

## Knowledge, Perception and Practice of Medication Use Review among Community Pharmacists in Southwestern Nigeria

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A – research concept and design; B – collection and/or assembly of data; C – data analysis and interpretation; D – writing the article; E – critical revision of the article; F – final approval of article.

### Abstract

**Background:** Medication use review (MUR) is an emerging concept in medicine management that has recorded success in many developed countries.

**Purpose:** To evaluate knowledge, perception and practice of MUR among community pharmacists (CP) in southwestern Nigeria.

**Method:** A cross-sectional study was carried out among 100 CP recruited from Oyo and Osun states between January and March, 2015, using a pre-tested questionnaire. Demographic information and CP's knowledge, perception and current practice of MUR were evaluated using open-ended, closed-ended and Likert-scale questions. Respondents' scores for 6-item knowledge test questions and description of specific component of MUR services were categorised as score >3 (good knowledge) and score ≤3 (poor knowledge). Descriptive statistics were used to summarize data. Ranked variables were evaluated using Kruskal-Wallis test at  $p < 0.05$ .

**Results:** Fifty-nine (59.0%) CP from Oyo and 41 (41.0%) from Osun state participated. Sixty-five (70.7%) had score >3 indicating "good" knowledge of MUR, while 27 (29.3%) had score ≤3 suggesting "poor" knowledge. Forty-two (42.0%) claimed to provide MUR service; of this, 14 (33.3%) had scores >3 indicating those who gave correct description of specific component of MUR. Lack of adequate time for counselling (49; 49.5%) and lack of specialized training for pharmacists (45; 45.5%) were cited as barriers to MUR practice. Majority (51; 51.5%) agreed that MUR service should be incorporated into community pharmacy practice.

**Conclusion:** Knowledge of MUR concept among community pharmacists in Oyo and Osun states is considerable, but description of specific component of MUR services by respondents was poor. There is therefore a need for continuous training on emerging concepts among pharmacists, so as to stimulate interest in patient-oriented service.

**Keywords:** Medication use review, Community pharmacist, Knowledge, Perception

### INTRODUCTION

In recent times, pharmacy practice is evolving and pharmacists are changing old roles to adopt new and extended roles to meet up with the evolving healthcare landscape (Swift, 1993; WHO, 1997; Erah & Nwazuoke, 2002; Farris *et al.*, 2005; Wiedenmayer *et al.*, 2006). Medicines Use Review (MUR) is a new and emerging community-based pharmacy service designed to help improve medicines use (Zermansky, 2001; Room for Review, 2002; NHS, 2013). It aims to educate patients about their medicines and improve medicines adherence as well as identify barriers to proper medicine use and resolve any medication-related issues (Zermansky *et al.*, 2001; Room for Review, 2002; Lefante *et al.*, 2005). This concept is consistent with the philosophy of

pharmaceutical care which has become the primary mission of the pharmacy profession (Erah & Nwazuoke, 2002; Farris *et al.*, 2005; Wiedenmayer *et al.*, 2006).

The ease of access to community pharmacies in many developed and developing countries makes their potential to contribute to medication-related education and involvement in disease management most essential (Sturgess *et al.*, 2003; Krska & Avery, 2007). Administration of drug therapy is an integral part of pharmacy practice, but pharmacists have overtime dissociated themselves from the responsibility of monitoring the use of drugs they administer (McGivney *et al.*, 2007), with resultant effect of increasing incidence of

medication-related problems (MRPs). Medication-related problem is a significant cause of hospital admissions, morbidity and mortality in the community, with financial cost of these admissions to individual patients and the healthcare system being very substantial (Zermansky *et al.*, 2001; Urbis, 2005; MOH New Zealand, 2007). Medication-related problems may involve the use of medicines without an indication, untreated indication, improper drug selection, sub-therapeutic dosing, overdosing, adverse drug reactions, drug interactions or failure to receive indicated medication (McGivney, 2007; Pharmaceutical Society of Australia, 2011). The potential cause(s) of medication-related problems include patient confusion or misunderstanding, failure to follow doctors' instructions, lack of understanding of potential adverse drug interactions, and prescribers' and/or pharmacists' lack of awareness of all medications that the patient is taking, including herbal or complementary medicines, over the counter preparations or those prescribed by other prescribers in cases where patients are attend to by two or more different prescribers (Goldfarb *et al.*, 2004; Urbis, 2005). Provision of MUR services by pharmacists may be one such intervention to resolve MRPs, thereby reducing medication misadventure among high risk individuals by identifying and minimizing barriers to effective treatment (Sorensen *et al.*, 2004; Hanlon *et al.*, 2004).

Medication use review is an important component of medicine management and pharmaceutical care and it tackles the challenge of non-optimum benefit from medicine use resulting in sub-optimal treatment outcomes and declining patient's quality of life (NHS, 2013). Some developed countries have adopted full implementation of medication use review with records of increased success (David *et al.*, 2007; Kriska and Avery, 2007; Rigby, 2010; Pharmaceutical Society of Australia, 2011). However, in developing countries including Nigeria, evidence-based research on current practices of medication use review is scarce. This study therefore aimed to evaluate knowledge, perception and practice of medication use review among community pharmacists in Oyo and Osun states in southwestern Nigeria, with a view to identify areas of focus for future intervention.

## MATERIALS AND METHODS

### Study population/study site

Superintendent pharmacists in registered community pharmacies in Oyo and Osun states, southwestern Nigeria.

### Study design

A prospective cross-sectional study among superintendent community pharmacists in Oyo and Osun states, Southwestern Nigeria between January and March, 2015, using pre-tested questionnaires. Ethical approval for the study was obtained from the Ethical Review Committee in the Ministry of Health of each state.

### Inclusion criteria/Exclusion Criteria

Eligible participants were registered community pharmacists practicing in the capital cities of Oyo and Osun states, and who gave voluntary informed consent to participate in the study. Participants included must also have at least one year practice experience in community pharmacy. Superintendent pharmacists in wholesale outlet or those in retail outlets who were not present in their respective pharmacy at the time of questionnaire administration, or who declined participation were excluded.

### Sample size determination

Representative sample size was calculated based on estimated population of 164 registered community pharmacists with the Pharmacists' Council of Nigeria for the year of study, comprising 108 from Oyo and 56 from Osun state, at 95% confidence level and 5% margin of errors. Allowing for a 10% non-response rate, target sample size of 110 was calculated using Raosoft® sample size calculator ([www.raosoft.com/samplesize.html](http://www.raosoft.com/samplesize.html)).

### Sampling technique and recruitment procedures

All eligible superintendent community pharmacists were visited in their respective premises. Objectives of the study were explained to individual participants after which verbal informed consent was obtained. The questionnaire which took about 20 minutes to complete was self-administered by respondents, while they were assured that participation is fully voluntary and confidentiality of responses is guaranteed.

### Data collection instrument

The questionnaire, as the main instrument for data collection, comprised open-ended, closed-ended and Likert-scale type questions. The questionnaire consisted of three sections. Section A evaluated socio-demographic characteristics and years of experience in community pharmacy practice. Section B assessed current roles/duties as a community pharmacist, as well as exploring respondents' answer to the 6-item knowledge test questions on medication use review (MUR) concept and definition (Room for Review, 2002; HSCB, 2014). Respondents' answers to the knowledge test questions were scored, with maximum obtainable scores of six points. Every correct answer attracted a score of one point, while an incorrect answer is assigned zero point. Respondents were also made to describe specific components of MUR service they engaged in and were subsequently scored. The key components of MUR were divided into six domains with correct description of a specific component attracted one point. Each respondent was scored based on the number of specific components described or mentioned. A binary categorization of scores by respondents for knowledge test questions of MUR and

description of specific components were developed as  $\leq 3$  versus  $> 3$  to indicate “poor” and “good” knowledge or description, respectively.

Section C comprised 4-point Likert scale questions to assess respondents’ perception on introduction of MUR services into community pharmacy settings, as well as evaluation of barrier(s) to engagement in MUR practice. The response options ranged from strongly agree (1), agree (2), disagree (3) and strongly disagree (4).

### Pre-test and validation of instrument

The questionnaire was pretested for content validity among five pharmacists chosen from academia and hospital. Feedback from pre-test led to some modifications including rephrasing of questions which were initially designed in dichotomous Yes/No responses to Likert scale options to enable respondents’ clarification of intention.

### Data analysis

Data was sorted, coded and entered into SPSS version 18.0 for analysis. Descriptive statistics including frequency and percentage were used to summarize data. Median value (50<sup>th</sup> percentile) was used in describing respondents’ opinion in ranked variables. Chi-square test was used to evaluate association of respondents’ educational qualification and years of experience in practice with knowledge score on MUR concept and definition. Respondents’ opinions on hindrance to MUR practice in ranked variables were evaluated with years of experience in practice using Kruskal Wallis test. The priori level of significance,  $p < 0.05$ .

## RESULTS

Of the 110 copies of questionnaire administered within the study period, 100 were completely filled and returned giving a response rate of 90.9%. Participants from Oyo state made up 59 of the total (59.0%), while 41 (41.0%) responses were from Osun state. Males constituted the higher proportion of gender (68; 68.0%), while majority (71; 71.0%) were married. Twenty-three (23.0%) had additional postgraduate qualification. Majority (48; 48.0%) had between 1-5 years’ experience in community pharmacy practice. Details of socio-demographic characteristics are shown in Table 1. Participants mentioned the roles currently performed in their place of practice to include mostly patient education (99; 99.0%), processing of prescription and dispensing (94; 94.0%) and stock taking/inventory management (88; 88.0%). Production of extemporaneous preparation was the least (12; 12.0%) duty mentioned (Table 2).

Response to knowledge test questions on MUR concepts and definition showed that 65 (70.7%) had score  $> 3$  indicating “good” knowledge, while 27 (29.3%) had score

$\leq 3$  suggesting “poor” knowledge of MUR concept and definition. Details of response on knowledge test questions and score of description of specific component of MUR service are shown in Table 3. Statements made by respondents suggesting “good description” of MUR services include “*I ask patients about the drugs they are currently taking, I also probe for over-the-counter and herbal remedies use. I go through the drugs to ensure that they are no drug therapy problems and if yes, I intervene or refer them to physician with suggested alternatives as appropriate*” Statements considered as “poor description” of specific component of MUR services include “*Obtaining feedback from patients on medication used*”. There was no significant association between respondents’ years of experience in practice and knowledge of MUR ( $p = 0.29$ ) Table 4.

A slight majority of the respondents (51; 51.5%) agreed that MUR service should be introduced into community pharmacy practice, though, a substantial number (46; 46.5%) were of the opinion that MUR practice is time consuming. A larger proportion (55; 55.6%) strongly agreed that MUR service builds professional relationship with patients, and most respondents indicate willingness to get involved in the provision of MUR service in their practice setting. There were no associations between respondents’ perception of MUR services and years of experience in community pharmacy practice ( $p > 0.05$ ). Details are shown in Table 5.

Most of the respondents (58; 58.6%) agreed that lack of collaboration among members of the healthcare team, lack of adequate time for counselling (49; 49.5%), lack of specialized training for pharmacists (45; 45.5%) and absence of financial rewards for additional duties (41; 41.4%) are contributory barriers to practice of MUR. Respondents largely disagreed with absence of drug information sources to refer to (64; 64.6%) and lack of adequate counselling space (52; 52.5%) as barriers to MUR services. Details are shown in Table 6.

Respondents’ list of duties to add or remove from the currently performed roles as a community pharmacist are shown in Table 7. Increased involvement in simple diagnostic or point of care test (6; 14.6%), patient counselling (6; 14.6%) and proper documentation of patient’s medication profile (6; 14.6%) top the list of duties to add to current duties as a community pharmacist. Sale of non-drug items (3; 27.3%) and drug purchasing (2; 18.2%) were cited as activities mostly desired to remove from their current roles as a community pharmacist.

## DISCUSSION

Most respondents had between 1-5 years of practice experience in community pharmacy, and about one-third had additional postgraduate qualification. In general, pharmacist’s involvement in medication use review

(MUR) services as an integral component of pharmacy practice may not necessarily require additional postgraduate qualification, rather a form of specialized training focusing largely on how to engage patients in qualitative and purposeful counselling to enhance pharmacist-patient therapeutic relationship is essential (Teh, 2001; Iversen *et al.*, 2001; Hudman *et al.*, 2006). In most schools of pharmacy in Nigeria and other developing countries, the undergraduate curriculum for Bachelor of Pharmacy training program may not extensively incorporate or integrate emerging topics such as MUR services (Erah & Nwazuke, 2002; Sapong, 2004; Cameron *et al.*, 2006). Thus, many graduate pharmacists may not really appreciate the importance and relevance of such emerging concepts to pharmacy professional practice.

It is noteworthy to say that respondents' knowledge of MUR and definition is considerable, with more than two thirds having good knowledge. However, a substantial number who claimed involvement in MUR services in their practice setting could not accurately describe the specific components of MUR they offer to patients. This is consistent with studies which report poor knowledge of MUR and pharmaceutical care among pharmacists in different practice settings (Urbis, 2005; Renberg & Tully, 2006; Krska & Avery, 2007; Babiker *et al.*, 2014). Medication use review is a patient-centered service that should be encouraged among pharmacists generally irrespective of the areas of pharmacy practice. Provision of MUR services by a pharmacist, especially in community pharmacy setting will ensure value-added roles that will enhance pharmacist's relevance in their respective practice environment (Teh, 2001; Iversen *et al.*, 2001; Hudman *et al.*, 2006). This is in line with the overall goal of pharmaceutical care which is defined as responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life (Hepler & Strand, 1990). Studies have documented that extended patient consultations with healthcare providers are much valued by patients (David *et al.*, 2007; Krska & Avery, 2007; Babiker *et al.*, 2014). Patients have also reported a sense of empowerment, perception of safety and increased medication knowledge following a patient medication record review service (Renberg & Tully, 2006), as well as a sense of satisfaction with the service (Stutgess *et al.*, 2003; Sorensen *et al.*, 2004). There is therefore a need to examine the positive and negative impacts of various pharmacy services with a view to identifying areas where improvements can be made to maximize health benefits (Renberg & Tully, 2006).

In this study, years of experience in practice and possession of additional postgraduate qualification did not significantly affect participants' knowledge of MUR concept and definition. Larger proportion of respondents with good knowledge of MUR within the 1 -10 years practice experience possibly suggest that pharmacy

graduates within these practice years constitute bulk of the so-called young pharmacists who may be eager to learn new and emerging concepts in pharmacy practice, and as such many may tend to seek further knowledge to improve themselves and advance their career (Chen & de Almeida Neto, 2007; Henman, 2008; Brazeau *et al.*, 2009) Irrespective of the years of experience in practice, pharmacists should generally seek out programs to enhance their usefulness and continued relevance as an integral member of the healthcare team.

Interestingly, a substantial number of respondents indicated willingness to get involved in the provision of MUR services and strongly agreed that engagement in MUR service builds professional relationship with patients. Sorensen *et al* (2004) in a trial looking at medicines review in the community reported positive trends in both clinical outcomes and costs, with cost-effectiveness consultations. Also, David *et al* (2007) reported that medication reviews conducted by a trained pharmacist shown to produce important cost savings, even after the deduction of the interventions' costs. Thus, Pharmacists Council of Nigeria (PCN) as a key stakeholder involved in the yearly mandatory continuing professional development (MCPD) program for pharmacists may need to take cognizance of this, and consider the inclusion of emerging topics such as MUR concept and services into the periodic professional modules. The MCPD program may be an appropriate medium to disseminate such information, as well as serve as a platform to stimulate pharmacist's interest and willingness to engage in patient-oriented services including MUR.

Lack of financial reward for additional duties and time constraints for counselling among others were mentioned as barriers for non-involvement in MUR service. This is well described in the literature indicating that the barriers are inherently linked to the structure of the health care system. Lack of appropriate or sustainable remuneration for the pharmacist was collectively seen as the largest barrier to service provision by pharmacists in different practice settings (Campbell & Saulie, 1998; Berbatis *et al.*, 2007). Thus, the need to take cognizance of respondents' opinions in these regards and put them into consideration in future decisions concerning pharmacy practice. It is also important to note that in spite of the fact that adequate counselling space and willingness of patient to give useful information are essential for effective counselling, a slight deficit in these should not deter pharmacists from rendering their professional responsibility to patient as envisioned in the philosophy of pharmaceutical care practice (Helper & Strand, 1990; Schommer, 1994).

Patient education and processing of prescriptions for dispensing which are primary duties of community pharmacists top the list of currently performed roles by respondents, while involvement in extemporaneous

preparation was least mentioned. This may be expected since any form of emerging duties for pharmacists should complement and build on the traditional roles rather than discard it outright. It is however noted that many respondents prefer to remove roles such as sales of non-drug items and stock-taking/inventory management from their current duties thereby focusing more on activities such as point-of-care/simple diagnostic test and proper documentation of patient' medication profile that will enhance counselling and impact directly on patient care. These are useful observations that need to be considered and utilized by concerned stakeholders, especially now that there is increased awareness and interest among pharmacists to embrace specialisation in pharmacy practice. Patient's counselling to ensure appropriate use of medicine is integral to providing patient-centered pharmaceutical care (Hartoum *et al.*, 1993). In addition to reducing medication-related morbidity and its associated

costs, medication use review with appropriate counselling benefits patients by reduction in adverse drug reactions, resolving non-adherence problems and preventing the occurrence of medication errors (Hepler & Strand, 1990; Hartoum *et al.*, 1993).

This study is limited by the fact that it was carried out in capital cities of the two states, while opinions of community pharmacists practicing in the suburbs might have also be useful in reaching a far-reaching conclusion. Also, the sample size may be considered to be small, but representative of PCN registered community pharmacists in the two states within the study period. In addition, we did not compare the differences in responses of community pharmacists from the two states. Thus, a need for future study that will put all these into consideration so as to ensure widespread generalisation of findings.

**Table 1: Socio-demographic characteristics of respondents**

<b>Variables</b>	<b>Frequency (%)</b>
<b>Gender (n=100)</b>	
Male	68 (68.0)
Female	32 (32.0)
<b>Marital status (n=100)</b>	
Married	71 (71.0)
Single	28 (28.0)
Widowed	1 (1.0)
<b>Educational qualification (n=100)</b>	
B.Pharm	100 (100.0)
<b>Other educational qualifications (n=21)</b>	
M. Sc./M.Pharm	12 (57.1)
MBA/MPH	6 (28.6)
FPC Pharm	1 (4.8)
FPGEE	1 (4.8)

Ph.D	1 (4.8)
<b>Number of years in practice (year)</b>	
≥ 1-5	48 (48.0)
6-10	14 (14.0)
11-15	8 (8.0)
16-20	6 (6.0)
>20	24 (24.0)

Key: B. Pharm = Bachelor of Pharmacy, M. Sc. = Master of Science, M. Pharm = Master of Pharmacy, MBA = Masters in Business Administration, MPH = Masters in Public Health, FPC Pharm = Fellow Postgraduate College of Pharmacy, FPGEE = Foreign Pharmacist Postgraduate Equivalent Education, Ph.D = Doctor of Philosophy

**Table 2: Current roles/duties performed by community pharmacists**

Variable	Frequency (%)	
	Yes	No
Patient Education	99 (99.0)	1 (1.0)
Processing prescriptions and dispensing	94 (94.0)	6 (6.0)
Supervision of staff	94 (94.0)	6 (6.0)
Stocktaking/inventory management	88 (88.0)	12 (12.0)
Monitoring drug use	80 (80.0)	20 (20.0)
Sales of non-drug items	77 (77.0)	23 (23.0)
Drug requisition	76 (76.0)	24 (24.0)
Weight management	67 (67.0)	33 (33.0)
On-the-spot diagnostic tests	57 (57.0)	43 (43.0)
Reporting adverse drug reaction	44 (44.0)	56 (56.0)
Production of extemporaneous preparations	12 (12.0)	88 (88.0)

**Table 3: Knowledge test questions on medication use review among respondents**

Concept and definitions of Medication Use Review	Frequency (%)	
	Yes	No
<b>Medication Use Review:</b>		
1. Check concordance and compliance*	83 (90.2)	9 (9.8)
2. Is a full clinical medication review**	69 (75.0)	23 (25.0)
3. Intends to change drug therapy**	34 (37.0)	58 (63.0)
4. Identifies if patients know how to use their medicines*	87 (94.6)	5 (5.4)
5. Can be carried out by doctors and nurses*	44 (47.8)	48 (52.2)
6. Does not necessarily build a professional relationship with the patient**	12 (13.0)	80 (87.0)
<b>Cut-off</b>		
Poor knowledge (Score $\leq$ 3)	27 (29.3)	
Good knowledge (Score $>$ 3)	65 (70.7)	
<b>Practice of MUR in participant's premise</b>	<b>Yes</b>	<b>No</b>
Do you provide MUR in your premise?	42 (42.0)	58 (58.0)
If yes, scores for description of specific component of MUR service		
0	5 (11.9)	
1	4 (9.5)	
2	14 (33.3)	
3	5 (11.9)	
4	11 (26.2)	
5	3 (7.1)	
<b>Cut-off</b>		
Poor description of specific component of MUR service (Score $\leq$ 3)	28 (66.7)	
Good description of specific component MUR service (Score $>$ 3)	14 (33.3)	

Key: MUR = Medication Use Review; \*Correct answer with respect to MUR concept and definition, \*\* incorrect answer to MUR concept, Only valid responses were considered for analysis

**Table 4: Relationship of respondents' educational qualification and years of experience in practice with knowledge of medication use review**

Variables	Knowledge of MUR n (%)		Chi-square	p-value
	Poor	Good		
<b>Educational qualification</b>				
B. Pharm only	20 (26.7)	55 (73.3)		
B. Pharm. + Postgraduate qualification	8 (47.1)	9 (52.9)	1.84	0.17
<b>Years of experience in practice</b>				
1- 10	16 (27.1)	43 (72.9)		
11 -20	6 (50.0)	6 (50.0)		
21 years and above	6 (28.6)	15 (71.4)	2.51	0.29

Key: MUR = Medication Use Review; n = number; Level of significance  $p < 0.05$ , Only valid responses were considered for analysis



**Table 5: Respondents' perception of medication use review and relationship with years of experience in practice**

Variables	Strongly agree	Agree n (%)	Disagree	Strongly disagree	50 <sup>th</sup> Percentile	K-W p-value
a. Medication use review raises the profile of the community pharmacist	43 (43.4)	53 (53.5)	1 (1.0)	2 (2.0)	2	0.11
b. Medication use review builds professional relationship with patients	55 (55.6)	42 (42.5)	2 (2.0)	-	1	0.40
c. Medication use review service is time consuming	4 (4.0)	46 (46.5)	34 (34.3)	15 (15.2)	2	0.06
d. Limitations to medication use review services outweigh the benefits	10 (10.1)	16 (16.2)	52 (52.5)	21 (21.2)	3	0.08
e. Only clinical pharmacists should perform a medication use review service	13 (13.3)	19 (19.4)	50 (57.0)	16 (16.3)	3	0.22
f. Medication use review services should be introduced into community pharmacy practice	47 (47.5)	51(51.5)	1 (1.0)	-	2	0.34
g. I will like to be involved in the provision of medication use review	54 (54.5)	43 (43.5)	2 (2.0)	-	1	0.83

Key: K-W - Kruskal Wallis test for respondents' opinion and number of years in practice; strongly agree = 1, agree = 2, disagree = 3, strongly disagree = 4; only valid responses were considered for analysis

**Table 6: Respondents' opinion on hindrance to practice of medication use review and relationship with years of experience**

Variables	Strongly agree	Agree n (%)	Disagree	Strongly disagree	50 <sup>th</sup> Percentile	K-W p- value
a. Need for standard operating procedures for effective medication use review process (n=99)	43 (43.4)	47 (47.5)	7 (7.1)	2 (2.0)	2	0.85
b. Lack of clear cut purpose for medication use review in our environment (n=99)	1 (1.0)	22 (22.2)	51 (51.5)	25 (25.3)	3	0.30
c. Lack of adequate time for counselling patient (n=99)	7 (7.1)	49 (49.5)	30 (30.3)	12 (12.0)	2	0.06
d. Lack of specialize training for pharmacists who wish to engage in MUR (n=99)	42 (42.4)	45 (45.5)	7 (7.1)	4 (4.0)	2	0.07
e. Insufficient staff strength (n=99)	18 (18.2)	44 (44.4)	31 (31.3)	6 (6.1)	2	0.83
f. Lack of adequate counselling space in most pharmacy (n=99)	7 (7.1)	22 (22.2)	52 (52.5)	18 (18.2)	3	0.38
g. Lack of collaboration between members of the healthcare team (n=99)	24 (24.2)	58 (58.6)	15 (15.2)	2 (2.0)	2	0.40
h. Absence/lack of financial reward for the additional duties (n=99)	18 (18.2)	41(41.4)	33 (33.3)	7 (7.1)	2	0.42
i. Patient unwillingness to be counseled or give information (n=99)	7 (7.1)	27 (27.3)	52 (52.5)	13 (13.1)	3	0.09
j. Lack of efficient drug information sources to refer to (n=99)	4 (4.0)	6 (6.1)	64 (64.6)	25 (25.3)	3	0.30

Key: K-W = Kruskal Wallis test for respondents' opinion and number of years in practice; strongly agree = 1, agree = 2, disagree = 3, strongly disagree = 4; only valid responses were considered for analysis; n = number

**Table 7: Respondents' opinion on activities to add or remove from current duties**

<b>Activities to remove (n = 11)</b>	<b>Frequency (%)</b>
Sales of non-drug items	3 (27.3)
Drug purchasing	2 (18.2)
Stock taking and Inventory management	2 (18.2)
All duties except supervisory	1 (9.1)
Drug requisition	1 (9.1)
Involvement in cashier activities, sales monitoring	1 (9.1)
Weekend duties without cut in pay	1 (9.1)
<b>Activities to add (n = 41)</b>	
Carrying out more simple diagnostic tests	6 (14.6)
Patient counselling	6 (14.6)
Engaging in proper documentation of patient medication profile	6 (14.6)
Drug purchasing/requisition	5 (12.2)
Use of computers to enhance documentation	3 (7.3)
Patient follow-up	3 (7.3)
Medication use review	2 (4.9)
Organizing community-based house outreaches	2 (4.9)
Administration of injectable	2 (4.9)
Regular attendance to advanced trainings	1 (2.4)
Specialization in area of Pharmacy practice	1 (2.4)
Production of extemporaneous preparations	1 (2.4)
Dispensing strictly on prescription alone	1 (2.4)
Reporting adverse drug reactions	1 (2.4)
Internet services as source of drug information	1 (2.4)

**CONCLUSION**

Knowledge of the concept of medication use review among community pharmacists in Oyo and Osun states is considerable, but there was poor description of its specific

component by some of those who claimed to provide the service in their practice setting. Respondents largely support introduction of medication use review service into community pharmacy practice. There is therefore a need

for continuous training of pharmacists on emerging concepts in pharmacy practice. Concerned stakeholders such as Pharmacists Council of Nigeria should also consider incorporation of such emerging topics into the

mandatory continuing professional development programme modules so as to ensure continuous stimulation of pharmacist's interest in patient-oriented services.

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