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## Self medication practices among workers in a tertiary hospital in Nigeria.

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### Summary

Studies in most developing countries revealed (70-95%) of illnesses are treated through self medication. Poor accessibility to medical services have been associated with this practice. This study determines the pattern of self medication among workers at the University College Hospital, Ibadan, Nigeria. In a cross sectional study, workers were selected using a stratified random sampling technique. A high proportion of workers (73%) reported the practice of self medication and 95.6% of them correctly use appropriate drugs. About 80% of these workers stock their drugs at home. Also, 80.4% procure their drugs in chemist shops. A higher proportion of workers directly involved with medical care services (90.9%) practice self medication compared to those involved with non-medical care services (62.9%),  $P < 0.01$ . Also, the higher the education of workers the more is the proportion that practice self medication ( $P < 0.05$ ). Self-medication is commonly practiced among the hospital population who have relatively easy access to medical care services. Thus self medication may be a real health option.

**Keywords:** *Self medication, health workers, practices, hospital*

### Résumé

Des études dans plusieurs pays sous développés (70-95%) ont révélées que les maladies sont traitées personnellement du à l'accès limité aux soins médicaux. Cette étude avait pour but de déterminer la fréquence de la pratique de médication personnelle parmi les employés du centre universitaire hospitalier (UCH), Ibadan, Nigeria. Les employés étaient sélectionnés à l'aide la technique simplifiée de stratification. Les résultats démontraient une proportion élevée (73%) des employés sous médication personnelle sans prescription du médecin et 95% utilisaient ces médicaments correctement. Environ 80% des employés prenaient leur médicament à la maison et 80.4% achetaient ces médicaments dans les pharmacies. 90.9% des employés travaillaient directement sous les services des soins médicales au centre universitaire comparé à 62.4% sous les soins non-médicales. Il était observé que les employés à niveau d'éducation élevé, prenaient pas des médicaments

sans prescription ( $P < 0.05$ ). La médication libre est régulièrement pratiquée parmi la population hospitalière qui ont facilement l'accès aux soins médicaux et pourrait être une option de la santé.

### Introduction

Self-medication has been defined as an act of obtaining and consuming one or more drugs without the advice of a physician either for diagnosis, prescription or surveillance of the treatment. [1-3]. In spite of the inherent danger in improper and indiscriminate utilization of drugs, the practice remains the commonest aspect of self-care particularly in developing countries. In the world today, an estimated (70-90%) of illnesses are managed without recourse to a physician [4,5,6].

In Nigeria, access to medical care is generally poor as the doctor to patient ratio is low [7,8]. Thus, utilization of hospital services has been hampered by its poor availability, accessibility and affordability. Therefore, it is logical to hypothesize that the practice of self-medication will be low among workers in a hospital because of their environmental advantage which make physicians and hospital care readily accessible to them. However, there is a dearth of information on the level of self-medication in Nigeria especially among different occupational groups. Also, the majority of available studies on self-medication in Nigeria and other countries have focused on the general population [9-10,13]. However it is useful to know the level at which self-medication is a real option in health care and not just because of an absence of professional health care services.

Therefore the present study determines the pattern of self-medication among hospital workers in Nigeria's largest teaching hospital.

### Materials and methods

A cross-sectional study of health workers in the University College Hospital (UCH), Ibadan was undertaken in 2002. This 870 bedded tertiary hospital was established in 1957 and has the largest concentration of doctors in Nigeria.

Using a 90% prevalence for self medication [6], an absolute deviation of 5%, and a level of significance of 5%, a minimum sample size of 138 was obtained. This was increased to 145 to accommodate for non response. A stratified random sampling technique was used to select the health workers. The workers were classified into sub-groups based on their professions such as administration, pharmacy, medical, security, nursing, maintenance, wards

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and clinics. A sample of workers was selected in each occupational group using probability proportional to size sampling technique.

The data collection was by a self-administered structured questionnaire. Items of information on the questionnaire included personal demographic data of the subjects, practice of self-medication, and reasons for self-medication. The data collected were electronically processed on a computer using the statistical program EPI-INFO for data entry and statistical analysis. Simple descriptive statistics of relevant variables to the study objectives were produced. Point and interval estimates of proportions were calculated and the association between any two categorical variables was investigated using the chi-square test of significance. The statistical significance of the difference between the means of any two continuous variables was assessed by the student t-test. All tests of significance were at the 5% probability level.

Result

Table 1 shows the demographic characteristics of the 123 hospital workers with complete questionnaires. The sex ratio was almost 3:2 and their mean age was 36.6years (SD

Table 1: The proportion of workers practicing self medication by their socio-demographic characteristics.

Socio-demographic characteristics	Total (n)	Self-medication (%)	P-value
All	122	89(72.9)	
Age (years)			
20-29	48	33(68.8)	0.75
30-39	38	27(71.1)	
40-49	22	18(81.8)	
>50	8	5(62.5)	
Unknown	6	6(10.0)	
Sex			
Male	72	49(68.1)	0.144
Female	50	40(80.0)	
Marital Status			
Never married	56	40(71.4)	0.89
Married	66	48(73.8)	
Highest level of Education			
University Graduate	46	35(84.8)	0.015
Diploma/SNM/NRN	29	22(75.9)	
SSCE/Pry Educ.	26	14(53.8)	
Unknown	21	14(66.4)	
Classification of jobs/ Department			
Non medical	70	44(62.9)	0.0009
Medical	44	40(90.9)	
Unknown	8	5(62.5)	

= 16.7years). A sizeable majority (85%) were Christians with 14.2% Muslims. Almost 53% were married and there was only a widow. Those in administrative professional group constitute the largest proportion of workers interviewed (35.1%) followed by nurses (23.7%) and only 7 doctors (6.1%) participated in the study. The respondents were further classified into occupation involved in direct patient medical care like doctors, nurses, pharmacists, and laboratory technologists and those not involved in direct medical work like administration, security, and porters.

A high proportion of the workers (73%), reported the use of self-medication on a regular basis and all of these people stock drugs at home. The 95% confidence interval for the prevalence of self-medication among the workers was 65% to 81%. The results showed that the higher the level of education the more likely is the practice of self-medication ( $p<0.05$ ) Also, workers who are directly involved with patient medical care significantly practice self medication more than those not directly involved with patient medical care ( $p<0.01$ ) (91% vs 63%)

The study also revealed that about 50% of the workers have first-aid boxes in their family homes. The common drugs stored at home include paracetamol, Vitamin C, Nivaquine, Septrin, Chloroquine and Vitamin B complex. The respondents reported they started self-medication at a mean age of 18.3years (SD=5.2years)

Table 2: The sources of drug acquisition, knowledge and rationale for self-medication practice

Sources and rationale	Frequencies	%
<i>Sources of knowledge</i>	27	30.0
Personal knowledge	24	27.0
Intimacy with doctor	13	15.0
Previous hosp. prescription	7	7.8
Chemist/patient medicine store.	5	5.6
<i>Sources of drug acquisition</i>		
Chemist/Supermarket	65	73.0
Previous hosp. supply	7	7.9
Patient medicine store	10	11.0
Unknown	7	7.9
<i>Rationale for self-medication practice</i>		
Acquired Professional experience	27	30.0
Parents/friends/relatives	8	9.0
Hospital bureaucracy	6	6.7
Previous prescription	6	6.7
Inexpensive drugs	4	4.5
Non response	38	43.0
Total	89	100.0

The sources of knowledge of drug for self-medication and rationale for practice are presented in Table 2. The commonest source was personal knowledge (30.0%),



followed by intimacy with doctors (27.0%) while previous hospital prescriptions (15.0%) ranked third. A low frequency (7.8%) obtained information from the chemist or patent medicine stores. The majority of respondents who practice self-medication acquired their drugs mainly from chemist shops (73.0%) while 10 workers (11.0%) reported patent medicine store and (7.9%) had hospital left overs as their source of drug.

The major factor expressed by workers as responsible for their self-medication practice was their acquired professional knowledge in the hospital environment (30.0%). Others include availability of previous prescriptions (6.7%), bureaucracy in hospital services (6.7%) and cost of treatment (4.5%). A large proportion (43.0%) did not respond to this item of information.

**Table 3:** Perceived reasons, doctors consultation and symptoms commonly treated for self-medication.

	Frequency	%
<i>Symptoms commonly treated for self-medication</i>		
Fever	60	67.0
Headache	15	17.0
Stomach problem	5	5.6
Common cold	4	4.5
Others	5	5.6
<i>Perceived reasons for drug discontinuation</i>		
When dosage is completed	51	57.0
Relief	32	36.0
When the purchase drug finishes	3	3.4
Others	3	3.4
<i>Perceived reasons for Doctor's Consultation</i>		
When the illness worsens	72	80.9
When children are involved	5	5.6
Others	12	13.4
Total	89	100.0

The common symptoms for which workers treat themselves include fever (67.0%), stomach problems (5.6%), headache (17.0%) and common cold (4.5%). A good proportion of workers (57.0%) discontinued the use of drug when the dosage is completed, while another 36.0% do so as soon as they found relief regardless of whether or not the dosage is completed. However, a few workers [3] even reported discontinuation as soon as the drugs purchased is exhausted. Panel 3 of the table revealed that the workers consult the doctors only when the condition of their illnesses worsens (72%) and a few do so when it involves children (5.6%).

## Discussion

The World Health Organization (WHO) has supported self-medication for minor illness but with appropriate guidelines for the assessment of the medicinal products to be used [1,22]. Also, previous studies have indicated the increased need for people's autonomy to manage their own health problem [2,10]. Many drugs are now sold on the counter without physicians prescriptions [22]. Thus the finding that 73% of hospital workers reported practicing self-medication appeared consistent with reports from previous studies. In Finland the figure was 70% [11,17], France, 84% [12], USA, 60% [13] and a previous study in Ibadan among the general population put it at 80% [7].

The apparently lower proportion of the prevalence of self-medication practice in this study when compared to a previous study in Ibadan [7] could be attributed to the population studied who have relatively easy access to medical care consultation. Thus the influence of the work environment on the use of self-medication is apparent. The intimacy of workers with a physician, their personal knowledge and previously acquired experience to treat themselves were the major factors the workers reported were responsible for self-medication. This is contrary to the situation in the United States where it was discovered that accessibility to doctors and health care centers were not strong factors in their decision for self-medication [12]. But similar to a Canadian study that found a relationship between accessibility to doctors and over the counter drug use [20]. Furthermore the fact that significantly more workers involved with medical care (90.9%) practice self-medication shows the effect of occupation on the practice of self-medication.

The finding that 80.4% of respondents acquired drugs from chemist shops is similar to that of Adeniyi *et al* 1984 [7]. But an interesting finding was the maintenance of First Aid Boxes and a situation where more than 80% stock their drugs at home. One major factor attributed to this could be the type of prevalent health problems in the community such as malaria, pneumonia, acute respiratory infections, diarrhoea, measles and malnutrition.

A sizeable proportion of hospital workers (96.9%) appear to correctly know the symptoms of malaria, the drugs for treatment and the common side effects of available drugs, such as itching, dizziness and weakness. Unfortunately only 57.0% discontinued self medication on completion of the right dosage regimen. However, the high frequency of symptoms like headache, fever, cough and body weakness in this study underscore the need for people to understand the type of illness associated with the symptoms to facilitate the purchase of appropriate drugs for self-medication. In recent times, the home management of some diseases has been encouraged to reduce severe morbidity and mortality. The major problem is for the population to have adequate knowledge of the symptoms of these common illnesses like malaria, pneumonia,



acute respiratory infections, diarrhoea, measles and malnutrition. Indeed malaria is the leading cause of morbidity and mortality in Nigeria. Studies have shown that pre-packaged anti-malaria and antibiotics available with trained distributors will go a long way to provide effective family and home management of malaria [13,15,16]. The symptoms reported in this study are some of the main clinical features of malaria. Even chronic diseases such as hypertension and diabetes can often be managed at home following initial diagnosis under the supervision of community nurses or family physician that carries out home visits. This management will not only prevent the severe forms of the diseases but lighten the burden of pressure on the physicians [18-20]. This is particularly relevant in Nigeria with a low doctor population ratio. The knowledge of the hospital workers in this hospital about the need to demand for health care as at when necessary could have encouraged the stock of drugs at home.

The fact that 95.6% of the workers engaged in self-medication in this study correctly use appropriate drugs is not unexpected because of the level of education of those involved and the fact that the more educated the workers are, the more they practice self-medication. This could be attributed to their access to information about treatment of minor ailments. However, of great concern is that a high proportion take incomplete dosage. The consequences of this practice is the possibility of increased drug resistance [23-24]. Hence the WHO has also emphasized the need for responsible self-medication [21].

This study shows that self medication is commonly practiced among population with relatively easy access to medical care and therefore may be a real health option.

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