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Key messages

- Definitive treatment of severe malaria with intramuscular artesunate (IM AS) is acceptable if skilled health workers and appropriate medical equipment are provided at lower-level health facilities. It will reduce disability and mortality due to delayed treatment at referral centres.
- Lower-level health facilities should be empowered with trained staff, basic in-patient facilities and medical supplies in order to manage severe cases of malaria.

Introduction

Severe malaria is a life threatening emergency with near 100% mortality rate if untreated. To reduce mortality due to severe malaria, there is a need to provide prompt definitive treatment to patients. In Nigeria, lower-level health facilities are the entry points for health service uptake and are nearest to the people. The national guidelines for malaria treatment restrict definitive treatment of severe malaria to higher levels of care. They also recommend that at lower levels, first dose of intramuscular artesunate (IM AS) be given to severe malaria patients before referral to higher level for appropriate treatment. Poor accessibility to referral facilities delays onset of treatment leading to disabilities and deaths. This study sought to explore the feasibility and acceptability of IM AS for definitive treatment of severe malaria at lower-level facilities.



Administration of IM AS for severe malaria treatment

Methods

In-depth key informant interviews were conducted between October and December 2014 with 90 selected policy makers (18), healthcare providers at higher-level facility (26), healthcare providers at lower-level facility (19), village health teams (12), donors (9) and academia (6) in three southern States of Oyo, Enugu and Cross River. All the stakeholders were involved with malaria control such as funders, managers, implementers or service providers. The minimum target of interviews was 48 and stopped after 90 interviews when no new information was being collected. Data was analysed using NVIVO software.

Results

Table 1: Characteristics of interviewees

Characteristic	Number N=90
Female gender n (%)	55 (61%)
Mean age in years (SD)	44 (8)
Education level (n%)	
Secondary	11 (12%)
Tertiary	79 (88%)
Mean # of years at current job (SD)	8 (8)

Challenges envisaged if IM AS is introduced at lower-level facility:

- Inadequate skilled personnel
- Ill-equipped facilities to care for in-patients
- High cost and non-availability of injectable artesunate
- Possibility of inappropriate use
- Poor judgement of clinical stage to refer

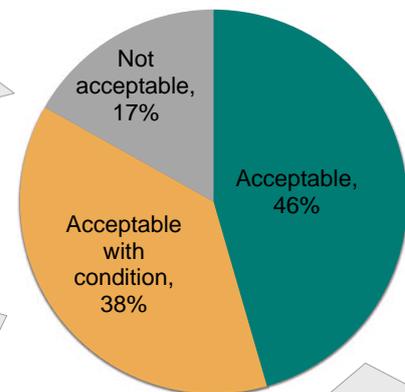
Recommendations to mitigate challenges:

- Recruitment of skilled health workers e.g. nurses, doctors
- Training of health workers on the use of IM AS for severe malaria treatment
- Monitoring, mentoring, motivation and supportive supervision
- Upgrading/supply of in-patient facilities and ancillary services
- Regular supply of injectable artesunate and other accessories

"Severe malaria comes with complications that cannot be managed at lower-level facilities"
- Programme manager

"If lower-level facility has a doctor or nurse, severe malaria can be treated"
- Higher-level facility nurse

"The level of severe malaria should be graded, treating less and moderately severe malaria at lower-level"
- Policymaker



"It is a form of task shifting and sharing between low and high level facilities"
- Policymaker

"Referral centres are too far from low-level facilities"
- High-level facility worker

Figure 1: Acceptability of definitive treatment of severe malaria at lower level facility with IM AS