

# Audit of outpatient department management of patients with respiratory symptoms in Lilongwe

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## Summary

**Setting:** 6 outpatient departments (OPD) of 3 hospitals and 2 health centres in Lilongwe.

**Objective:** To assess the existing health worker practice in providing care to patients with respiratory symptoms in the OPD.

### Methods:

Between 1 and 31 July 2002 exit interviews were conducted with patients from OPD consultation rooms and possessing a prescription for respiratory diseases. Verbal confirmation of the patients' complaints was done, patients' OPD notes were reviewed and a questionnaire was completed. Data was collected for patients aged 5 and above.

### Results:

3001 patients with median age of 27 years were enrolled in the study. 1203 (40%) were male. 80% had made several visits to the OPD with the same symptom. In some cases

verbal reports of main symptoms did not match with those recorded on OPD notes. 511 (17%) patients reported that a clinician listened to their chest. Antibiotics were prescribed to 2501 (83.3%) patients for various respiratory complaints. Similarly analgesics were prescribed to 2671 (89%) patients. Steroids were prescribed to 32 (1.2%) patients and a bronchodilator was prescribed to 185 (6.2%) patients. Only 56 (2%) patients were referred to another level of care.

**Conclusion:** Management of patients with respiratory symptoms in Lilongwe is characterised by increased usage of antibiotics, analgesics and inability of health workers to examine the patients' chests. Referral to other care facilities is also uncommon. More investigations are required to understand the causes of this practice so that corrective measures are designed and implemented.

## Introduction

International guidelines for management of common respiratory conditions for low-income countries are available.<sup>1,2,3</sup> The Malawi Standard Treatment Guidelines<sup>5</sup> also provide information on how respiratory diseases can be managed in the country. There have not been many studies in Malawi to assess the management of patients with respiratory symptoms in outpatient departments (OPD). In 1995 one study was conducted at Queen Elizabeth Central Hospital in Blantyre which assessed how patients presenting with a cough were managed in OPD before a diagnosis of tuberculosis is done.<sup>4</sup>

With financial assistance from the World Health Organisation (WHO) Adult Lung Health Initiative unit in Geneva we decided to assess the existing health worker practice in providing care for patients with respiratory symptoms in the OPD of selected hospitals and health centres in Lilongwe.

Lilongwe has an estimated population of 1.3 million (1997/1998 estimate). In the district there are 1 central hospital (with 2 OPD), 3 mission hospitals, 2 rural hospitals and 48 health centres (both government and mission).

## Methods

Five health facilities; a rural mission hospital, a semi-urban mission hospital, an urban health centre, a rural health centre and the central hospital (with 2 OPD) were chosen for the study. Thirteen data collectors, mainly nurses working in the OPD, were given half-day training on data collection and patient interview. From 1 to 31 July 2002 data was collected from all six OPD using a questionnaire.

During the study period data collectors (the trained nurses) examined the prescription records of every patient exiting the 6 OPD consultation rooms. Patients whose prescription bore respiratory symptoms or disease were interviewed and their responses were recorded on the questionnaires. During this interaction that was between the patients and the study nurses

the following information was entered on the questionnaires: study number, age, sex, recorded symptoms or diagnoses, presenting complaint in patients' own words, number of health facility visits with same complaint, treatment prescribed on the date of the interview, requested investigations and referral of the patients to other sections of health care.

At the end of the study period the principal investigator visited all participating health units to collect completed questionnaires. Data from the questionnaires was entered in a computer, using Epi-Info 6.04 software, at the central unit of the TB programme. The data was cleaned before analysis. During analysis, where applicable, comparison between two variables was done using 2x2 tables and their p values used to determine significant statistical differences.

## Results

There were 3001 registered patients in the study. The median age for 2951 (98.3%) patients for whom age was indicated was 27 years (range: 5 to 90 years). Of the 2958 (98.5%) patients whose sex was recorded 1203 (40%) were male. Duration of symptoms was known in 99.7% of the patients and this ranged from 1 to 995 days with a median of 7 days.

Number of repeated visits was analysed for 2953 (98%) of the patients for whom the information was recorded. The results are summarised in **Table 1**.

In some cases the main symptoms reported by the patients to the study nurses did not match with what the clinicians had recorded in the OPD notes. These results are summarised in **Table 2**.

A clinician listened to the chest of 511 (17%) patients. The usage of antibiotic and analgesic treatments are summarised in **Table 3**. These results are not different for TB suspects among the enrolled subjects and this is shown in **Table 4**.

Only 56 (2%) of all patients were referred to care elsewhere in the system.

## Discussion

The study conducted in Lilongwe shows several problems in the management of patients with respiratory symptoms in OPD.

Firstly, both antibiotics and analgesics were over-prescribed. This raises the concerns of creation of antibiotic resistance and wastage of drugs. There is need to establish the main cause of this kind of practice and design proper interventions.

Secondly, a considerable number of patients (80%) had made more than one visit to the health facilities with the same complaint. It is not possible to determine the average time between each repeated visit from the database. However this raises concern of possible poor diagnoses and ineffective treatment. HIV complications could have played a role in this observation.

There is also need to determine how well these complications are managed in the OPD settings. The issue of poor diagnoses and ineffective treatments can also be addressed with proper in-service training and continued supportive supervision.

Thirdly, the results also suggest that very few patients had a proper chest examination by the clinicians. The causes for this are varied. These include: lack of instruments (stethoscopes), the attending clinicians rendering the examination unnecessary, high patient load in the OPD resulting in reduced consultation time and probable lack of confidence on the part of the clinician to perform the examination. Whatever the cause this finding raises an important point to clinic supervisors who should ensure quality care along the National Standard Treatment Guidelines.<sup>5</sup>

Lastly, very few patients were referred for care elsewhere or at next level. It is not clear in this study whether this was due to numerous uncomplicated cases, or there is lack of a functioning referral system in the district. This needs to be explored.

### Acknowledgement

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**TABLE 1: Number of repeated visits with same complaint of 2953 of the 3001 patients with respiratory diseases presenting to five out-patients departments in Lilongwe (Malawi) in July 2002.**

Number of visit	No of patients (%)
First	509 (17%)
Second	1725 (57%)
Third	480 (16%)
Fourth	176 (6%)
Fifth	63 (2%)
No record	42 (2%)

**TABLE 2: Complaints of 3001 patients with respiratory diseases presenting to five outpatients departments in Lilongwe (Malawi) in July 2002 and how clinicians recorded the diseases.**

Type of symptom	Number of patients reporting the symptom as major problem (%)	Number of patients having the symptom in their medical records or prescription (%)
Dry Cough	2191 (73%)	1011 (34%)
Chest pain	378 (12.6%)	625 (21%)
Productive cough	288 (9.6%)	365 (12%)
Other <sup>a</sup>	144 (4.7%)	248 (8%)
Unknown <sup>b</sup>	3 (0.1%)	752 (25%)

<sup>a</sup> Complaints or diagnoses included dyspnoea, asthma, wheeze, known TB, fever, diarrhoea, anaemia, headache, oral thrush, malaria, heart palpitations, rheumatism, tonsillitis, general body pains, COAD, difficulty swallowing.

<sup>b</sup> 3 records were not filled in by study data collectors and the 752 records in second column had no diagnoses or symptom recorded by a clinician.

**TABLE 3: Prescribed treatment for three most common complaints for 2857 of the 3001 patients recruited between in July 2002 in Lilongwe, Malawi.**

Recorded complaint	No. (%) prescribed antibiotic	No. (%) prescribed analgesic	No. (%) prescribed bronco-dilator	No. (%) prescribed sputum smear for AFB <sup>a</sup>	No. (%) prescribed a chest x-ray	No. (%) prescribed steroid treatment	No. (%) prescribed PPD <sup>b</sup>
Dry Cough, n=2191	1863 (85%)	1986 (90.6%)	105 (4.8%)	286 (13.1%)	166 (7.6%)	4 (0.2%)	1
Chest pain, n=378	304 (80.4%)	344 (88.4%)	11 (2.9%)	66 (17.5%)	30 (7.9%)	11 (2.9%)	Nil
Productive cough, n=288	241 (83.7%)	243 (84%)	6 (2.1%)	74 (25.7%)	3 (11.5%)	8 (2.8%)	Nil

<sup>a</sup> Acid Fast Bacilli that causes tuberculosis

<sup>b</sup> Purified Protein Derivative for diagnosing tuberculosis infection

**TABLE 4: Management of patients with chronic cough (a cough lasting 3 weeks or more) among 3001 patients with respiratory symptoms recruited in Lilongwe (Malawi) in July 2002.**

Recorded complaint	No. (%) prescribed antibiotic	No. (%) prescribed analgesic	No. (%) prescribed bronco-dilator	No. (%) prescribed sputum smear for AFB <sup>a</sup>	No. (%) prescribed a chest x-ray	No. (%) prescribed steroid treatment	No. (%) prescribed PPD <sup>b</sup>
Dry Cough, n=451	308 (84.3%)	373 (82.7%)	37 (8.2%)	109 (24.7%)	69 (15.3%)	2 (0.4%)	Nil
Productive cough, n=122	100 (82%)	94 (77%)	3 (2.5%)	47 (38.5%)	17 (13.9%)	4 (3.3%)	Nil

<sup>a</sup> Acid Fast Bacilli that causes tuberculosis

<sup>b</sup> Purified Protein Derivative for diagnosing tuberculosis infection