Country experiences with pre-referral interventions and referrals

Presentation at RBM Case Management Working Group

NMEP, Nigeria

Vision - a Malaria free Nigeria;
Goal *– to achieve a parasite prevalence of less than 10% and reduce mortality attributable to malaria to less than 50 deaths per 1,000 live births by 2025*

NMSP Strategic Goal and Objectives

To achieve a parasite prevalence of less than 10% and reduce mortality attributable to malaria to less than 50 deaths per 1,000 livebirths by 2025.

Prevention

- Insecticide-treated mosquito nets (LLINs)
- Indoor Residual Spraying

In areas of high and stable transmission

- IPT in pregnancy (IPTp)
- IPT in infancy (IPTi) now PMC
- Vaccine deployment

In areas of high seasonal transmission

- Seasonal Malaria Chemoprevention

Diagnosis & Treatment

- Parasite based diagnosis
  - Microscopy
  - Rapid Diagnostic Tests
- Artemisinin-based combination therapies (ACTs)
- Severe Malaria
  - Artesunate

Case management service delivery areas:

- Health facilities/Pre-referal
- Community Case Management/pre-referal
- Private sector

Surveillance, M & E

- Routine HMIS
- Malaria surveillance and response systems
- Household surveys
- Health Facility Surveys

Strengthening health systems

Advocacy, Communications and Social Mobilization

Procurement and Quality assurance

Trends in Malaria Prevalence

Percent of children age 6-59 months who tested positive for malaria by microscopy

2010 NMIS 2015 NMIS 2018 NDHS 2021 NMIS

Structure of Nigerian Health System

- Tertiary health system (Federal govt. owned)
- Secondary health system (State govt. owned)
- Primary healthcare system (LGA owned)
- Community level health system (TBAs, Village Health Workers, CORPS, Voluntary community mobilizers = CHIPS Agents)
- Available in all states of the federation

Severe Malaria Coordination Structure

Malaria Technical Working Group

↑

Case Management Subcommittee (CMSC)

↑

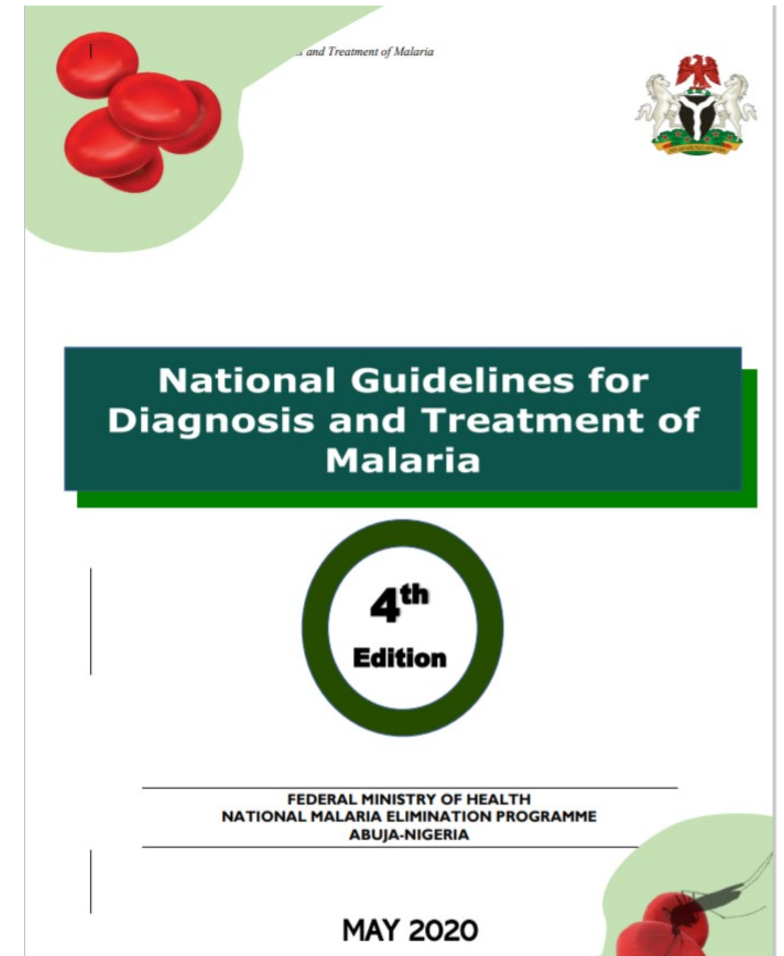
Severe Malaria Working Group

Annual Severe Malaria Stakeholders Meeting ↔ Severe Malaria Working Group

Severe Malaria Working Group ↔
- Task teams
- Committees

Guidelines for Pre-Referral Treatment

- At community or Primary health facility levels, give pre-referral treatment to a sick child with danger signs and refer immediately
- Options in a ranked order include:
  - **For children**: Give; a single dose (10mg/kg BW) rectal Artesunate or Artesunate IM (children <6 years only); or Artemether IM; or Quinine IM
  - **For adults:** Give Artesunate IM; **OR** Artemether IM; **OR** Quinine IM



ALGORITHM FOR MANAGEMENT OF SEVERE FEBRILE ILLNESSES AT COMMUNITY OR FIRST LEVEL HEALTH FACILITIES

FEVER
Temp ≥37.5°C
Febrile to touch
History of fever in last 24hours

No General Danger Signs

Do RDT
Do

If Positive
Give RECOMMENDED ACT

No improvement after 2 Days
OR
Getting Worse REFER to Next Level

If Negative
Check other MAIN SYMPTOMS

Treat Other MAIN SYMTOM if present
COUGH
DIARRHOEA
EAR PAIN
MEASLES

CANNOT Treat other main Symptom OR
NO MAIN SYMPTOM
REFER TO NEXT HEALTH FACILITY

General Danger Signs*

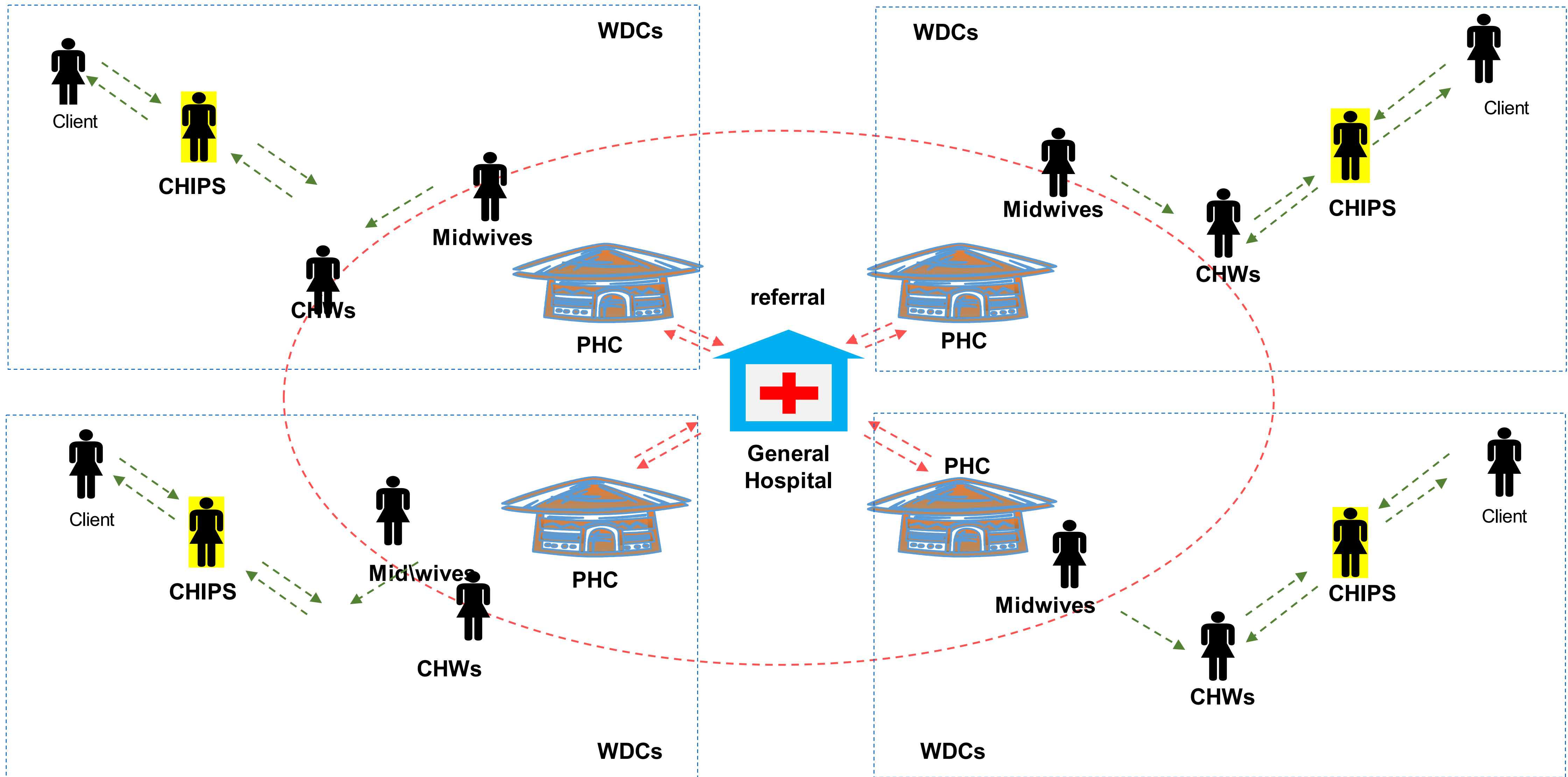
At Community:
REFER URGENTLY to nearest HealtH Facility

At PHCs or OPD:
Give PRE-REFERRAL Treatment** and REFER URGENTLY to General Hospital or Next Level

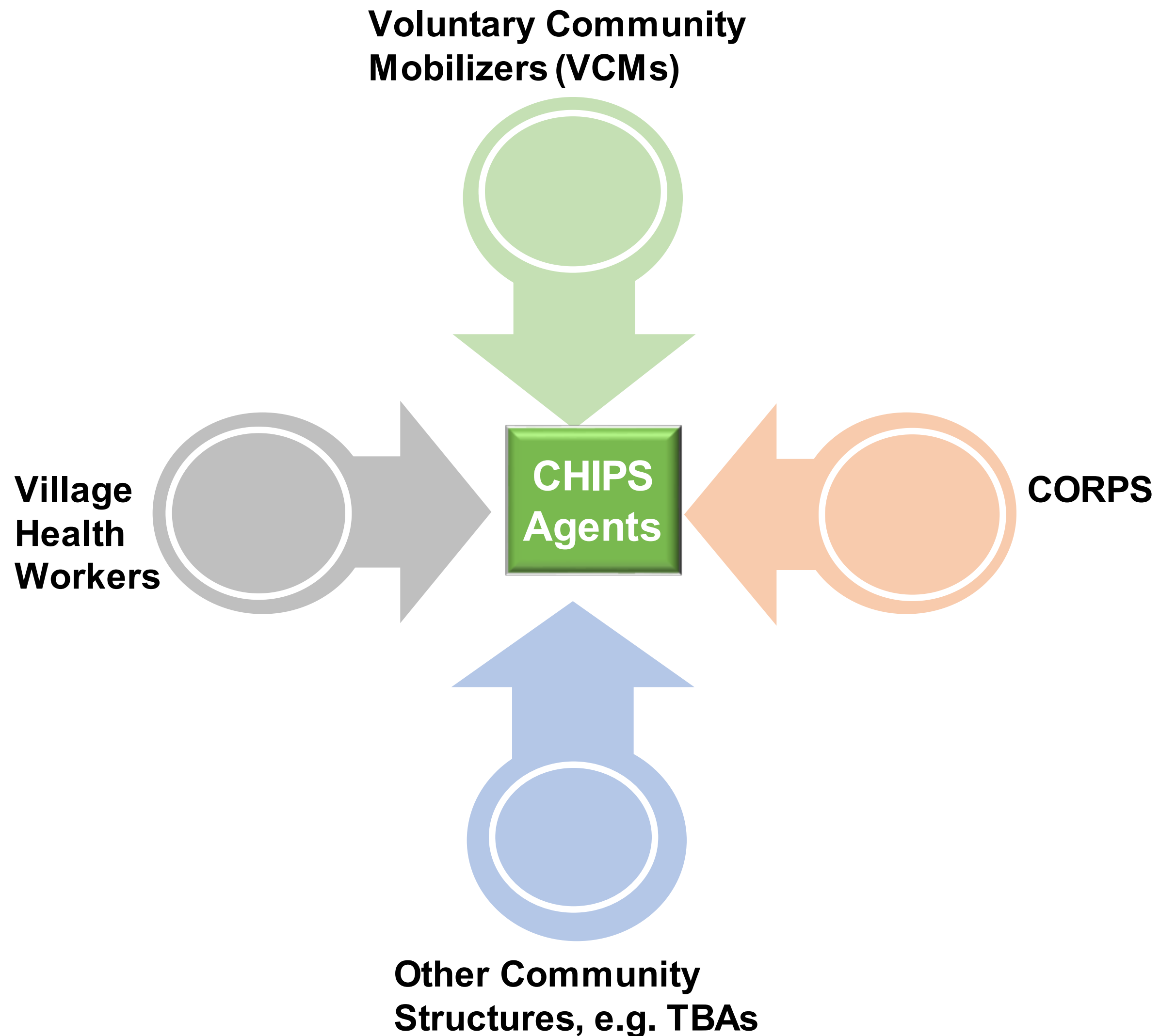
General Danger Signs*
- impaired consciousness (confusion or drowsiness or coma)
- inability to drink or breastfeed
- vomiting everything
- convulsions
- inability to sit or stand up

Pre-Referral Treatment**
- Give IM Artesunate or Artesunate Suppository or IM Artemether or IM Quinine
- Give First Dose of Recommended Antibiotics

Referral Linkages from the Community to Secondary/Tertiary Facility in Nigeria



Harmonization of community health structures/transition to CHIPS

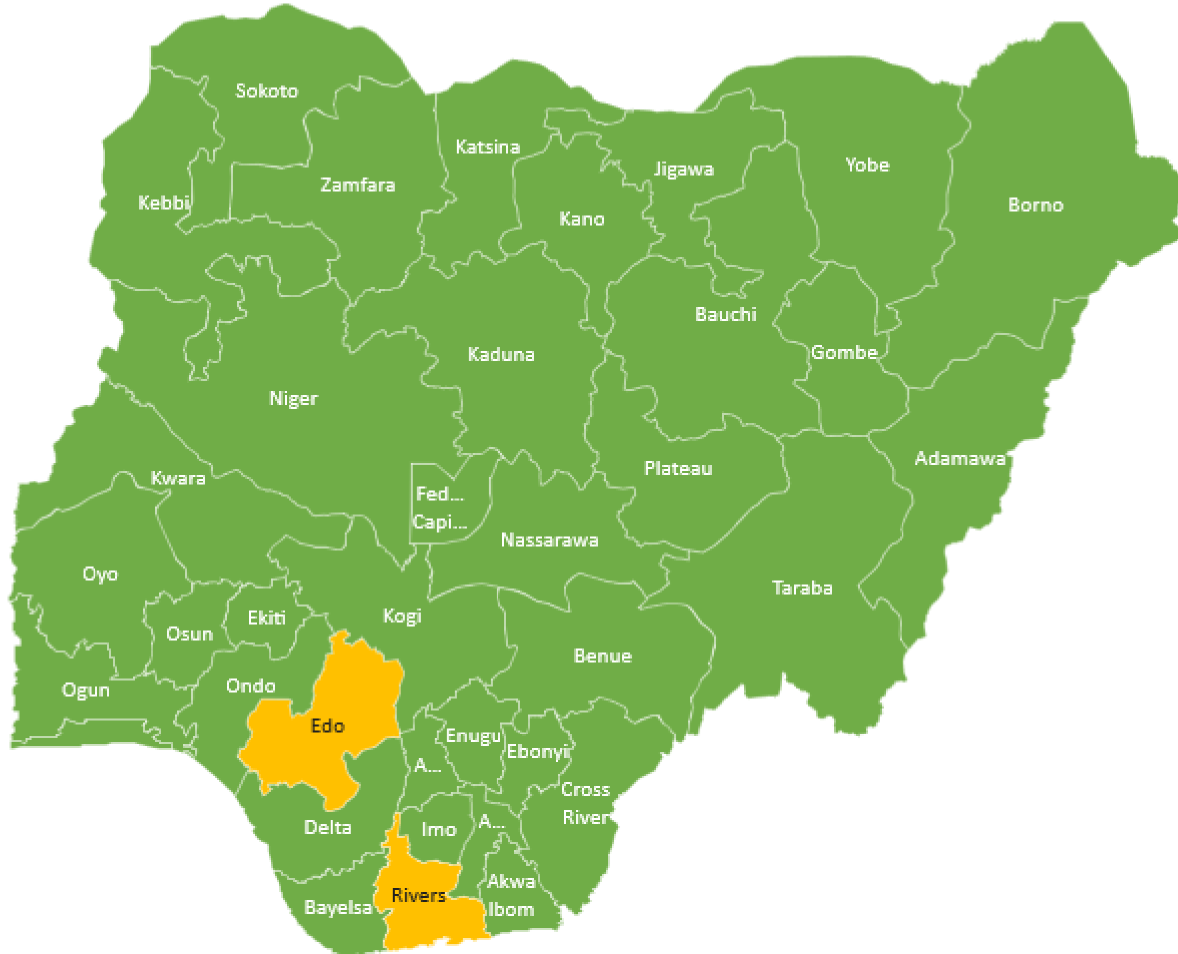


- CHIPS Program integrates all existing community-based health services and personnel
- Absorbed all adhoc system, integrated into the workforce for accountability
- CHIPS agents identify and provide treatment for U5, refer a sick child with danger signs urgently
- This approach promotes efficiency by ensuring the ***use of a harmonized database of community-level human resource*** for health partnering with the NPHCDA and the SPHCDAs to deliver on PHC mandates
- The harmonization has resulted in:
  - ***one plan***
  - ***one training curriculum and***
  - ***one M&E for all community level services and personnel***

Status of Program Implementation as of June 2023

Implementation

Yet to commence



Geopolitical Zone	State	Status of CHIPS Personnel	Number of LGAs	Number of Wards	No. of CHIPS Agents	No. of CEFP	Total no. of CHIPS Personnel
NC	Kwara	Deployed	4	20	200	40	240
	Nasarawa	Deployed	13	82	820	164	984
	Niger	Deployed	14	93	930	186	1116
	Benue	Trained	7	14	140	28	168
	Plateau	Deployed	5	14	140	28	168
	FCT	Trained	3	15	150	30	180
	Kogi	Trained	4	16	160	32	192
NE	Adamawa	Deployed	21	182	1800	300	2100
	Bauchi	Trained	20	133	800	133	933
	Borno	Deployed	18	85	1405	279	1684
	Gombe	Deployed	11	57	1100	100	1200
	Taraba	Trained	13	78	822	164	986
	Yobe	Deployed	12	64	768	136	904
NW	Jigawa	Deployed	26	135	1044	209	1253
	Kaduna	Deployed	20	171	2063	347	2410
	Kano	Deployed	18	196	3300	629	3929
	Katsina	Deployed	6	24	240	48	288
	kebbi	Trained	6	18	180	36	216
	Sokoto	Deployed	3	9	90	18	108
SE	Abia	Deployed	5	32	320	64	384
	Anambra	Trained	8	68	680	136	816
	Ebonyi	Deployed	2	26	284	55	339
	Enugu	Trained	3	15	150	30	180
	Imo	Trained	3	12	120	24	144
SS	Bayelsa	Trained	1	3	30	6	36
	Cross- River	Trained	5	50	500	100	600
	Akwa-Ibom	Trained	6	33	327	66	393
	Delta	Deployed	4	10	100	20	120
SW	Ogun	Deployed	6	10	100	20	120
	Osun	Deployed	3	30	300	60	360
	Ondo	Deployed	4	18	180	36	216
	Oyo	Trained	6	18	180	36	216
	Ekiti	Trained	5	50	500	100	600
	Lagos	Trained	5	15	148	30	178
	TOTAL		290	1,796	20,071	3,690	23,761

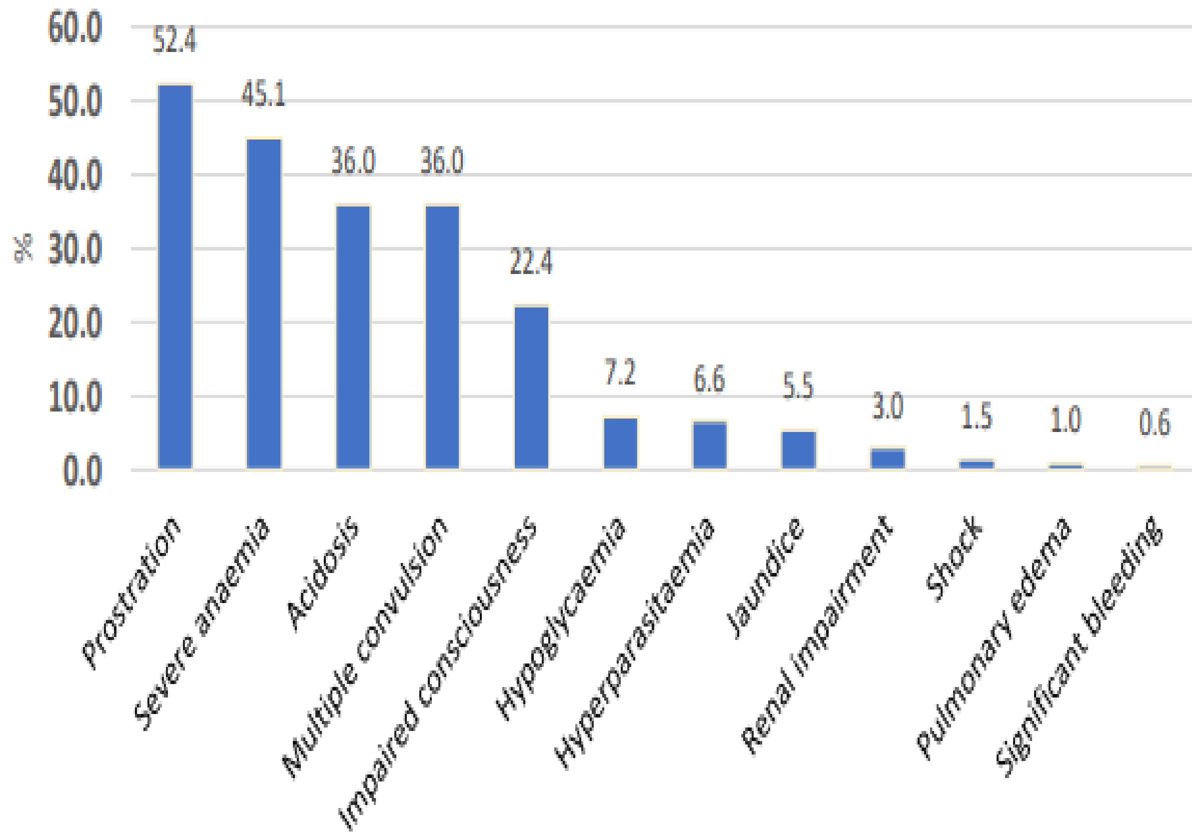
What We Need to Know – **Community level malaria cascade (Ohaozara LGA) and community/health facility TPR**

Severe Malaria Retrospective Study (SMRS)

- The study involved data extraction from patients Case note
- A 5 year retrospective data collation from 18 Tertiary Health Facilities and 18 Secondary Facilities
- Referral indicates that most of the patients were Self referred
  - **Tertiary Facility:** 3459 (68.4%) were self referred. Another 1602 (31.6%) were referred by the lower levels of the health care system.
  - **Secondary facility:** Self-referral, 3187 (91%) cases outweighed health facility referral, 252 (7.2%) cases

Presentation at Referral (SMRS)

Tertiary Facility

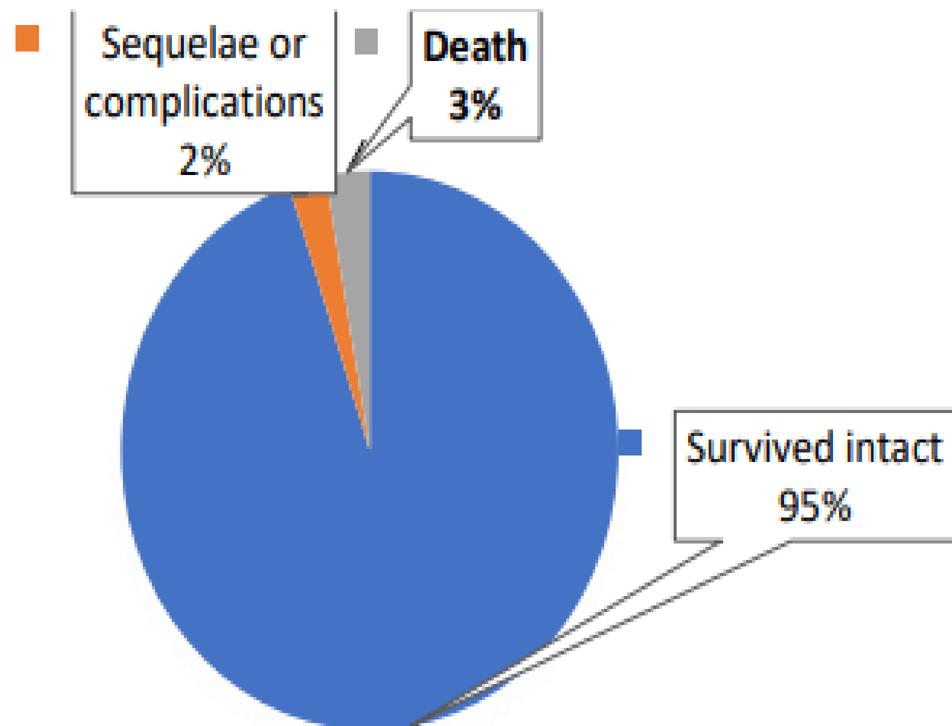


Secondary

Complications	n	Cases (%)
Prostration	3292	2325 (70.6)
Severe malarial anaemia	3417	1402 (41.0)
Hypoglycaemia	2358	936 (40.0)
Hyperparasitaemia	2242	789 (35.2)
Multiple convulsions	3314	1092 (33.0)
Impaired consciousness	2945	428 (14.5)
Severe Acidosis	837	253 (13.8)
Pulmonary oedema	1834	100 (5.5)
Shock	69	1767 (3.9)
Jaundice	1665	46 (2.8)
Renal impairment	1769	31 (1.8)
Significant bleeding	2135	26 (1.2)

Treatment Outcome (SMRS)

Tertiary Facility

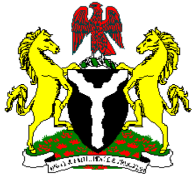


Outcome oftreatment of severe malaria

Secondary

Treatment outcome	n (3496)	Cases (%)
Survival Intact		3122 (89.3)
Survived with complication		29 (0.8)
Referred to Tertiary Health Facility		103 (2.9)
Death		242 (6.9)
		3496 (100.0)

Our Vision - a malaria free Nigeria; Our goal – to reduce malaria burden to pre-elimination levels and bring malaria-related mortality to zero



Severe Malaria Stakeholders Meeting

- Held on 5th – 6th July 2023
- National stakeholders with representation across all States (DPH, DMS, Medical Consultants), IPs and other International stakeholders
- Key deliverable - stakeholders agreed to collaborate and work in synergy
- **Thereafter, a communique was issued and disseminated Nationally, across States highlighting (challenges) including referral in Nigeria and Recommendation**

Communique

COMMUNIQUE ISSUED AT THE NATIONAL SEVERE MALARIA STAKEHOLDERS' MEETING HELD AT SANDRALIA HOTEL, JABI, ABUJA ON THE 5TH – 6TH JULY, 2023

PREAMBLE

The 2023 National Severe Malaria Stakeholders meeting which was held from 5TH – 6TH JULY, 2023, was declared open by the Director of Public Health Federal Ministry of Health, represented by the National Coordinator NMEP, Dr Perpetua Uhomoibhi. Participants comprising of States' Directors of Hospital/Medical Services, and Paediatricians from Tertiary Hospitals from thirty-one states namely **Adamawa, Delta, Gombe, Jigawa, Kaduna, Kano, Katsina, Kwara, Niger, Ogun, Osun, Sokoto, Oyo, Taraba, Yobe, Zamfara, Nasarawa, Cross Rivers, Akwa-Ibom, Ebonyi, Benue, Plateau, Bauchi, Kebbi, Anambra, Abia, Imo, Bayelsa, Ekiti, Rivers states and the FCT,** and Directors from Federal Tertiary Hospitals.
In addition to the National Coordinator of the National Malaria Elimination Programme (NMEP) and Heads of Branches with Key technical staff, were partners' representatives from the WHO and UNICEF, Presidents Malaria Initiative for States (PMI-S), Medicines for Malaria Venture (MMV), Catholic Relief Services (CRS), USAID Integrated Health Program (IHP), Management Sciences for Health (MSH), Malaria Consortium, Clinton Health Access Initiative (CHAI), Professional Associations (NMA, NANNM, PAN, etc), and the Academia. The two-day meeting was moderated by Professor Olugbenga Mokuolu, Portfolio Director MSH/PMI-S.

OBJECTIVES OF THE MEETING

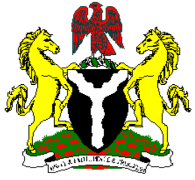
1. Provide updates and review progress on Severe Malaria activities in the country (NMEP and Partner's projects); including the burden of the disease and commodity logistics management
2. Disseminate recent research findings on Severe Malaria conducted globally and in-country and discuss implications for policy and implementation in Nigeria

Challenges on Referrals (From Communique)

1. Unavailability of rectal artesunate in most states for use in initiating pre-referral treatments
2. Weak referral linkages in all levels of the healthcare system
3. Weak data management systems for severe malaria documentation and reporting in secondary and tertiary health facilities
4. Inadequate human resources for health vis-a-vis frequent attrition of staff and non-recruitment by the state governments
5. Wastages associated with the reconstitution, dosage, and administration of artesunate injection

Recommendations on Referrals (From Communique)

1. The need to adopt the newly released **WHO information note on rectal artesunate** (July 5, 2023) that reinforces the use of **Rectal Artesunate** for eligible age groups for pre-referral treatment
2. The **determination** on implementing the national guidelines on **pre-referral treatment** including making **rectal artesunate** widely available for use in children under 5 years
3. The introduction of **multiple strengths of artesunate injection (30mg, 60mg, and 120mg vials)** offers opportunities to minimize wastage and reduce costs to patients.
4. **The added need for focused surveillance and strategies targeted at people >5 years**, including prioritizing commodities forecasting and procurement to cater to these age groups



Next Steps

1. The Country to explore domestic and donor resources to procure Rectal Artesunate
2. Capacity Building of Health Care Workers across cadre on pre-referral services and management of Severe Malaria (ongoing)
3. Increase deployment of implementation of CHIPS intervention across the country through donor and State intervention (Scale up plan developed)

THANK YOU