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# DRUG TREATMENT OF COMMON CHILDHOOD SYMPTOMS IN NNEWI: WHAT MOTHERS DO?

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## ABSTRACT

**Objectives**: To determine how mothers treat common childhood symptoms before hospital attendance in Nnewi.

**Materials and methods:** Information was obtained from 211 consecutive mothers on their children's presenting symptoms, drugs administered, source of the drugs, persons who prescribed the drugs, number of drugs administered, prior to hospital attendance through a structured questionnaire administered by the authors.

**Results:** A combination of fever, cough and catarrh topped the list of presenting symptoms in 87 (41%) of the patients while fever and diarrhea had the least frequency of 16 (7.6%). One hundred and five or 52% of the mothers decided on the drugs that were administered followed by patent medicine dealers who accounted for 59 or 29.2%. Trained health professionals whom mothers consulted before bringing their children to hospital were responsible for 28 (13.8%) of the prescriptions. Patent medicine stores were the sources of 90.6% of the drugs while health facilities accounted for 8.4%.

The frequency chart of prescribed drugs were analgesics 166(34.9%), hematinics 88 (18.5 %), antibiotics and antimalarials 81(17.1%) and 74 (15.6%) respectively while antidiarrheoals and ORT were least administered with 7 (1.5%) and 1(0.2%) respectively. The children received an average of 2.7 drugs per prescription.

**Conclusion:** With the high prescription rate of mothers for sick children at home, there is need for effective methods to educate mothers on the use and potential dangers of home medication.

***KEY WORDS:*** Maternal drug response, Drug Acquisition, Home medication.

## INTRODUCTION

Mothers being very close to their children are usually the first to notice abnormal symptoms in children. Often times they respond by giving drugs, which they believe will alleviate their children's symptoms.

The drugs they administer are based on their past experiences of management of similar symptoms or on recommendations of another person which may be inappropriate for the presenting symptoms. This practice coupled with inadequate dosing may lead to irrational drug use and development of resistance to the commonly used drugs especially antibiotics by organisms. In fact there is no limit to the drugs accessible to mothers.

In Nigeria, drugs are sold without restrictions, by Patent Medicine Dealers (called "chemists") in markets and along the streets by vendors. This practice has led to easy acquisition of drugs by mothers.

This study was designed to determine the maternal acquisition and administration of drugs to their children in response to the common childhood symptoms prior to hospital attendance.

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## MATERIALS AND METHODS

This was a prospective study of mothers who brought their children to hospital with a history of pre-hospital drug administration. A structured questionnaire was used to collect information from the mothers on their children's presenting symptom, drugs administered, source of prescription, place of acquisition and duration of treatment at home.

Two hundred and eleven consecutive mothers were recruited for the study. The mothers were between 18 – 44 years. This study was carried out in the authors' private clinics in Nnewi between the months of February and May 2003.

## RESULTS

Two hundred and eleven questionnaires were analyzed. Table 1 shows the presenting symptoms with 87 or 41% of the children presenting with a combination of fever, cough and catarrh while a combination of fever and diarrheoa was the least presenting symptoms seen in 16 or 7.6% of the study population.

The prescription pattern revealed that mothers were the main prescribers accounting for 111(52.6%) of the prescriptions, followed by Patent medicine dealers ("chemists") with 62(29.4%). Trained health care providers- the doctor, nurse and pharmacist accounted

for 6(2.8%), 12(5.7%) and 6(2.8%) respectively. (Table 2)

The largest source of drugs, were the patent medicine stores with 192(90.1%) followed by pharmacies and hospitals with 11(5.2%) and 6(2.8%) respectively. (Table 3)

The pharmacological classification of the administered drugs is shown in Table 4. Analgesics, hematinics, antibiotics and anti-malaria's topped the list with 166(34.9 %), 88(18.5%), 81(17.1%) and 74(15.6%) respectively.

Table 5 shows the average number of drugs prescribed per symptom. This ranged between 2.6 and 3 for the various symptoms described.

*Table 1*: **Presenting symptoms**

| *Symptom(s)* | *Patients n=211* | *Percent* |
|---|---|---|
| Fever/cough/catarrh | 87 | 41.2 |
| Fever | 70 | 33.2 |
| Cough | 20 | 9.5 |
| Fever/vomiting | 18 | 8.5 |
| Fever/diarrheoa | 16 | 7.6 |
| **Total** | **211** | **100** |

*Table 2:* **Source of prescription**

| *Source* | *Frequency* | *Percent* |
|---|---|---|
| Mother | 111 | 52.6 |
| Patentmedicine dealer ("chemist") | 62 | 29.4 |
| Nurse | 12 | 5.7 |
| Pharmacist | 6 | 2.8 |
| Neighbour | 6 | 2.8 |
| Doctor | 6 | 2.8 |
| Father | 4 | 1.9 |
| Homeopath | 4 | 1.9 |
| **Total** | **211** | **100** |

*Table 3:* **Source of drugs**

| *Source* | *Frequency* | *Percent* |
|---|---|---|
| Patent medicine store | 192 | 90.1 |
| Pharmacy | 11 | 5.2 |
| Hospital | 6 | 2.8 |
| Nursing home | 2 | 0.9 |
| **Total** | **211** | **99.9** |

*Table 4*: **Pharmacological classification of prescribed drugs**

| *Classification* | *Drugs* | *Percent* |
|---|---|---|
| Analgesics | 166 | 35.0 |
| Antibiotics | 81 | 17.0 |
| Antimalarials | 74 | 15.6 |
| Haematinics | 88 | 1.9 |
| Antihelminthics | 5 | 1.1 |
| Antiemetic | 5 | 1.1 |
| Antitussives | 36 | 7.6 |
| Vitamin C | 12 | 2.5 |
| ORT | 1 | 0.2 |
| Anti-diarrheals | 7 | 1.5 |
| **Total** | **475** | |

*Table 5*: **Average number of drugs**

| Symptom(s) | Range | Average |
|---|---|---|
| Cough | 1-4 | 2.6 |
| Fever/vomiting | 1-5 | 3 |
| Fever/diarrhea | 1-6 | 3 |
| Fever | 1-7 | 2.7 |
| Fever/cough/catarrh | 1-6 | 2.8 |

## DISCUSSION

The common presenting symptoms in this study were fever, cough, vomiting and diarrhea either alone as single symptoms or in combinations. All mothers had administered drugs at home before coming to hospital. The average number of drugs prescribed for each symptom or symptom combinations was lower than the average of 4 in other Nigerian studies [1-3] It is note worthy that the Nigerian studies were conducted on prescribing pattern of trained medical personnel in health facilities.

Mothers and patent medicine dealers ("chemists") decided mostly the drugs to be administered to these children This may be because mothers are the direct caregivers, who depending on their knowledge of drugs may decide on the drugs to administer or consult the patent medicine dealers who run the stores they have gone to buy drugs from. Fathers were also consulted on the type of drugs that were to be administered to the children. It is significant to note that only 28(13.3%) mothers consulted trained health care personnel. This observation highlights the great danger these children face in their various localities from inappropriate treatment and possible drug toxicities, since the mothers and patent medicine dealers are not trained to appreciate the contraindications and side effects of the drugs they administer.

The most frequently prescribed drug classes were Analgesics (34.9%). Hematinics accounted for 18.4% Antibiotics (17.1%), and Anti-malaria's (15.5%). Understandably the high usage of analgesics antibiotics

and antimalarials in the area is due to the fact that fevers are commonly assumed to be due to malaria or infections. It is a common belief among the mothers that fever reduces the hemoglobin concentration of the babies and may possibly lead to blood transfusion. In order to address this common belief and reduce the incidence of blood transfusion they resort to the use of haematinics during episodes of fever. This probably accounted for the high frequency of administration of haematinics. These drugs were taken consecutively or concurrently. In most cases the choice of drugs was inappropriate resulting in persistence of symptoms. This led to visiting the hospital after an average of 2.7 days of home treatment with a range of 1 to 7 days.

The ease of acquisition of ethical preparations in the community is worrisome, over 91% of the administered drugs were obtained from Patent Medicine stores which are not authorized to stock them, thus heighten the possibility of improper storage and compromise of efficacy. Being unauthorized dealers, sourcing of genuine drugs may be unlikely; hence these children may be faced with greater danger of receiving fake and adulterated drugs.

Home treatment may be beneficial sometimes but with the high prevalence of fake drugs in our society, and lack of knowledge of drug action on the part of mothers and patent medicine dealers who prescribed mostly for these children, there is need for training of patent medicine dealers and effective campaign to educate mothers on the potential dangers of home medication.

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