

**13th RBM Case Management Working Group
Meeting, Kigali Rwanda**

Misuse of Artesunate in Uganda

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Malaria Burden in Uganda

- Malaria is one of the leading causes of morbidity and mortality & costing a family on average, USD 9 or 3% of annual income per episode
- 33% of OPD, 22% of Admissions, 11 % of deaths
- Globally,
 - 3rd highest contributor to the global malaria cases at 5.1 % in 2022
 - 8th highest contributor to the global malaria deaths in 2022 at 2.9 %





Policy & Strategic Interventions

❑ 1.0 Case Management

Policy Goal: To significantly reduce morbidity and prevent mortality attributable to malaria and eventually interrupt transmission

Policy Objectives:

- ❑ Early diagnosis and prompt, effective treatment of malaria.
- ❑ All suspected malaria cases are subjected to parasitological testing.
- ❑ Availability of quality assured diagnostics and malaria treatments
- ❑ All cases are properly documented at all points of care





Diagnosis

- mRDTs shall be used at all levels of service delivery**
- Quality Assured Microscopy remains gold standard**



Treatment Objectives

Uncomplicated malaria	Complicated malaria
<p>To reduce Malaria related morbidity.</p> <p>To prevent progression to severe Malaria.</p> <p>To interrupt transmission .</p> <p>To mitigate anti-malaria resistance development</p>	<p>To prevent Malaria deaths.</p> <p>To prevent disability.</p>



Treatment cont'd

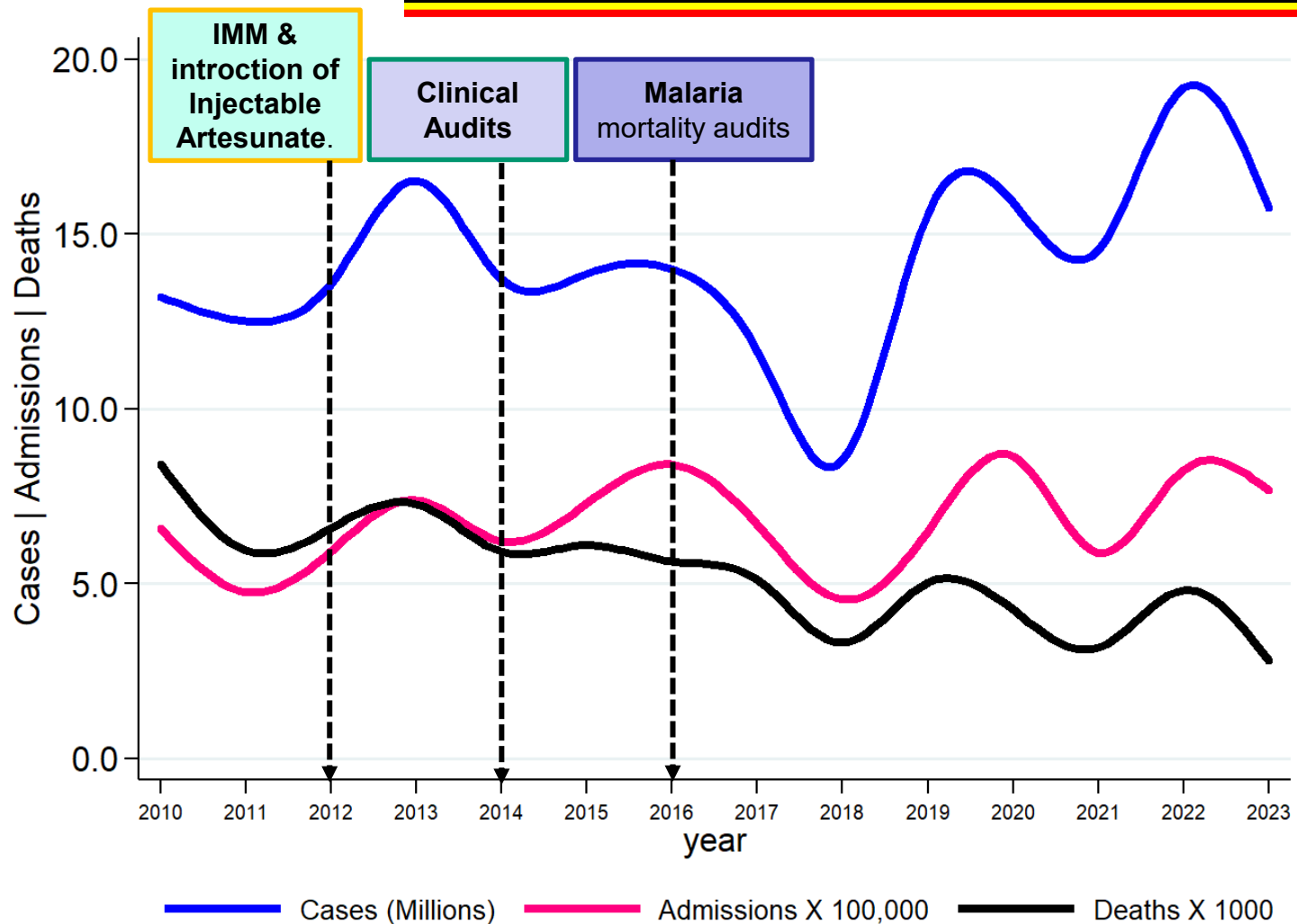
- ❑ ***Treatment regimens for uncomplicated malaria***
 - 1st line is an ACT, Artemether/Lumefantrine (AL)
 - Alternative 1st line is Artesunate/Amodiaquine (ASAQ)
 - 2nd line is Dihydroartemisinin Piperaquine (DHA-PPQ)
- ❑ **1st & 2nd line ACTs to be reviewed against results of Therapeutic Efficacy Studies.**

Severe Malaria

- ❑ **IV Artesunate in all patients including infants and PW in all trimesters**
***Discharge all severe malaria cases on DP and give another dose on review after 1 month for 3/12 for chemoprevention(Prevention of malaria re-infection before full recovery from severe malaria effects).**
- ❑ **Quinine IV in absence of artesunate**

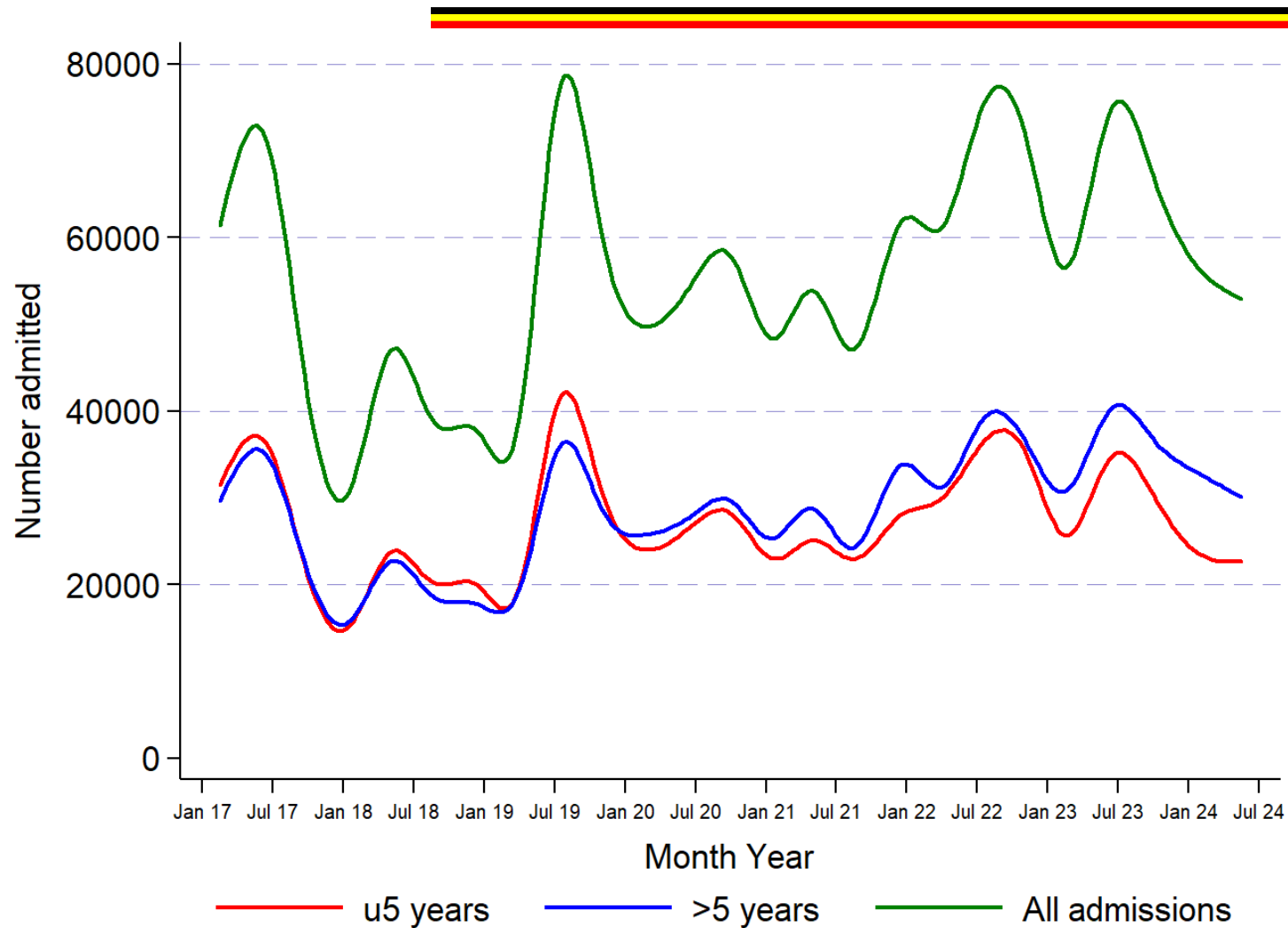


Trends of Malaria cases, admissions and deaths:

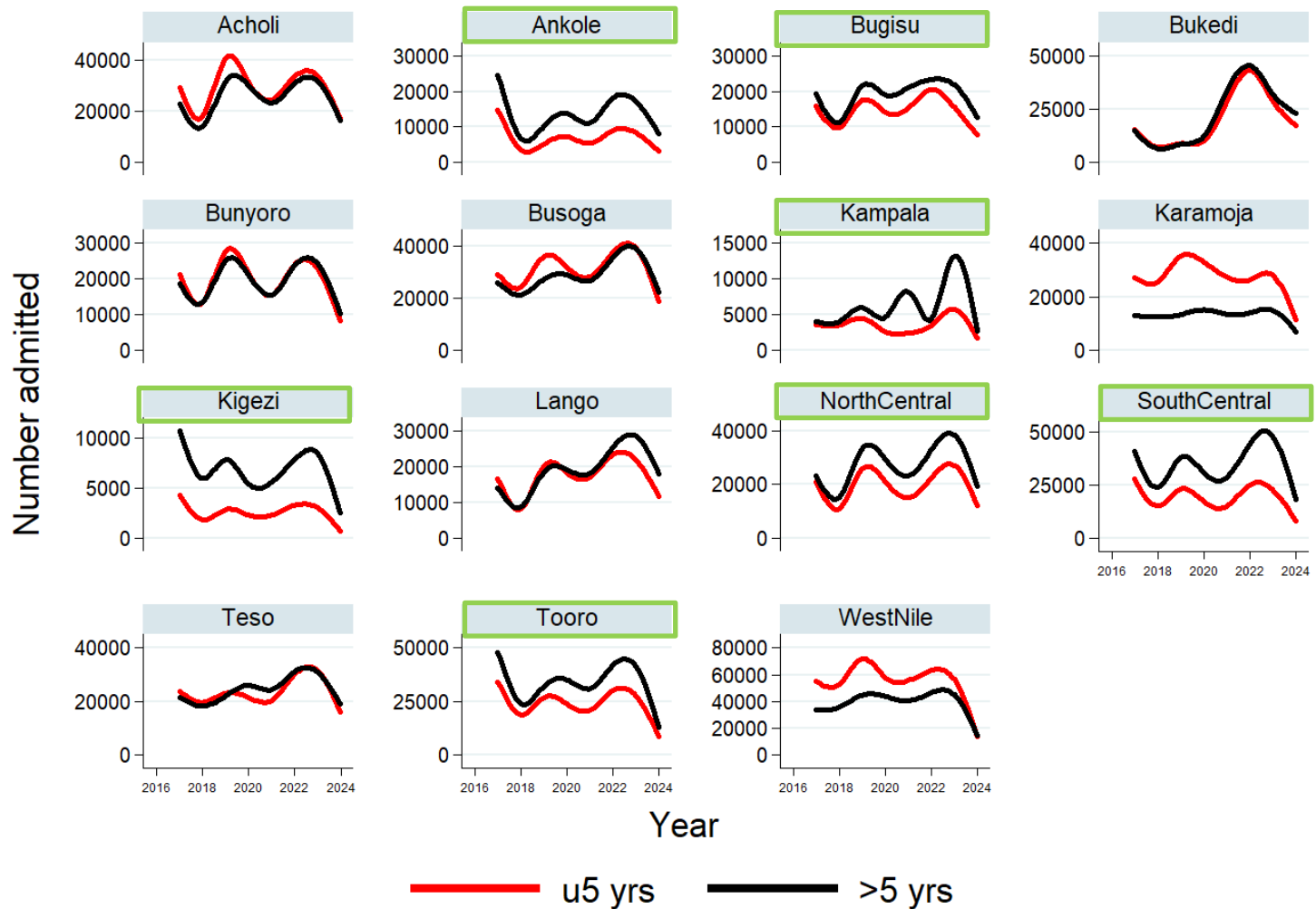


Malaria admissions in Uganda

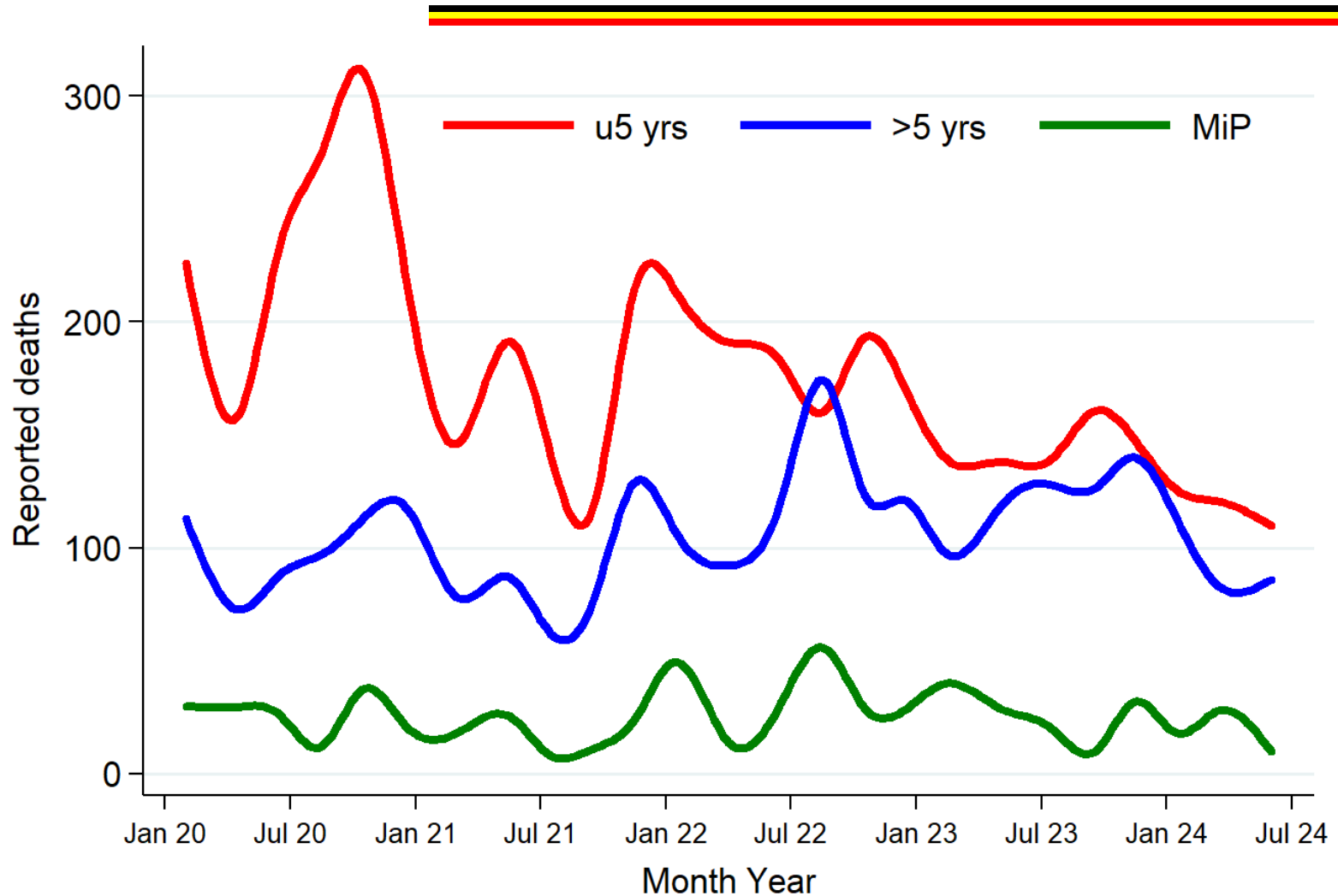
General trend in admissions by age group



More admissions in >5 yr age group in low – moderate transmission areas



More deaths in children u5 years



Strategies for severe malaria management

- Communicate risk and promote early treatment seeking behaviour .
- Increase access to care through integrated community case management
- Reduce stock -outs of Malaria case management commodities and supplies.
- Improve and sustain the quality of case management in the private and public sector including community.
- Reinforce appropriate patient referrals and use of rectal Artesunate
- Promote the practice of patient follow up and adherence to the PDMC recommended schedule

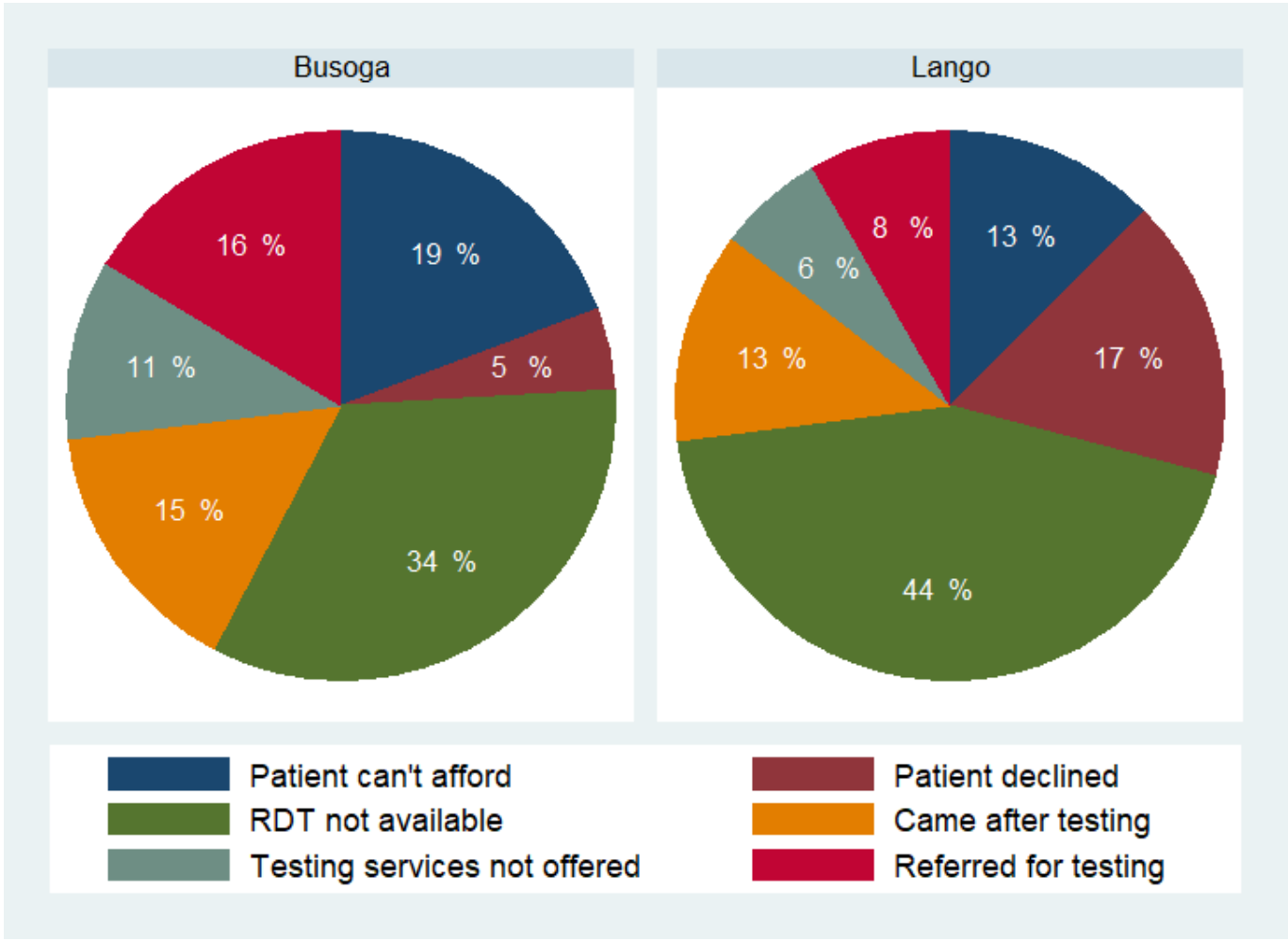
Common errors during the management of Malaria

Common Error	Rationale
Presumptive treatment of malaria	Poor management of actual illness; wastage of antimalarial medicines; potential for development of resistance to antimalarial medicines
Delay in starting antimalarial therapy	Progression to severe disease
Partial treatment or incorrect dosages	Progression to severe disease; potential for development of resistance to antimalarial medicines
Monotherapy	Progression to severe disease or death; potential for development of resistance to antimalarial medicines
Delay or failure to refer a patient who needs referral	Progression to severe disease or death
Inappropriate route of administration of the medicines (e.g. giving a patient with severe malaria oral treatment)	Progression of symptoms or death
Failure to recognize severe malaria	Progression of symptoms or death
Failure to recognize and treat other conditions	Failure of patient to recover and progression of complications of the other conditions

Malaria case management practice at drug shops

Variable	Busoga	Lango
# of DS that attended to a patient in the past wk	358	343
# of DS that attended to a febrile patient in the past wk	296 (83%)	261 (77%)
Services offered to last febrile patient seen		
Number of patients	296	261
Temperature taken, n (%)	164 (55%)	149 (58%)
Weight measured, n (%)	25 (8%)	53 (20%)
Malaria test done, n (%)	190 (64%)	213 (82%)
Positive malaria test, n (%)	171 (90%)	198 (93%)
Malaria test type		
RDT	188 (99%)	205 (96%)
Microscopy	2 (1%)	8 (4%)

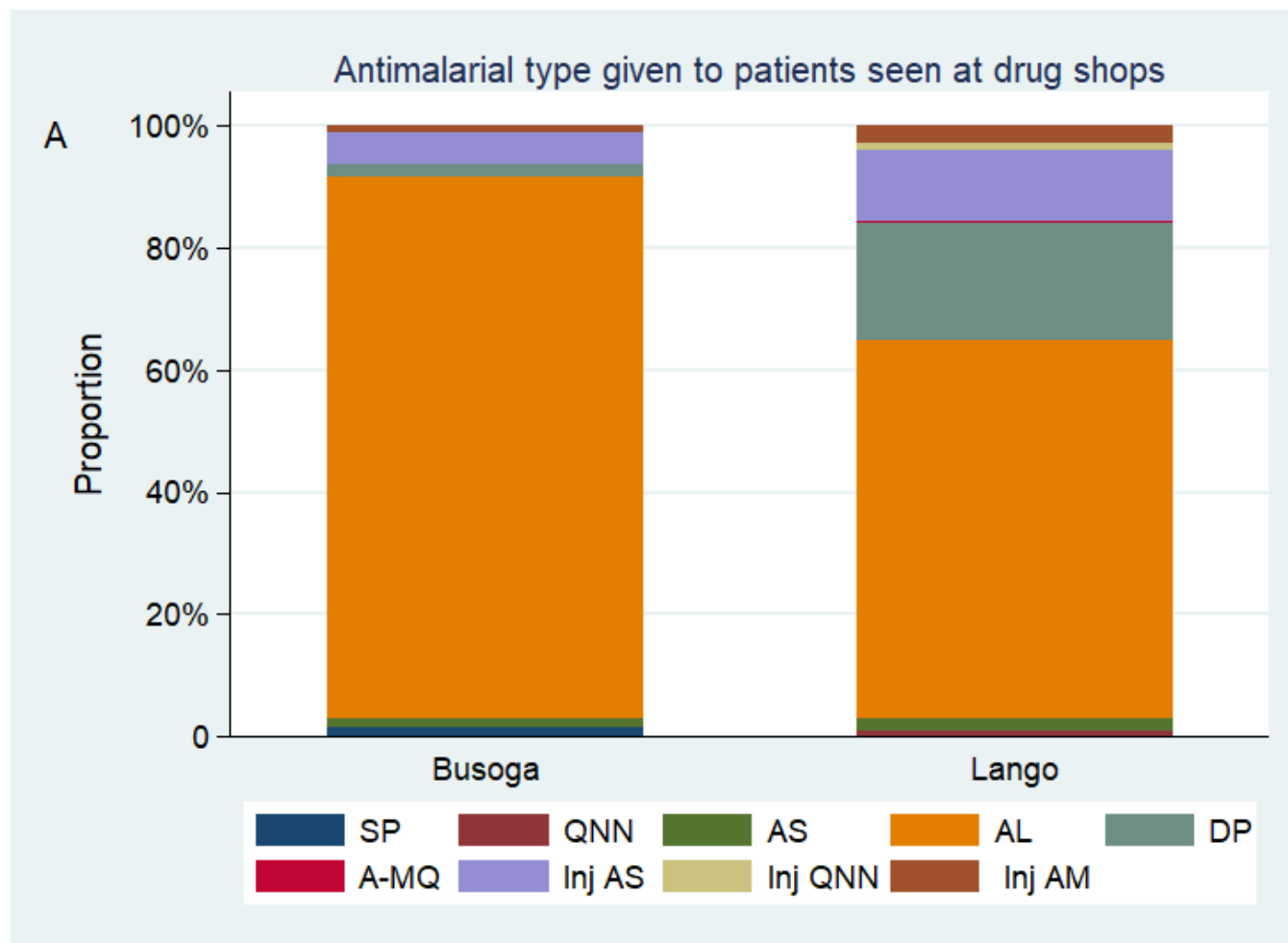
Reasons for not offering a malaria test



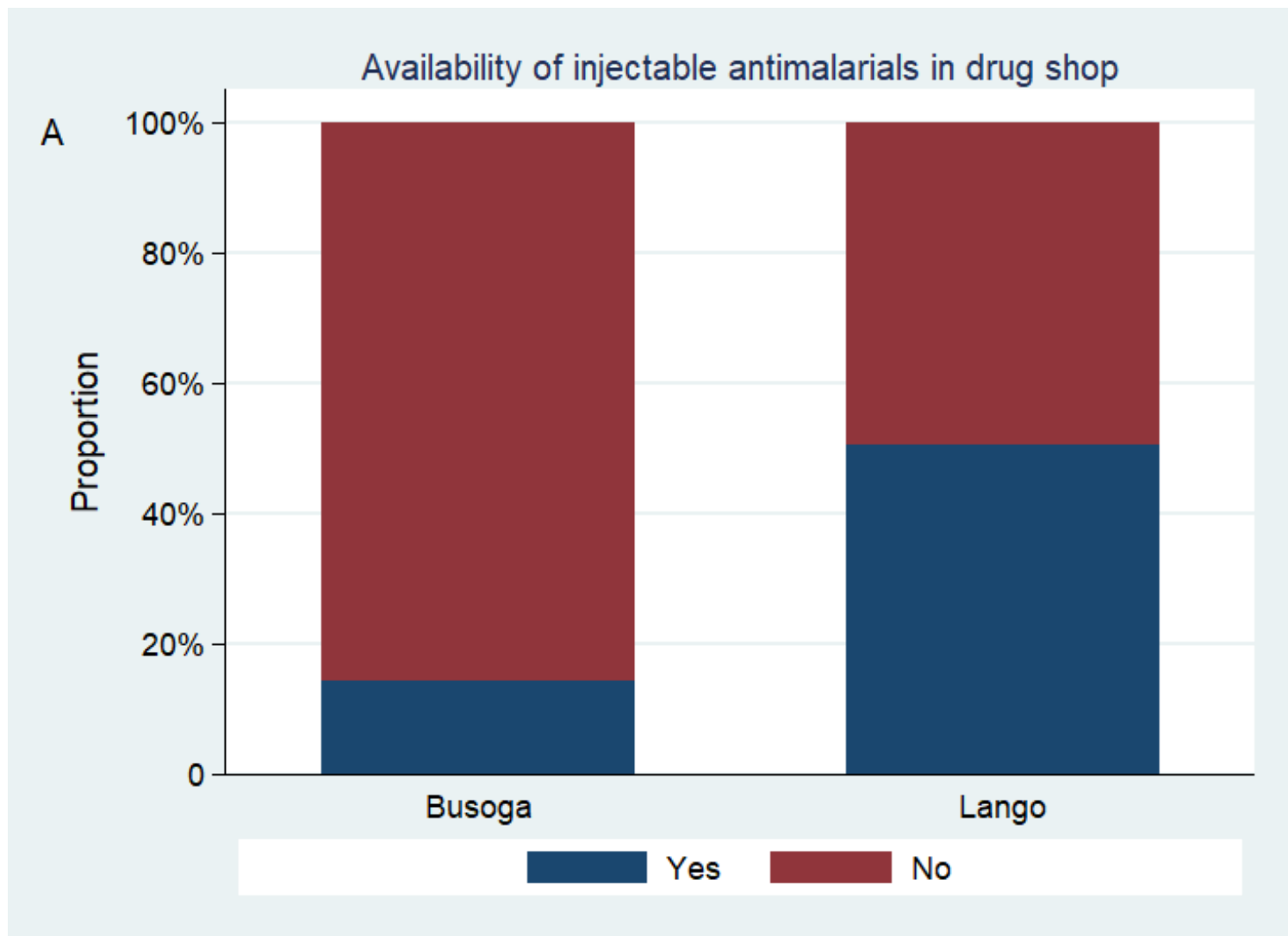
Antimalarial treatment practices

Variable	Busoga	Lango
Patients with a positive test result		
Number	171	198
Prescribed an antimalarial	166 (97%)	192 (97%)
If prescribed, was the antimalarial given	163 (98%)	190 (99%)
If given, was it a full dose	146 (89%)	178 (93%)
Patients with a negative test result		
Number	18	15
Prescribed an antimalarial	8 (44%)	2 (13%)
If prescribed, was the antimalarial given	8 (100%)	1 (50%)
If given was it a full dose	7 (78%)	1 (100%)
Patients without a malaria test		
Number	106	48
Prescribed an antimalarial	65 (69%)	32 (67%)
If prescribed, was the antimalarial given	64 (98%)	32 (100%)
If given, was it a full dose	44 (69%)	27 (84%)

Antimalarial type given to patients



Injectable antimalarials in stock



Findings from Clinical and Mortality Audits

- **Stocking & Administration inj. Artesunate in OPD**
- **No proper patient assessment e.g weight, testing**
- **Improper artesunate reconstitution**
- **Failure to adhere to administration schedule**
- **Non clarity on length of use of artesunate in case of non patient response**

Recommendations

- **Work on the 3 delays**
- **Holistic patient assessment and management**
- **Address system issues**
- **Involve health facility management in Quality Improvement**
- **Introduce accountability malaria mortality like maternal mortality**
- **Look at severe malaria supplies holistically beyond antimalarial**
- **Invest in high dependency units for severe malaria management**