(MIS)DIAGNOSING MALARIA

NIGERIAN BREWERIES PLC

CASE STUDY

BY DR RICHARD AJAYI
COMPANY MEDICAL ADVISER
NIGERIAN BREWERIES PLC
BACKGROUND

- Eight (8) clinics across the country.

- FTE – 3,200 (22,400 medical beneficiaries).

- The clinics are opened 24/7.

- Clinic establishment:
  - Lagos – 2 doctors, 2 medical laboratory scientists and 5 nurses on 04 shift
  - Other sites – 1 doctor and 5 nurses on 04 shift

- Scope of services: primary and secondary care.
• Extensive workplace malaria campaign.

• Standard laboratory in Lagos.

• Side laboratories in other sites.

• Presently only confirmed malaria cases are treated.

• Regular malaria webcast with Heineken Global Health Affairs
WHICH OF THESE IS AVAILABLE IN NB PLC?
MALARIA DIAGNOSIS IN NB PLC
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- Malaria antigen (Ag) rapid diagnostic test (RDT), used in all clinics since 2007.

- Malaria light microscopy (thick and thin blood film) is available in the Lagos clinic only.

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- Malaria microscopy is provided by external laboratories to other sites.

- There is a yearly audit of the external laboratories by NB PLC senior medical laboratory scientist.
Elements of malaria diagnosis in NB PLC

Malaria diagnosis in NB PLC

- Quality of MRDT
- Right reagents & equipment
- Capacity of the human resources doing the test
- Quality Assurance of both tests
Details of the Elements

1. **RIGHT REAGENTS & EQUIPMENT**
   - The right stain and of good quality.
   - Good working microscope
   - pH of the water for diluting stain.
   - Storage of stain
   - Good and clean microscope slides

2. **QUALITY OF MRDT IN USE**
   - Choice of MRDT is based on best first 5 brands on WHO/FIND current evaluation result.
   - Lot/batch testing before each procurement twice a year.
3. CAPACITY OF THE HUMAN RESOURCE DOING THE TEST

- Training of the 2 MLS on malaria diagnosis by ANID centre, CMUL.
- Proficiency testing of NB PLC MLS and external medical providers’ MLS, by ANID centre, CMUL.
- Re-training of NB PLC MLS and assessment of their expertise on microscopy every 4 years by ANID centre, CMUL.

4. QUALITY ASSURANCE OF BOTH TESTS

- Yearly QC of about 25 samples with ANID centre, CMUL. Results are 100% compliant.
- QC of about 15 samples with Pathcare Nigeria since 2012. Results are 100% compliant.
- Compare other best first 5 brands with current brand in use, if more sensitive.
  Example- Humasis, Carestat, First response, ABON, Binax NOW
Breakthrough in malaria diagnosis

- Diagnosed Plasmodium ovale and Plasmodium malariae in averagely 3 patients (Nigerians) yearly since 2008.
Case study of malaria misdiagnosis

1
A patient went to an hospital after 2 days of having fever and was diagnosed of malaria and typhoid by the hospital laboratory.

ACT & antibiotic were given by the doctor.

Patient sought a second before administering the drugs after a day because the symptoms had subsided.

Laboratory result from NB PLC showed negative result for malaria (both MRDT & microscopy) and no significant titre for the widal reaction.

2
Clinicians from some external medical providers prescribe both AcT & antibiotic without any laboratory investigation.

Diagnosis is made by patient complain,
Case study no 3

Patient present in NB PLC clinic with complaint of some signs & symbols with a personal diagnosis of malaria.

Routinely, Full blood count, MRDT & malaria microscopy tests are usually requested.

Laboratory investigations reveals leucocytosis, neutrophilia, lymphocytosis and sometimes eosinophilia with a negative malaria test results, for significant number of these patients.

Patient feel better with the administration of the right prescribed drug without an antimalarial.
10 STEPS TO BETTER CARE®

STEP 1: KNOW WHAT YOU’RE DEALING WITH
Get the correct diagnosis
No of malaria cases vs total consultations in all clinics

- 2011
- 2012
- 2013

Legend:
- Red: Malaria cases
- Blue: Total consultations
Percentage malaria case of the total consultations in all clinics.

% malaria cases vs total consultation

- 2011
- 2012
- 2013
SUCCESS

- Positive malaria result has reduced from 1 out of 6 to 1 out of 11, because of all the preventive measures in place and accurate diagnosis.

- Malaria now account for about 4% of all our clinics’ consultation as at 2013.

- Paradigm shift recorded in patient orientation on malaria.
**CHALLENGES**

- Patient orientation and mind-set - solved by education using KAP on malaria

- Quality of MRDTs procured – solved by QA on MRDTs batch

- Easy access to antimalarial drugs by employees across the counter.

- Strong employee union with initial poor knowledge on malaria

- Refusal of expatriates to take their malaria chemoprophylaxis
THANKS