15.1)	15 (12.6)
31 - 40	12 (10.1)	24 (20.2)
41 - 50	18 (15.1)	10 (8.4)
51 - 60	15 (12.6)	7 (5.9)
<i>Total</i>	<i>63 (52.9)</i>	<i>56 (47.1)</i>

$\chi^2 = 9.09, df = 3, p = 0.028$

The distribution of the respondents in respect of their qualifications, area of practice and years of experience are presented in Table 2. Majority of the respondents (71.6%) hold only a first degree in pharmacy. The rest had further higher education (master's degree, fellowship and PhD). The highest proportion of the respondents practice in community pharmacies (47.8%) and had not more than five years experience as pharmacists.

The positive responses to the 52 suggested practice standards are summarized in Table 3. The positive responses to the 52 suggested practice standards are summarized in Table 3. With respect to feasibility, the average positive response was 71.3%. Each of the practice standards with positive responses below 60% is marked with asterisk (*) in the Appendix (The 52 suggested practice

Table 2: Distribution of respondents in respect of their qualification, area of practice and years of experience of responding pharmacists.

Parameters	Male (%)	Female (%)
Qualification		
Bachelor degree	36 (30.2)	41 (34.4)
Bachelor and master's degree in pharmacy	6 (5.0)	0
Bachelor's degree and master's degree in business administration	6 (5.0)	9 (7.6)
Bachelor's degree and master's degree in health management and planning	0	2 (1.6)
Bachelor's degree and PhD	13 (10.9)	3 (2.5)
Bachelor's degree and fellowship of West African Postgraduate College of Pharmacists	2 (1.6)	1 (0.8)
<i>Total</i>	<i>63 (52.9)</i>	<i>56 (47.1)</i>
Practice Area		
	Male ^a	Female ^a
Academics	14 (11.8)	3 (2.5)
Community pharmacy	26 (21.8)	31 (26.0)
Hospital	23 (19.3)	22 (18.5)
<i>Total</i>	<i>63 (52.9)</i>	<i>56 (47.1)</i>
Experience (yr)		
	Male ^b	Female ^b
1 – 5	21 (17.6)	18 (15.1)
6 – 10	12 (10.1)	10 (8.4)
11 – 15	6 (5.0)	8 (6.7)
16 – 20	2 (1.6)	10 (8.4)
> 20	22 (18.5)	10 (8.4)
<i>Total</i>	<i>63 (52.9)</i>	<i>56 (47.1)</i>

^a $\chi^2 = 7.19, df = 3, p = 0.027;$ ^b $\chi^2 = 10.15, df = 4, p = 0.038$

standards obtained from the round one Delphi procedure). The highest positive responses on feasibility were on the need for the pharmacist to (1) devise a standard system of data collection of all necessary medical and personal information from each patient (89.9%), (2) document follow-up care plan and where care plan is not deemed necessary (88.5%), and (3) formulate therapeutic plan for the patient (83.5%).

On the question of the relevance of each of the practice standards, the average positive response (72.0%) was not significantly different from that of the responses for feasibility ($p > 0.05$). Not less than 50% of the pharmacists judged all the initial 52 suggested practice standards to be both feasible and relevant. However, not less than 60% of the pharmacists judged 47 of the

Table 3: Average responses of pharmacists to the 52 suggested practice standards obtained from the round one Delphi procedure

Parameter	% Positive response (mean ± sd)	95% Confidence Interval	Range (%)
Feasibility	71.3 ± 9.2	68.7 – 73.9	50.6 – 89.9
Relevance	72.0 ± 8.0	69.7 – 74.4	50.6 – 88.6
Currently applied in my setting	18.2 ± 20.2	12.5 – 23.8	0 – 65.8
Intends to implement the standard	10.8 ± 6.7	8.9 – 12.6	1.3 – 30.4

Table 4: Practice standards currently being applied by the respondents

S/N	Practice standard	Proportion of pharmacists currently applying it
1	The pharmacist shall make a conscious effort to provide oral patient counseling with each prescription that includes directions for use, indication, drug class, side effects, storage requirements, and what to do in case of missing a dose(s), in addition to providing a hard copy of this information	56.9%
2	The pharmacist will ask on each refill prescription the following question, "What problems are you having with this medicine?", or similar open-ended question	54.4%
3	Pharmacists shall have an area of private consultation available to patients	63.3%
4	When communicating with the patient, the pharmacist should use the open-ended question, "What questions do you have about this medication?" to address concerns and ensure patients understands their drug regimen	53.2%
5	The pharmacist will use large enough print on prescription labels to make them easily readable for patients in addition to frequently changing ribbons to ensure label readability	50.6%
6	The pharmacist should include written instructions to each patient on how to administer specialty products (i.e., ear drops, ophthalmic drops and ointments, rectal suppositories, inhalers, injections, etc.)	56.9%

suggested practice standards to be both feasible and relevant.

The responses on current application of each of the standards (mean ± sd, 18.2% ± 20.2%; 95% confidence interval, 12.5% - 23.8%) were generally low when compared with those of "relevance" and "feasibility".

The suggested standards currently applied by over 50% of the respondents are given in Table 4. Also, the responses on the intention to apply the standards in the respondents' practice area were relatively low (mean ± sd, 10.8% ± 6.7%; 95% confidence interval, 8.9% - 12.6%).

In this study, analysis of variance did not reveal any significant difference between the years of experience, qualification, or practice areas and the responses to the suggested practice standards ($p > 0.05$).

Discussion

Drug therapy with prescribed medication is a collaborative process involving the patient, the physician, the pharmacist and other health care professionals. In recent years, pharmacists in many countries have adopted a much more patient centred approach in the pharmaceutical services they provide. This assures that both patient care and economic aspects of drug therapy are appropriately considered in the interest of the patient. The principles of pharmaceutical care are embedded in the concept of Good Pharmacy Practice¹¹. Application of practice standards that are practicable can result in enhancement of clinical, economic and humanistic outcomes of patient care¹²⁻¹⁴. In arriving at practice standards that can be applied in Nigeria, this study has adopted this survey approach as a framework, using known standards that have been previously applied in arriving at practice standards elsewhere².

The need for pharmacists to agree on a standardized approach by which individual pharmacists will provide pharmaceutical care to patients cannot be overemphasized. There is no doubt that pharmaceutical care will fail if each pharmacy setting or individual pharmacists are allowed to define pharmaceutical care standards on their own¹⁵. The involvement of pharmacists in any setting in developing practice standards for pharmaceutical care to which they can adhere and upon which they may ultimately be evaluated is relevant². It is for these reasons that only qualified pharmacists were involved in this study. Designed to provide a framework for developing standards that will be acceptable to pharmacists in Nigeria, and in particular, Benin City, and which they can meaningfully apply, this study has considered a good spread in the age, years

of experience, qualification and practice areas as well as gender balance in its conduct. Although a statistically significant gender balance was not achieved in the study sample it is unlikely that the result obtained would change significantly if a gender balance was achieved. Neither the age, years of experience, qualification and practice areas was found to have significantly affected the responses from the responding pharmacists. The possible reason for this finding is that the introduction of the term, "pharmaceutical care" in the practice of pharmacy in Nigeria is new. Furthermore, pharmacists in Benin City are still trying to apply the philosophy with the hope that they will achieve a better health care provision.

On the issue of feasibility and relevance of the Delphi initial 52 practice standards, it is difficult to recommend all the standards for initial application in Benin City even though more than 50% of the responding pharmacists have indicated the feasibility and relevance of all the standards. The practice standard numbers 32 and 33 in the Appendix which had positive responses between 50% and 60% were not judged feasible and relevant in a previous study². Extension of this finding to the present study would justify the exclusion of all the practice standards with positive responses below 60% (marked with asterisk [*] in the Appendix) from standards that can be recommended for use in Benin City, and in fact, Nigeria. The proximity of the 60% to the mean positive responses when compared with 50% further justifies the need for the exclusion. Thus, only the 47 standards in the Appendix without asterisk are being recommended for initial application in Benin City. Studies by Desselle and Rappaport² on the initial 52 practice standards suggested by the Delphi Expert Panel indicated that only 43 of the standards were rated positively for feasibility and 50 of them were rated positive for relevance. The differences between some of the standards being identified in this study and those previously identified are not unexpected as

pharmaceutical care is at its infancy in Nigeria. Nevertheless, the similarity of most of the positively rated standards in the previous study² to the 47 standards being recommended in this study is remarkable and supports the reliability of the outcome of this present study.

Clearly, an adequate pharmaceutical service provided by pharmacists is a vital component of Primary Health Care. This is recognized by World Health Organization (WHO), and several publications emphasize the important role of the pharmacist in health care delivery¹⁶⁻¹⁸. A previous study¹⁹ has shown that pharmacists are generally positive about trying to provide pharmaceutical care but possess moderate to high intentions to apply the standards. Lack of workable strategies to adopt pharmaceutical care has been suggested as a possible reason for poor response on intention to apply the standards by many pharmacists¹⁹. The low positive response to current application and intention to apply the suggested standards in Benin City is contrary to report from the Netherlands where it is obvious that the pharmacists engage in many pharmaceutical care activities including health promotion and disease prevention, patient counseling and communication with other health professionals²⁰. The current low application and intention to apply the practice standards in hospitals and community pharmacies is predictable. Pharmacists in Benin City, and in fact, most other parts of Nigeria, still practice in health care environments where there are little or no spaces provided for patient counseling. The medical profession has recently become hostile with the concept of clinical practice by pharmacists. Also, most of the pharmacists frequently demonstrate lack of confidence and assertiveness needed to effectively carry out their clinical roles in hospitals. Furthermore, the provision of pharmaceutical care is not merely a function of individual decision-making but is strongly impacted by pharmacists' perceived control over their practice environments²¹. These facts may

account for the low positive response on current application and intention to apply the pharmaceutical care standards. This calls for urgent attention by the Pharmaceutical Society of Nigeria, the Pharmacists Council of Nigeria (the regulatory organ of the practice of pharmacy in Nigeria) and all pharmacists practicing in Nigeria, to seriously address the needs of patients, and better health care for them through effective pharmaceutical services. The pharmacists in Nigeria should be made aware of this obligation. Challenges posed by the low positive responses on the current application and intention to apply each of the standards demand an early development and implementation of guidelines and standards for pharmaceutical care in Nigeria. Few pharmacists who currently apply some of the practice standards had clinical pharmacy training and work in hospitals and community pharmacies.

The use of the suggested 52 practice standards in this study may have introduced bias as suggested in previous reports²²⁻²⁴. Nevertheless, many pharmacists in Benin City, and indeed Nigeria, are still not familiar with expected standards of practice of pharmaceutical care. This justifies the use of the known suggested practice standards.

Conclusion

In addition to known factors affecting the implementation of pharmaceutical care in many countries (such as USA and Australia), the lack of pharmaceutical care practice standards applicable in Benin City, and in fact in Nigeria, is a major barrier to the implementation of pharmaceutical care in Nigeria. Pharmaceutical care practice standards that can be effectively applied in improving effective pharmaceutical services in Benin City have been identified. The identified 47 standards are most likely to stimulate the widespread implementation of pharmaceutical care in Nigeria if seriously addressed by the Pharmacists' Council of Nigeria, the Pharmaceutical Society of Nigeria and Nigeria pharmacists.

Implementation of these standards will enable the patients and health care professionals to appreciate the value of the pharmaceutical care services in optimizing therapeutic and economic outcomes.

The process of adopting innovation typically has several, significant stages of development and testing prior to adoption²⁰. Thus, further studies would be needed to appraise and evaluate the standards with the

aim of categorizing and simplifying them. This will hopefully provide a logical validity instrument to measure performance.

Acknowledgements

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Appendix

The Fifty-Two Suggested Practice Standards Obtained From the Round One Delphi Procedure²

1. The pharmacist shall devise a standard system of data collection of all necessary medical and personal information from each patient, including: prescribing physician(s), medication history, medical condition & diagnoses, allergies, and other data that would assist in detecting potential medical or drug-related problems.
 2. When potential problems are identified, a therapeutic plan should be formulated with the patient that becomes part his/her permanent record. This plan should be thoroughly discussed with the patient in addition to providing a hard (written) copy of the plan.
 3. The pharmacist should be prepared to re-evaluate and modify therapeutic plans on subsequent patient visits and consult with the necessary physician(s).
 4. The pharmacist should document each care plan and also document those occasions when a care plan is not deemed necessary.
 5. Follow-up appointments should be arranged within a reasonable time, preferably within 7-14 days of initial patient visit to assure positive outcomes (i.e., compliance, efficacy of drug regimen, avoidance of adverse reactions or drug interactions).
 6. The pharmacist will check each refill prescription for compliance (overuse, under-use, misuse, etc.) to assure positive outcomes.
 7. The pharmacist shall obtain access to each patient' s lab tests, including diagnostic, HR, BP, weight, blood sugar, cholesterol, etc. where appropriate to record in the patient' s record and assess trends in to determine the impact of drug therapy.
 8. Pharmacists should secure access to on-line medical libraries and medical literature as well as product literature & handouts from pharmaceutical companies.
 9. The pharmacist should regularly run reports on their patients to see if they are getting timely refills and visiting physicians on a scheduled basis, and intervene where appropriate.
 10. The pharmacist evaluates every prescription to detect any potential prescribing errors and intervenes when necessary.
 11. The pharmacist shall make a conscious effort to provide oral patient counseling with each prescription that includes directions for use, indication, drug class, side effects, storage requirements, and what to do in case of missing a dose(s), in addition to providing a hard copy of this information.
 12. The pharmacist maintains open and effective channels of communication with other health care providers for the benefit of the patient, mainly for the resolving of any potential or actual drug-related problems.
 13. The pharmacist documents the results of each patient encounter and intervention.
 14. The pharmacist will assess and maintain a record of each patient' s appropriate vitalsigns (i.e., blood pressure for hypertensives) to compare for future evaluation.
 15. When communicating with the patient, the pharmacist should use the open-ended question, "What questions do you have about this medication?" to address concerns and ensure patients
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- understands their drug regimen.
16. The pharmacist will ask on each refill prescription the following question, "What problems are you having with this medicine?", or similar open-ended question.
 17. The pharmacist will regularly update all of the information in the patient' s permanent pharmacy record.
 18. The pharmacist will use large enough print on prescription labels to make them easily readable for patients in addition to frequently changing ribbons to ensure label readability.
 19. The pharmacist should appropriately use technicians & other support personnel in clerical and dispensatory functions to create more time for patient interaction and patient care activities.
 20. The pharmacist shall obtain from each patient's information regarding their use of any OTC medications with each visit and maintain this as part of their permanent pharmacy record.
 21. The pharmacist will make an effort to meet the major prescribers in the area to explain pharmaceutical care and let them know how he/she can help their patients with its implementation.
 22. The pharmacist should be actively involved with seeking and developing a relationship with a computer company that embraces the concept of pharmaceutical care and consistently develops new software to facilitate it.
 23. The pharmacist should strive to carry all products necessary to carry out a patient' s drug therapy (i.e., nebulizers for asthma patients).
 - *24.** The pharmacist should attempt to professionalize pharmacy' s product mix toward healthrelated items, such as products for nutrition & fitness and medical accessories.
 25. The pharmacist shall instruct all patients that have a disease that can be monitored and will discuss with these patients how to monitor them (diabetic blood glucose monitors, cholesterol tests, peak flow meters, etc.).
 26. The pharmacist should be actively involved in the promotion of community health and conduct seminars on health issues and disease management that include lifestyle modification, goal setting, and outcomes management.
 27. The pharmacist shall allow a specific amount of time for patients who wish to make appointments to discuss their care/care plans, health, or drug therapy.
 28. Pharmacists shall have an area of private consultation available to patients.
 29. Each pharmacist shall procure a certain amount of hours of continuing education on topics to enhance their abilities to document, intervene, and follow-up on patients.
 30. Pharmacists should be actively involved in support of associations and practice groups who promote the ideals of pharmaceutical care.
 31. Pharmacists shall promote the concept of pharmaceutical care to patients, physicians, benefits managers, and insurance companies.
 - *32.** The pharmacist shall follow-up via telephone with each patient started on a new antibiotic after 24-72 hours of treatment to check for allergic reactions and therapeutic effect.
 - *33.** The pharmacist shall contact geriatric patients by telephone every three months to ensure compliance with cardiac and anti-hypertensive medications.
 34. The pharmacist shall be actively involved in the determination of the drug product formulary for their patients.
 35. Pharmacists should participate as principal investigators for IND' s (investigational new drugs) and for proposed new indications of drugs.
 36. Pharmacists will utilize patient weight to determine and assure proper dosages of medications for children (< 12 years old or < 40 kg weight).
 - *37.** The pharmacy staff will phone patients who did not pick up new prescriptions within 1 day and refill prescriptions within 3 days after they have been filled to help ensure patients get their prescribed medication.
 38. Pharmacists who are made aware of adverse drug experiences by patients will complete a Medwatch report as part of the FDA' s voluntary reporting program for ADR' s.
 39. A compounding log will be prepared for each batch of compounded product prepared, which will include lot numbers of ingredients, dates of preparation & expiration, quantities used, and preparer' s initials.
 40. The pharmacist should take an active role in all aspects of patient wellness.
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- *41. The pharmacist shall be the patient' s advocate with regard to social, economical, and psychological barriers to drug therapy.
42. The pharmacist should check for the most economical therapeutic alternative for any medication and relay this information to the prescriber.
43. The pharmacist should include written instructions to each patient on how to administer specialty products (i.e., ear drops, ophthalmic drops and ointments, rectal suppositories, inhalers, injections, etc.)
44. The pharmacist shall provide information to patients on special support and/or educational groups (such as the Multiple Sclerosis Society, American Diabetes Association, Vital Interest Program, etc.)
45. The pharmacist shall exhibit competence and knowledge concerning the impact of OTC drugs on outcomes of disease states (e.g., use of niacin in Type II diabetics).
46. The pharmacist shall triage the patient' s OTC requests to determine if thei problem requires referral, OTC treatment, or other supportive treatment and make individualized product recommendations for appropriate OTC requests.
47. The pharmacist shall document OTC recommendations on the patient' s profile.
48. The pharmacist shall monitor the outcomes of OTC recommendations by a follow-up appointment or phone call.
49. The pharmacist shall provide a written continuity of care report when a patient visits a new health care provider or new health care institution.
50. The pharmacist shall ensure that complete prescription information is provided for patients unable to personally pick up their medications in addition to making a conscious effort to maintain updated medication profiles for these patients.
51. The pharmacist should make efforts to optimize therapy and minimize effects by staying updated on common and newly discovered adverse effects and drug interactions, particularly with specific high-risk patients.
52. The pharmacist should maintain a caring, friendly, responsible relationship with patients while taking a sincere interest in their health and drug therapy (e.g., asking, "How' s your arthritis?" "How are you feeling?", etc.)

References

1. Hepler CD, Strand LM. Opportunities and responsibilities in pharmaceutical care. *Am J Hosp Pharm* 1990; 47: 533-43.
2. Desselle S, Rappaport HM. The identification of pharmaceutical care standards in the community pharmacy setting. *J Pharm Care* 1997; 1 Article 3: 1-11
3. Cipolle RJ, Strand LM, Morley PC. *Pharmaceutical Care Practice*. McGraw-Hill, New York. 1998.
4. American Pharmaceutical Association. *An AphA White Paper on the Role of the Pharmacist in Comprehensive Medication Use Management: The Delivery of Pharmaceutical Care*. American Pharmaceutical Association, Washington, DC, 1992.
5. American Society of Hospital Pharmacists. *ASHP statement on pharmaceutical care*. *Am J Hosp Pharm* 1993; 50: 1720-3.
6. Larson RA. Patients' willingness to pay for pharmaceutical care. *J Amer Pharm Assoc*. 2000; 40: 618-24.
7. Martin S. What are you afraid of? *Am Pharm* 1990; NS30: 751-3.
8. May RJ. Barriers to pharmaceutical care in the acute care setting. *Am J Hosp Pharm* 1993; 50: 1608-11.
9. Swift BG. Barriers to pharmaceutical care in the home care setting. *Am J Hosp Pharm* 1993; 50: 1611-4.
10. Louie N, Robertson N. Barriers to pharmaceutical care in the managed care setting. *Am J Hosp Pharm* 1993; 50: 1614-7.
11. *Pharmaceutical care. FIP Statement of Professional Standards adopted at The Hague, The Netherlands on 4th September 1998*. p. 1.
12. Barber DB, Solomon DA. Effect of consultant pharmacist intervention on antipsychotic drug use in a rest home. *The Consultant Pharmacist* 1992; 7: 155-8.
13. Cooper JW. Effect of initiation, termination and reinitiation of consultant pharmacist services in a geriatric long-term care facility. *Medical Care* 1985; 23: 84-8.
14. Laucka PV, Hoffman NB. Decreasing medication use in a nursing home patient-care unit. *Amer J Hops Pharm* 1992; 49: 96-9.
15. Hutchinson RA, Schumock GT. Need to develop a legal and ethical base for pharmaceutical care. *Annals of Pharmacother* 1994; 28: 954-6.
16. *The Role of the Pharmacist in the Health Care System*. Report of a WHO Consultative Group, New Delhi, India 1993.
17. *Role of the Pharmacist in Support of the WHO Revised Drug Strategy*. Forty-seventh World Health Assembly. WHO, Geneva 1994.

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18. Good Pharmacy Practice in Community and Hospital Setting. WHO, Geneva, 1997.
19. Farris KB, Schopflocher DP. Between intention and behaviour: an application of community pharmacists' assessment of pharmaceutical care. *Soc Sci Med* 1999; 49: 55-66.
20. van Mill JWF, Tromp TFJ. Pharmaceutical care in Netherlands. History, definition and projects. *Pharm World Sci* 1996; 18 (6): 237-40.
21. Rogers EM. *Diffusion and Innovations*, 3rd ed. New York: Free Press, 1983.
22. Helmer O. *Social Technology*. Basic Books Inc., New York 1966 p.11.
23. Welty G. A critique of the Delphi technique. *Proceedings of the American Statistical Association*. Washington DC, 1972.
24. Linstone HA, Turoff M (ed). *The Delphi method: techniques and applications*. Addison-Wesley, Reading, 1975: 373-86.