

## Assessment of the documentation of pharmaceutical care activities among community pharmacists in Ibadan.

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### ABSTRACT

**Background:** Documentation of pharmaceutical care activities is a vital component of pharmaceutical care. Documentation is the primary method of demonstrating value within an organized healthcare system.

**Objectives:** The study assessed the documentation of pharmaceutical care activities among community pharmacists in Ibadan.

**Methods:** This was a cross-sectional study carried out between August and October, 2013, where pretested structured questionnaires were administered to community pharmacists in Ibadan. The questionnaire assessed the documentation of pharmaceutical care activities among the participants. The data obtained was analyzed with descriptive statistics like frequencies and percentages using SPSS version 20. The level of significance was set at  $p < 0.05$ .

**Results:** Twenty-two (33.8%) respondents documented their pharmaceutical care interventions while 43 (66.2%) did not document it; 8 (18.2%) respondents employed the use of computerized documentation. Only 2 (3.1%) respondents used a standard method of PC documentation; however, only one (1.5%) of the 3 respondents could specify the standard documentation format that he used. Fifteen respondents (25.0%) document referrals while 50 (76.9%) do not document referrals. Twenty-seven (41.5%) respondents documented and reported adverse drug reactions while 38 (58.5%) respondents did not. Eighteen respondents (30.0%) documented interventions made on drug therapy problems while 47(72.3%) respondents did not.

**Conclusion:** Almost all the community pharmacists in Ibadan were aware of pharmaceutical care concept. The level of documentation among community pharmacists in Ibadan was very low; however, they were willing to undergo training on the pharmaceutical care concept.

**Keywords:** Documentation, pharmaceutical care, pharmacists, Ibadan.

## Evaluation comparée de la documentation des activités de soins pharmaceutiques chez les pharmaciens communautaires et hospitaliers à Ibadan

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**Contexte:** La documentation des activités de soins pharmaceutiques est une composante essentielle des soins pharmaceutiques. La documentation est la principale méthode de démonstration de la valeur au sein d'un système de santé organisé.

**Objectifs:** L'étude a évalué la documentation des activités de soins pharmaceutiques chez les pharmaciens communautaires à Ibadan.

**Méthodes:** C'était une étude transversale réalisée entre août et octobre 2013, où des questionnaires structurés pre-testés ont été administrés aux pharmaciens communautaires à Ibadan. Le questionnaire a évalué la documentation des activités de soins pharmaceutiques parmi les participants. Les données obtenues ont été analysées avec des statistiques descriptives comme les fréquences et les pourcentages en utilisant la version 20 du logiciel SPSS. Le niveau de signification a été fixé à  $p < 0,05$ .

**Résultats:** Vingt-deux (33,8%) répondants ont documenté leurs interventions de soins pharmaceutiques, tandis que 43 (66,2%) ne les ont pas documentés; 8 (18,2%) répondants ont utilisé la documentation informatisée. Seuls 2 (3,1%) répondants ont employé une méthode type de documentation à l'ordinateur; cependant, seul un (1,5%) des 3 répondants pouvait indiquer le format de documentation type qu'il a utilisé. Quinze répondants (25,0%) documentent les références de consultations alors que 50 (76,9%) ne documentent pas les références. Vingt-sept (41,5%) répondants ont documenté et rapporté des réactions indésirables aux médicaments alors que 38 (58,5%) répondants ne l'ont pas. Dix-huit répondants (30,0%) ont documenté les interventions faites sur les problèmes de thérapie médicamenteux alors que 47 (72,3%) répondants ne les ont pas documentées.

**Conclusion:** Presque tous les pharmaciens communautaires à Ibadan étaient au courant du concept de soin pharmaceutiques. Le niveau de documentation entre les pharmaciens communautaires à Ibadan était très bas; cependant, ils étaient prêts à suivre une formation sur le concept de soins pharmaceutiques.

**Mots clés:** Documentation, soin pharmaceutique, pharmaciens, Ibadan.

## INTRODUCTION

The Pharmacists Council of Nigeria (PCN) in 2005 set minimum standards to assure the practice of pharmaceutical care in pharmacy premises.<sup>1</sup> The need for pharmaceutical care practice is frequently addressed in continuing education programs organized by PCN, in conferences and workshops in the country. However, Nigerian pharmacists are yet to fully accept pharmaceutical care concept and implement it in their practice settings. Low satisfaction of patient with pharmaceutical care services has been reported as well.<sup>2</sup>

A great deal has been written about documentation systems in the pharmacy literature, both in clinical practice and in education, but these systems tend to be individualized applications in which the transfer of data to other providers is non-existent or quite limited.<sup>3,4,5,6</sup>

Many documentation systems in pharmacy focus on the generation of reports for workload analysis or accreditation purposes. Unfortunately, the information gathered and analyzed in such applications does little, if anything, to improve patient care if it is not in a real time format. The principal purpose of clinical documentation is to provide a record of what a practitioner does, why it is done, and when possible, what outcomes are achieved. It is essential to document succinctly the patient-specific recommendations and actions taken by pharmacists, such as obtaining medication histories, counseling patients performing patient assessment and monitoring, conducting medication and regimen reviews, and providing medication information are direct services that benefit patients, pharmacists, and other healthcare providers in various practice settings. The provision of these services by pharmacists and their associated outcomes need to be documented and communicated to other healthcare providers on a consistent basis. Documentation that occurs in a vacuum and devoid of real-time dissemination ultimately may not benefit patient care.

Documentation is central to the provision of patient-centered care/pharmaceutical care.<sup>7</sup> Documentation is the primary method to demonstrate value within an organized healthcare system. More importantly, it is the accepted method by which healthcare providers communicate with one another with respect to patient care decision making and clinical outcomes. Thus, if pharmacists in all practice settings are not communicating data/information routinely with other providers, they may not be considered an essential and integral part of the healthcare team. As Cipolle and others, in 2004 suggested that “if you are not

documenting the care you provide in a comprehensive manner, then you do not have a practice”

In the community settings, Pharmacists may be one of the most accessible healthcare providers seen by patients on a regular basis (e.g., when medications are dispensed or over-the-counter products and diagnostics are purchased). By actively participating in the management of prescribed and non-prescribed medication products as well monitoring associated clinical outcomes, Pharmacists can make a valuable contribution to patient care and demonstrate their impact on clinical and economic outcomes. While such activities presently are occurring in community practice, the provision of timely documentation to other providers and patients alike often is lacking.

Documentation enables the Pharmaceutical care model of Pharmacy Practice to be maximized and communicated to vested parties. Access to documentation and communication among sites of patient care must be accurate and timely to facilitate pharmaceutical care. As discussed by Helper, documentation supports care that is coordinated, efficient, and cooperative.<sup>8</sup>

Conversely, failure to document activities and patient outcomes can directly affect patient' quality of care. There are several reasons for failure to document in the medication-use system, and these are related to the process of documentation, the specific data collected on a consistent basis, how documentation is shared (e.g., other Pharmacists, healthcare providers, patients, insurers), and methods by which the data are shared.

Pharmacy practice has shifted from being product-specific to being both product and patient-specific. Documentation is a major aspect of pharmaceutical care. It is a tool for research, training younger colleagues and for audit trails. It is therefore important to assess documentation among community pharmacists in Ibadan.

## METHODS

### Study design

This was a cross-sectional study carried out between August and October, 2013, where pretested structured questionnaires were administered to community pharmacists in Ibadan. The questionnaire assessed the documentation of pharmaceutical care activities among the participants.

### Study population

All registered Pharmacists that work in registered pharmaceutical premises in Ibadan were recruited for the study.

**Sampling strategies and sampling size**

The research involved total sampling. The entire 86 registered pharmacists that worked in registered pharmacies in Ibadan were recruited for the study. The number of registered pharmacists working in registered pharmaceutical premises was obtained from the comprehensive list from the Pharmacist Council of Nigeria at the Pharmaceutical Society of Nigeria Ibadan office at Challenge, Ibadan, Oyo State.

**Inclusion criteria and exclusion criteria**

Only registered Pharmacists were included in the study. The questionnaires were administered to Pharmacists that had their Pharmacies registered with the Pharmacists Council of Nigeria. Pharmacists that were not registered with the

Pharmacists Council of Nigeria were excluded from the study.

**Data analysis and statistics**

The data generated was statistically analyzed using Statistical Package for Social Sciences (SPSS) version 20. Results were presented as frequencies and percentages of the variables.

**RESULTS**

The response rate was 75.6%. Out of the 65 respondents, there were 35 (53.8%) males. The years of experience and the highest academic qualification of respondents are as shown in Figures 1 and 2 respectively.

**Table 1: Years of experience**

Years of Experience	Frequency	Percentage
1-5 years	27	41.5
6-10 years	14	21.5
11-15 years	6	9.2
16-20 years	2	3.1
>20 years	16	24.6

**Table 2: Highest academic qualification**

Highest Academic Qualification	Frequency	Percentage
B. Pharm	49	75.4
M. Sc./M. Pharm	11	16.9
Pharm D	2	3.1
PhD	1	1.5
Others (MBA, MMP)	2	3.1

**Key:** (MBA: Masters in Business Administration; MMP: Masters in Managerial Psychology)

A little greater than half (61.5%) respondents became aware of the pharmaceutical care (PC) concept in pharmacy school; 4 (6.2%) through journals, a little above a tenth (15.4%) through postgraduate studies, 2 (3.1%) through internet, 2 (3.1%) through colleagues. Only 8 (13.6%) respondents fully stated the definition of pharmaceutical care correctly; 21 (32.3%) respondents got it wrong and 36 (55.4%) defined it partially correctly. Only 3 (4.6%) respondents always documented their PC interventions; 17 (26.2%) often, 24 (36.9%) rarely and 21 (32.3%) never documented their PC interventions. Among those that document their PC activities, 36 (81.8%) respondents used manual documentation method while 8 (18.2%) respondents employed computerized documentation method. Only 2 (3.1%)

respondents used a standard method of PC documentation, however, only one (1.5%) of the 2 respondents could specify the standard documentation format that he used.

The community pharmacists in Ibadan, Oyo State rated the importance of documentation of pharmaceutical care in decreasing order of importance as improved desired patient outcomes, promotion of continuity of patient care, increase pharmacist's job satisfaction, evidence of pharmaceutical care action taken, improves patient's perception of pharmacists, communication tool with other healthcare practitioners, improves pharmacist's recognition by other healthcare practitioners, research purposes, legal evidence, to influence policy on pharmaceutical care remuneration

and pharmacist's reimbursement (Table 4). Tables 3 shows the responses of the respondents to various close-ended questions including awareness on PC; willingness to be trained on PC; documentation of adverse drug reactions and documentation of drug

therapy problems. Table 4 reveals the responses on the importance of documentation of pharmaceutical care activities which includes job satisfaction, research purposes and communication tool with other healthcare professionals.

**Table 3: Responses to close-ended (Yes/No) questions**

Items	Responses	
	Yes (%)	No (%)
Are you aware of the PC concept? (n=65)	59 (90.8)	6 (9.2)
Are you willing to undergo PC training? (n=65)	62 (95.4)	3 (4.6)
Do you document PC intervention (n=65)	22 (33.8)	43 (66.2)
Do you use a standard documentation format? (n=65)	2 (3.1)	63 (96.9)
Do you document referrals? (n=65)	15 (23.1)	50 (76.9)
Do you report adverse drug reactions? (n=65)	27 (41.5)	38 (58.5)
Do you document drug therapy problems? (n=65)	27 (41.5)	38 (58.5)
Do you make interventions in the DTPs? (n=65)	33 (50.8)	32 (49.2)
Do you document DTP interventions? (n=60)	18 (27.7)	47 (72.3)

**Table 4: Responses to importance of pharmaceutical care documentation**

Importance of pharmaceutical Care Documentation	Responses (frequency; percentage)										
	1	2	3	4	5	6	7	8	9	10	11
Improved desired patient outcomes (n=49)	30;60	4;8.2	3;6.1	-	1;2.0	4;8.2	3;6.1	1;2.0	1;2.0	1;2.0	1;2.0
Pharmacist's reimbursement (n=45)	2;4.4	4;8.9	3;6.7	2;4.4	5;11.1	4;8.9	2;4.4	4;8.9	2;4.4	8;17.8	9;20.4
Legal evidence (n=46)	6;13.0	8;17.4	5;10.9	3;6.5	7;15.2	3;6.5	3;6.5	7;15.2	2;4.3	2;4.3	-
Communication tool with other healthcare professional (n=45)	6;13.3	8;17.8	7;15.6	6;13.3	5;11.1	3;6.7	2;4.4	3;6.7	1;2.2	4;8.9	-
Research purposes (n=45)	5;11.1	4;8.9	7;15.6	6;13.3	3;6.7	8;17.8	5;11.1	-	4;8.9	2;4.4	1;2.2
Evidence of PC action taken (n=44)	11;25.0	6;13.6	5;11.4	1;2.3	6;13.6	5;11.4	4;9.1	3;6.8	1;2.3	-	2;4.5
Promotes continuity of patient care (n=45)	12;26.7	13;28.9	5;11.1	2;4.4	4;8.9	1;2.2	2;4.4	3;6.7	2;4.4	-	1;2.2
To influence policy on PC remuneration (n=44)	4;9.1	4;9.1	2;4.5	5;11.4	4;9.1	1;2.3	4;9.1	4;9.1	10;22.7	3;6.8	3;6.8
Increase Pharmacist's job satisfaction (n=44)	11;25.0	5;11.4	4;9.1	6;13.6	4;9.1	3;6.8	3;6.8	5;11.4	2;4.5	-	1;2.3
Improves patient's perception of Pharmacists (n=44)	12;27.3	7;15.9	3;6.8	5;11.4	5;11.4	3;6.8	2;4.5	3;6.8	2;4.5	2;4.5	-
Improves Pharmacist's recognition by other healthcare professionals (n=40)	9;22.5	5;12.5	3;7.5	6;15.0	7;17.5	2;5.0	2;5.0	2;5.0	4;10.0	4;10.0	1;2.5

**Key:** The responses were graded with 1 representing the most important and 11 being the least important.

## DISCUSSION

About three quarters of the respondents had B. Pharm as their highest academic qualification and this can be explained by the fact that about one half of the respondents have between one and five years of experience, they may either not have started or completed their postgraduate studies. The years of practice revealed that less than one half of the respondents have one to five years of experience and the cumulative of three quarter have up to 20 years of practice. This is favorable as the younger pharmacists are likely to be the driving force behind pharmaceutical care considering the fact that the older pharmacists are likely to be involved in managerial involvements in the community pharmacies.

Almost all the respondents are aware of the pharmaceutical care concept. This is comparable with a study carried out in Ogun State by Suleiman *et al* in 2011 which assessed the attitude, perception and practice of pharmacists towards pharmaceutical care implementation which reported that most of the respondents (92.2%) were aware of the pharmaceutical care concept.<sup>9</sup> Another study carried out by Suleiman *et al*, (2012) in Ogun State also revealed that almost all the respondents were aware of the pharmaceutical care concept.<sup>10</sup> As far back as 1997, the World Health Organization had encouraged special attention to be placed on knowledge, skills, attitudes and behaviors which support pharmaceutical care model right from undergraduate training.<sup>11</sup> From this study, well over one-half of the respondents became aware of the pharmaceutical care concept while undergoing undergraduate education in the pharmacy schools. This is a good development as it reveals a robust training in the pharmacy schools which is commendable when compared with current trends in the health world. For countries where pharmaceutical care practice is still evolving such as Nigeria, fostering positive pharmaceutical care attitude amongst pharmacists should be the first and fundamental strategy so as to stimulate its wide spread acceptance and implementation. It is equally important to nurture positive pharmaceutical care altitudes not only to practitioners of today but more importantly, the practitioners of tomorrow.<sup>12</sup>

The study revealed that the level of understanding of the pharmaceutical care concept among pharmacists in Oyo State is inadequate as only a little over one tenth of the respondent could correctly define Pharmaceutical care; almost all the respondents are willing to undergo training on pharmaceutical care. This is comparable than with the study by Suleiman *et al* (2012) in Ogun

State which revealed that less than a quarter of the respondents gave correct definition of the pharmaceutical care concept with almost all the respondents willing to know more about pharmaceutical care concept.<sup>10</sup>

The level of documentation of pharmaceutical care practice among community pharmacists in Oyo State is rather low. About two third of the respondents do not document pharmaceutical care interventions. The work by Suleiman and others in 2102 revealed standard format in 9.8% of the total respondents, computerized software in 3.1%.<sup>10</sup> In 2003, Oparah and Eferakeya also showed the lack of documentation among Pharmacists in a study done in Benin City.<sup>13</sup> Duweijua *et al*, (2001) reported that almost 90% respondents (community pharmacists) kept no records of their pharmaceutical care related activities.<sup>14</sup> Oparah *et al*, (2004) also reported lack of some core elements of pharmaceutical care such as patient referral, documentation, drug related problems identification among some community pharmacists in Nigeria.<sup>2</sup> The documentation guidelines for pharmacists developed by Ontario College of pharmacist in 2004 stated the use of a standard format encourages completeness of data, ensures consistency, and improves organization of thought.<sup>15</sup>

Documentation of referrals is an important aspect of pharmaceutical care as it creates awareness on the activities of community pharmacists to other healthcare practitioners. However, only a quarter of the respondents document referrals. Clinical recommendations made by a pharmacist on behalf of the patient, as well as actions taken in accordance with these recommendations, should be documented in a permanent manner that makes the information available to all the health care professionals caring for the patient. In her statement on pharmaceutical care in 1993, the American Society of Hospital Pharmacists believe that, to ensure proper coordination of patients' medication therapies, health care systems must be designed to enable, foster, and facilitate communication and collaboration among health care providers.<sup>16</sup> Documentation is the primary method of demonstrating value within an organized healthcare system. More importantly, it is the accepted method by which healthcare providers communicate with one another with respect to patient care decision making and clinical outcomes. Thus, if pharmacists in all practice settings are not communicating data/information routinely with other providers, they may not be considered an essential and integral part of

the healthcare team. As Cipolle and others have suggested "if you are not documenting the care you provide in a comprehensive manner, then you do not have a practice".<sup>7</sup> About one half of the respondents report adverse drug reactions. This shows the need for awareness on pharmacovigilance to ensure that adverse drug reactions are reported to the appropriate quarters for adequate actions to be taken.

The rating of the importance of pharmaceutical care showed that the community pharmacists in Ibadan, Oyo State regard the patient-centered advantages of improved desired outcomes as the most important, followed by the promotion of patient's continuity of care even when the primary pharmacists is not available; and the pharmacists-centered advantages of serving as legal evidences as the least but one and remuneration as the least important, Oyo State are well positioned as far as patient-centeredness is concerned in the importance of documentation.

One major limitation to this study is that the information provided is as accurate as the sincerity of the participants in their responses. Also, it would have been better if an intervention was made so that the gaps discovered were addressed. However, this would be considered for further research.

## CONCLUSION

The study reveals that level of documentation of pharmaceutical care activities among community pharmacists in Ibadan, Oyo State is very low. The respondents were however willing to undergo training on the pharmaceutical care concept. The assessment of the importance of documentation revealed that the respondents were mindful of the patient-centered importance and they rated such above the pharmacist's-centered importance. Their method of documentation is majorly manual.

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