

**EVALUATION OF DOCUMENTATION OF PATIENT MEDICATION RECORDS
IN COMMUNITY PHARMACIES IN ILORIN, KWARA STATE, NIGERIA: A
BEFORE AND AFTER STUDY**

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Abstract

Background: Documentation is said to be the heart of Pharmaceutical Care and without documentation, provision of Pharmaceutical Care is incomplete. Community pharmacies are the health care outlets that are closest to the community and provide a wide range of health care delivery services including Patient Medication Record (PMR). PMR's primary purpose is to convey information for use in patient care. The objectives of the study were to assess the community pharmacists' knowledge of PMR, evaluate documentation of PMR and provide intervention to improve documentation of PMR.

Method: The study was carried out in Ilorin, capital of Kwara State, Nigeria. Data was collected by use of pretested self-administered questionnaire distributed to forty two registered community pharmacies in Ilorin. The questionnaire was designed based on Royal Pharmaceutical Society of Great Britain (RPSGB) Clinical Governance Assessment. Intervention was carried out using seminar method to educate the community pharmacists on the importance of keeping PMR using a PMR tool (paper type) and encouraging them to do so. A post intervention study was carried at 2 weeks and 3 years after, to determine the impact of the intervention on the knowledge and usage of the PMR tool.

Result: Those that responded were 37 (88%). Twelve (32%) of the responding pharmacists had PMR form but only 10 (27%) entered information into it in pre intervention study.

However at the 2 weeks post intervention study, 35 (94.6%) of them had PMR form and 24 (64.9%) actually used it while 32 (86.5%) had and 30 (81.1%) used the form 3 years post intervention. There was statistically significant difference between pre and post intervention studies on the use of PMR tool. There was no statistical significant difference between the 2 weeks and 3 years post intervention in having and using the PMR tool which implies that the intervention was sustained over a period of 3 years.

Conclusion: The intervention improved the documentation of patient medication record by community pharmacists in Ilorin and this was sustained over a period of 3 years.

Key words: Intervention, Documentation, Community pharmacy, Patient Medication Record (PMR)

INTRODUCTION

Documentation is said to be the heart of Pharmaceutical Care and without documentation, provision of Pharmaceutical Care is incomplete¹.

Community pharmacies are the health care outlets that are closest to the community and provide a wide range of health care delivery services including Patient Medication Record (PMR). PMR's primary purpose is to convey information for use in patient care. The PMR prompts pharmacists during dispensing, especially for drug interactions and can be used for stock control and targeting health promotion².

Medication record keeping in community pharmacies can be very useful to the pharmacists, patients and other health care practitioner in the management of the patient and can be used for strategic planning and budgeting in the health sector and also a source of statistics for disease prevalence and drugs consumption³.

The pharmacist verifies the legality, safety and appropriateness of the prescription order, checks the patient medication record before dispensing the prescription⁴

The improvement in usage of PMR tool if sustained will generate three types of output over a long period of time. These outputs are Pharmaceutical Care Patient chart; The patient's personalized Pharmaceutical Plan and Management Report⁵

Improved PMR in community pharmacies can also facilitate information exchange among different health care providers that are directly responsible for treatment of patient.

Computerization of medical and pharmacy records affords providers and institutions unique ways to store voluminous amounts of health data without the expansive storage that was necessary in the past⁶.

Research has demonstrated that discharge medication summaries provided to the patient, GP and the patient's nominated community pharmacist help reduce re-admissions.⁷⁻⁹

The objectives of the study were to assess the community pharmacists' knowledge of PMR, evaluate documentation of PMR and intervention to improve documentation of PMR.

METHODS

The Population

The study was carried out in Ilorin township which is the capital of Kwara State. There were forty two registered pharmacies in Ilorin from ACPN Kwara state chapter's record as at the period of study, providing pharmaceutical products and pharmaceutical care to the entire population of Ilorin.

Sample Size and Sample Technique

Since the total number of registered community pharmacies in Ilorin during the period of study was forty two, the entire community Pharmacists in Ilorin were sampled and given the questionnaire.

Sources of data

The data was obtained by administering questionnaire to the entire registered community pharmacists in Ilorin. The questionnaire was designed to provide information such as year of graduation, additional qualification, knowledge and usage of patient medication record. Other information expected from the questionnaire includes the use of electronic patient medication record, categories of diseases considered for patient medication record keeping.

The same questionnaire was administered to the community pharmacists thrice, that is, pre-intervention, 2 weeks and 3 years post intervention.

Pre-intervention study

The questionnaire was administered to all community pharmacists in Ilorin before the intervention to obtain their basic knowledge on patient medication record and also to assess

whether the community pharmacists in the state were keeping patient medication record and for which categories of diseases.

It was also intended to determine whether intervention was needed and which area was the intervention required.

Data was collected by use of pretested self-administered questionnaire distributed to all registered community pharmacists in Ilorin. The questionnaire was designed based on RPSGB¹⁰.

The response of the questionnaire administered in the pre-intervention study was analyzed and the outcome showed the area where intervention was needed.

Intervention

Intervention was carried out using seminar method to educate the community pharmacists on the importance of keeping PMR using a PMR tool (paper type) and were also encouraged to do so.

The seminar was participatory and there was question and answer session. At the end of the seminar, the community pharmacists were given sample of the PMR form and they were encouraged to make more copies and start using it to keep medication record of their patients.

Post Intervention

The same questionnaire used in the pre-intervention study was administered two weeks and three years after the intervention. This provided data on the effect of the intervention on the knowledge and usage of PMR in the community pharmacy.

Also physical assessment and sighting of PMR form filled by the community pharmacists was carried out to ascertain the usage of the PMR form.

Data Analysis

The questionnaires distributed for the pre and post intervention studies were retrieved from the registered community pharmacists sampled. The responses were collated and data obtained were analyzed using a statistical software programmes SPSS 10 and EPI Info 16.

The result obtained from pre-intervention study was compared with the result obtained in from post intervention study using chi square test. Significance level was fixed at $p < 0.05$

RESULTS

Those that responded were 37 (88%). The demographic distribution of the responding pharmacists shows that male pharmacists were 27 (73%) while female Pharmacists were 10 (27%). Twelve (32%) of the responding pharmacists had PMR form but only 10 (27%) entered information into it in pre intervention study. However at the 2 weeks post intervention study, 35 (94.6%) of them had PMR form and 24 (64.9%) actually used it while 32 (86.5%) had and 30 (81.1%) used the form 3 years post intervention.

The results showed that statistically significant difference existed between pre and post intervention studies on the use of PMR tool ($p < 0.001$). There was no statistical significant difference between the 2 weeks and 3 years post intervention in having and using the PMR tool ($p = 0.233$ and 0.116 respectively).

Table 1: Knowledge and Use of PMR Pre- and Post-Intervention

	Pre-Intervention n (%)	2 weeks Post Intervention n (%)	3 years Post Intervention n (%)
Have PMR tool	12 (32.4)	35 (94.6)	32 (86.5)
Use PMR form	10 (27.0)	24 (64.9)	30 (81.1)
Heard of PMR form	35 (94.6)	37 (100.0)	35 (94.6)
Seen PMR form	27 (73.0)	36 (97.3)	37 (100.0)

DISCUSSION

From the result, there was no statistically significant difference between the pre and post intervention studies in the knowledge ($p > 0.05$) of PMR among the community pharmacists but there was statistically significant differences (improvement) between the pre intervention and post intervention studies in the usage of PMR tool by the community pharmacists in the study ($p < 0.001$), and the number of community pharmacists that had seen the PMR ($p < 0.05$). Improvement in usage of PMR tool is an indication of improvement in the provision of pharmaceutical care in the community pharmacy practice since documentation is the heart of Pharmaceutical Care from the slogan, “if you don’t write it you did not do it”.

The results showed that statistically significant difference existed between pre and post intervention studies on the use of PMR tool ($p < 0.001$) but there was no statistically significant difference between the 2 weeks and 3 years post intervention in having and using the PMR tool ($p = 0.233$ and 0.116 respectively) which implies that the intervention was sustained over a period of 3 years.

The improvement in usage of PMR tool as observed in this study, if sustained will generate three types of output over a prolonged period of time. The outputs are Pharmaceutical Care Patient chart; the Patient’s personalized Pharmaceutical Plan and Management report⁵.

Pharmaceutical Care Patient chart is the most important and without it Pharmaceutical Care cannot be provided. It is the source document for other reports¹¹.

Improved PMR in community pharmacies can also facilitate information exchange among different health care providers that are directly responsible for treatment of patient⁵.

Patient medication record obtained from community pharmacies can also be used to refer patient to medical practitioners. Adequate documentation of PMR in the community pharmacies can be used as a measure of adherence. For example, community pharmacy refill

record can be used as a measure of adherence to anti-retroviral agents and as predictor of viral load response¹². Use of PMR and access to summary care record in community pharmacies can benefit patients and pharmacy practice¹³.

CONCLUSION

This result of this study showed that the intervention improved the attitude of community pharmacists towards patients' medication record keeping in their pharmacies. The intervention improved the documentation of patient medication record by community pharmacists in Ilorin and this was sustained over a period of 3 years.

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