

Original Research Article

A 5-year assessment of malaria documentation and reporting practices in government healthcare facilities in Lagos, Nigeria

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ABSTRACT

Background: Robust and effective information management systems are critical for successful malaria control and elimination. This study was a follow up study to assess the practices of Lagos State public healthcare facilities with regards to malaria documentations and reporting to the local government authorities (LGAs) in Lagos Nigeria in 2009 and then in 2013.

Methods: We conducted a descriptive cross-sectional repeated survey of all 218 functional government-owned health facilities in Lagos State between in years 2009 and 2013 using a structured questionnaire. Approval was obtained from the research ethics committee of the Lagos State Ministry of Health.

Results: There was a decrease in the proportion of primary & secondary healthcare facilities that document all cases of malaria seen in the facilities from 97.9% and 95.5% respectively in 2009 to 91.5% and 85.7% in 2013. About 53% of the primary healthcare facilities rendered malaria data to the Local Government Area (LGA) using the IDSR system in 2009 which marginally increase to 62.4% in 2013. Whereas in 2009, 63.6% of secondary healthcare facilities rendered malaria data to the LGA whilst 50% did in 2013. The only Tertiary health facility in the state did not render malaria data to the LGA in 2009 but did in 2013.

Conclusions: There was a gradual reduction in malaria documentation by the government healthcare facilities. Therefore, there is need to intensify training among health workers in the government health facilities in the state with continuous monitoring and evaluation of performance to determine the impact.

Keywords: Malaria, Disease notification, Health facilities, Lagos

INTRODUCTION

More than 3.4 billion people live in areas at risk of malaria globally. In 2015 alone, there were 214 million cases of malaria and about 638,000 deaths with about 90% of these deaths occurring in sub-Saharan Africa.¹ Malaria is a major public health problem in Nigeria accounting for about 25% of global malaria cases and deaths.² In Nigeria, about half of adults have at least one episode of malaria each year and this is responsible for

more than 60-70% of outpatient visits and 30% hospital admissions in the country.³ Robust and effective information management systems are critical for successful malaria control and elimination.^{4,5} Malaria surveillance is generally integrated into a broader system of health information or communicable disease surveillance. At the health-facility level, case-based surveillance of malaria inpatient cases and deaths are undertaken with the aim of effectively responding to severe cases and attaining a target of zero malaria death.

Routine health facility data are less expensive to obtain than survey data and also help to build capacity.⁸ The International Health Regulations (IHR 2005) require Member States to strengthen their existing capacity for disease surveillance and response using the IDSR strategy. However, this is still not well implemented in most of the developing countries.^{9,10} In 2012 According to World Health Organization (WHO), 62 out of 103 countries that had ongoing malaria transmission had reporting systems considered to be sufficiently consistent for policy decisions regarding malaria trends between 2000–2012. In the 41 outstanding countries, which account for 80% of estimated cases, it was not possible to reliably assess malaria trends using the data submitted to WHO information management systems. Health information management systems are weakest where the malaria burden is greatest.¹¹ In a study by Jeddah governorate to assess the reporting of weekly reportable communicable diseases at the health facility level, 86% of government facilities were reporting communicable diseases.¹²

Lagos State being one of the most populous States in Nigeria is being faced with challenges of inadequate capacity for effective malaria surveillance according to the current WHO guidelines. All state-owned Healthcare facilities are expected to provide disease data timely and regularly to the LGA where they are located using approved IDSR reporting format. Some diseases must be reported within 24 hours, they should be reported immediately to the department as soon as they are suspected. Other diseases are reported weekly or monthly. At the LGA level, analysis and feedback to health facilities is expected to be done. The Epidemiology unit of the State Ministry of Health collates data from the LGAs and forwards it to the Epidemiology Division of the Federal Ministry of Health (FMOH).¹³ The aim of this study was to assess the malaria documentation and reporting practices of all government-owned health care facility of Lagos Nigeria in years 2009 and 2013.

METHODS

The Lagos State Ministry of Health supervises and coordinates activities of the two hundred and eighteen (218) government-owned facilities providing primary, secondary and tertiary health care to the citizenry.

This study was designed as a repeated cross-sectional study to assess the state government-funded health institutional practices regarding malaria documentation & reporting over a 5-year period. A structured questionnaire was used for data collection from the leadership of the health facilities by trained interviewers at each health facility to the head of the facility or officer-in-charge of reporting activities in each facility. Baseline data collection took place in 2009 at each health facility with the aid of pre-tested guide which was adapted from the WHO protocol for the assessment of national

communicable disease surveillance and response.¹⁴ A repeat assessment was conducted in 2013 using the same instrument.

All the 218 health facilities owned by the state government were included in this study

Data processing and analysis were carried out using Epi-info statistical software version 7.0.8.3 of the Centers for Disease Control and Prevention (CDC). Categorical data were presented as frequency tables and Charts. Pearson's chi square test & fishers' exact tests were used to assess the association between categorical variables. Statistical significance level was set at $p < 0.05$.

Approval was obtained from the research ethics committee of the Lagos State Ministry of Health, Nigeria.

RESULTS

All the 218 facilities were assessed. These included one Tertiary Hospital; 195 PHCs in 2009 and 189 in 2013, and 22 secondary healthcare facilities in 2009 and 28 in 2013 (Table 1).

Table 1: Category of facility.

Category of facility	2009	2013
	N (%)	N (%)
PHC	195 (89.4)	189 (86.7)
Secondary	22 (10.1)	28 (12.8)
Tertiary	1 (0.5)	1 (0.5)
Total	218 (100)	218 (100)

$\chi^2=5.89$, $p=0.147^1$

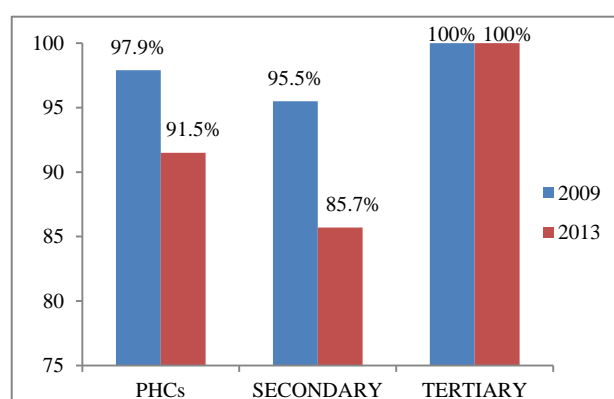


Figure 1: Documentation of malaria cases in the public health care facilities.

There was a decrease in the proportion of primary & secondary healthcare facilities that documented all cases of malaria seen in their facilities in 2009 from 97.9% and 95.5% respectively to 91.5% and 85.7% in 2013 (Figure 1). About 99% of the primary healthcare facilities kept records of all diseases in 2009 which was very minimally different from 98% in 2013 ($p < 0.05$). All the secondary and tertiary facilities kept records of all diseases seen in

their facilities in 2009 but there was a decrease in the proportion of secondary facilities (93%) that kept records

of all cases in 2013, though this was not statistically significant ($p > 0.05$).

Table 2: Record keeping & IDSR reporting practices in the facilities.

Record keeping/rendering for malaria	2009	2013	χ^2	P value
Keep records of all diseases seen	N (%)	N (%)		
PHC	192(98.5)	186 (98.4)	0.0	1.000*
Secondary facilities	22 (100)	26(92.8)	1.6	0.497*
Tertiary	1(100)	1(100)	0.0	1.000*
Heard of IDSR				
PHC	106(54.4)	135(71.4)	11.9	0.001
Secondary facilities	17(77.3)	16(57.1)	2.2	0.118
Tertiary	1(100)	1(100)	0.0	1.000*
Render malaria data to LGA				
PHC	104(53.3)	118(62.4)	3.2	0.071
Secondary facilities	14(63.6)	14 (50.0)	1.0	0.326
Tertiary	0(0.0)	1 (100)	0.8	1.000*

*fisher's exact p value.

About 54% of the primary healthcare facilities heads were aware of IDSR in 2009 compared to 71.4% in 2013 and this was statistically significant ($p < 0.05$). Whereas in the secondary health facilities, 77.3% of the heads were aware of IDSR in 2009, but only 57.1% of were aware in 2013, although not statistically significant ($p > 0.05$). The heads of the tertiary healthcare facilities were aware of IDSR both in 2009 and 2013 (Table 2).

Furthermore, just about 53% of the primary healthcare facilities rendered data on malaria to the LGA using the IDSR system in 2009 which marginally increased to 62.4% in 2013 ($p > 0.05$). However, though there was a decrease from 63.6% of secondary healthcare facilities who rendered malaria data to the LGA in 2009 to just about 50% in 2013, this was not statistically significant ($p > 0.05$). The only tertiary health facility in the state did not render malaria data to the LGA in 2009 but did in 2013.

DISCUSSION

Proper documentation & timely notification of diseases are important sources of epidemiological information for effective prevention and control actions. The State Ministry of Health, in a programme tagged EKO Malaria-Free Campaign, implemented several malaria control programmes and interventions which involved supply of malaria consumables to facilities and capacity building for health workers. However, these efforts did not influence the Malaria documentation and reporting practices of some of these facilities. This study reported a decrease in the proportion of primary and secondary healthcare facilities that documented malaria cases from 98% and 96% respectively in 2009 to 91.5% and 85.7% in 2013, and a decrease in the proportion of secondary healthcare facilities that were keeping records in 2013 to 93% from 100% in 2009, though not statistically significant. However, more than 90% of all the health

facilities kept records of all diseases, which is comparable with a similar study done in Anambra State, Nigeria.¹⁵ In this study there was generally an increase in IDSR awareness among the heads of facilities from about 57% in 2009 to 70% in 2013, though awareness among the heads of secondary healthcare facilities declined from 77% in 2009 to 57% in 2013 repetition were lower compared to what was reported in a study done in Anambra State in Nigeria where 89.8% of the health workers were aware of IDSR.¹⁵ Again, there was a decrease in the proportion of secondary healthcare facilities that rendered to the LGA using the IDSR system from 63.6% in 2009 to 50% in 2013 (Table 1). The decline in the malaria reporting practices of the secondary healthcare facilities in the State may be due to the fact that a lot of government public health programmes are usually implemented at the primary health care level and most of the time, the secondary healthcare providers might be left behind. However, from this study, about two third of all the public healthcare facilities in the State rendered data to the LGA using the IDSR system in 2013 as against about half of them who did in 2009. This result is below the target of 80% given in the WHO IDSR.¹⁶ It is also lower compared to the result of a study done in Ethiopia which that more than 80% of centres rendered malaria reports according to the IDSR system, and the study done at Jeddah which reported 86%.^{12,17}

CONCLUSION

There was generally a decline in the proportion of government health facilities that had a documentation process for malaria cases between 2009 and 2013 in Lagos state. Awareness of IDSR and rendering of Malaria data according to the IDSR systems was marginally increased in these facilities during the five-year period.

We therefore recommend the Ministry of Health and other relevant government agencies and their partners should intensify continuous healthcare professional training programmes especially at the secondary healthcare facilities. The Eko Free Malaria campaign and other state programmes to eliminate malaria should be sustained through continuous monitoring and evaluation of performance to determine the impact of interventions whilst exploring other innovative strategies.

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