

Overview on Best Practices in Continuum of Care for Severe Malaria Patients in Rwanda

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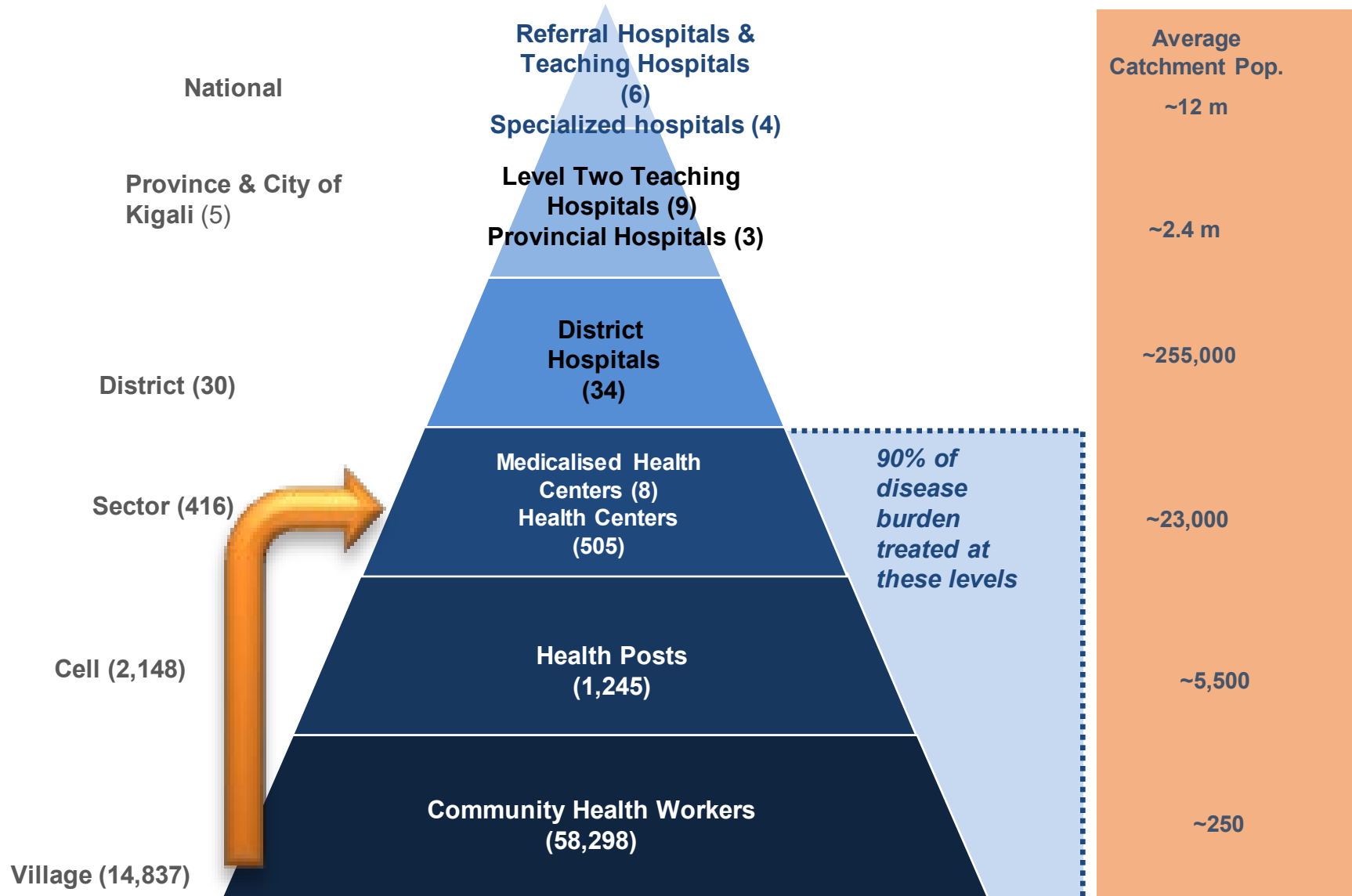
Introduction and significance

- Referrals of severe malaria patients from lower health facilities within the health system play a vital role in ensuring prompt and appropriate management of the disease
- The referral process involves transferring patients with severe malaria symptoms from primary healthcare centers or community to higher-level health facilities, such as district hospitals, Provincial or regional Referral Hospital, where specialized care and resources are available

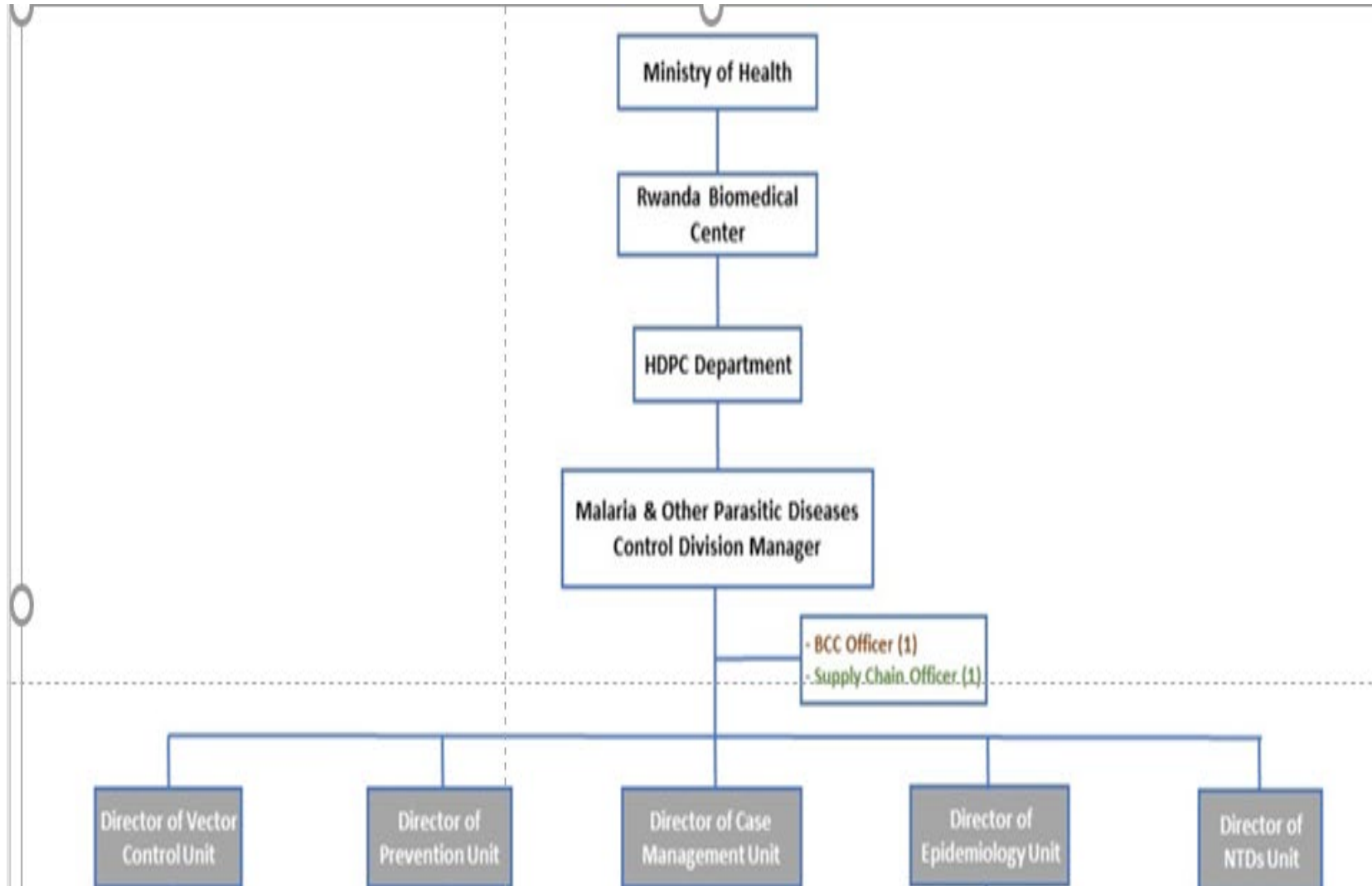
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Rwanda Health Sector Structure

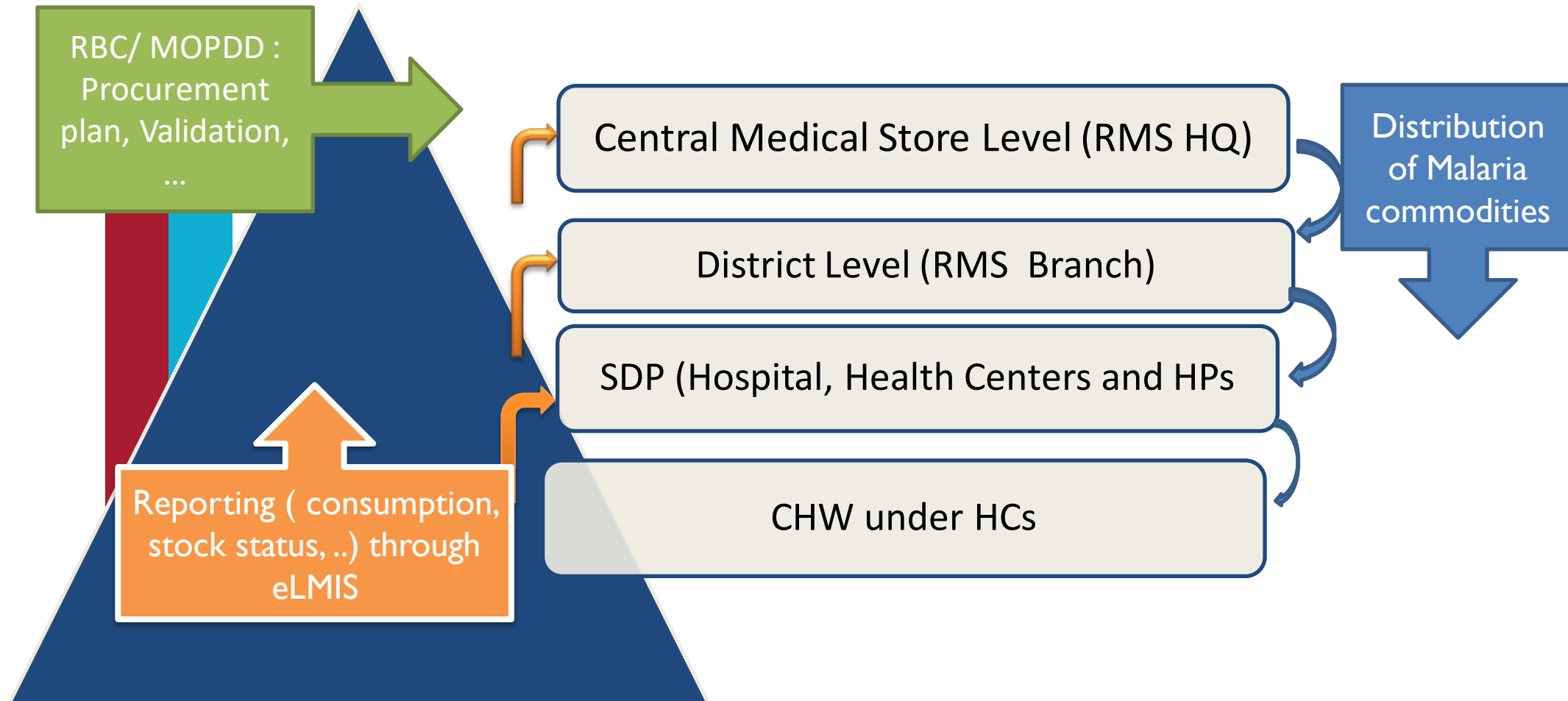


Organizational Structure of RNMP



- 1. Malaria Prevention:** vector control (VC); malaria in pregnancy (MIP)
- 2. Malaria case management:** diagnosis and treatment
- 3. Surveillance Monitoring Evaluation, Operational Research (SMEOR);** Epidemic Preparedness and Response (EPR)
- 4. Program Management (PM);** Procurement and Supply Management (PSM); Finance & costing (FH)
- 5. Advocacy, Communication & Social mobilization (ACSM)**

Supply Chain of Malaria Commodities



Rwanda Malaria treatment Guideline

- The last version : **National Malaria Treatment Guideline Version 2020** was released as a part of “National Integrated Malaria Control Guidelines Version 2020, a comprehensive Malaria control guiding tool.

Classification Of Malaria Cases:

- ❖ **Simple Malaria**
- ❖ **Simple Malaria with Minor Digestive Symptoms**
- ❖ **Severe malaria**

The parasitological confirmation of Plasmodium by either blood smear or rapid test is compulsory without any exception

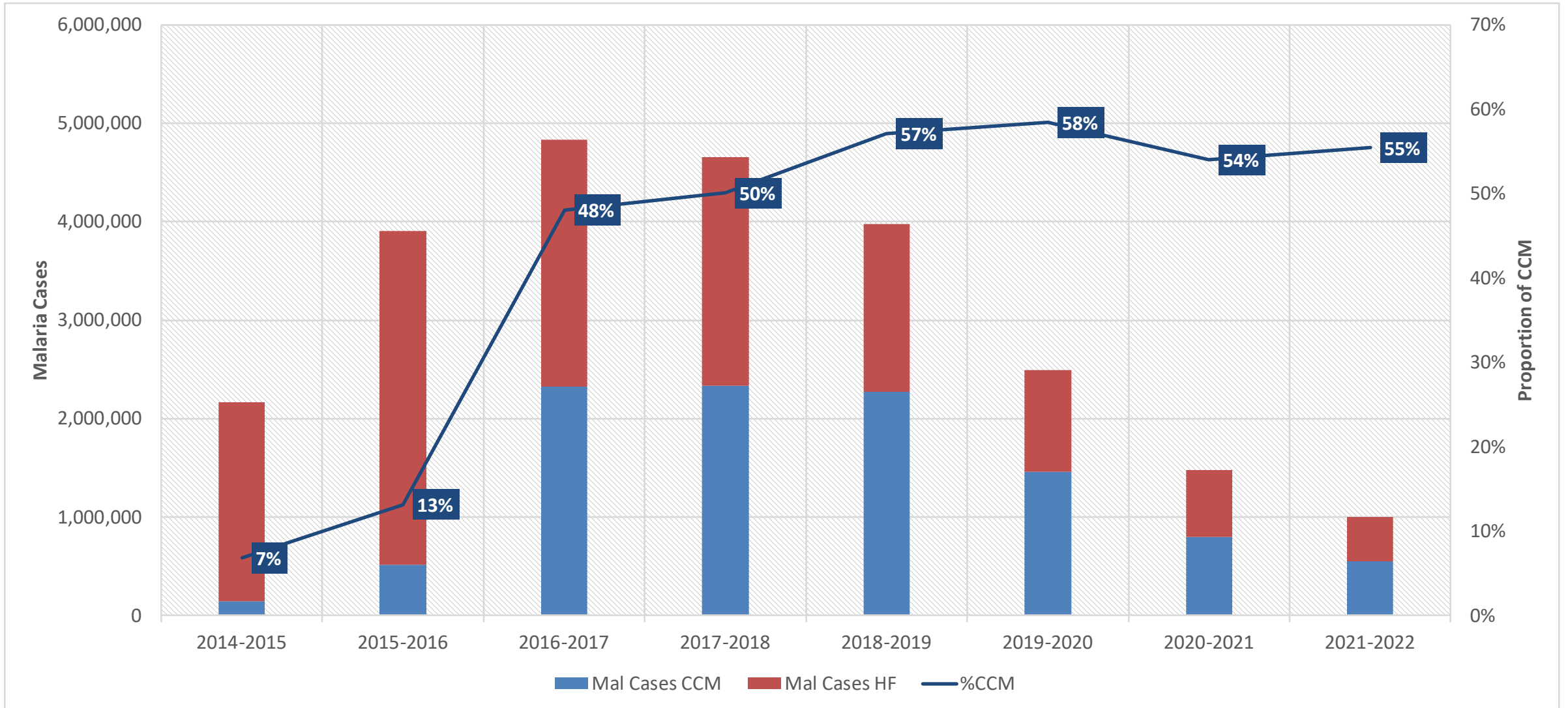
Malaria Diagnosis

	Community	Health Posts	Health Centers	Hospital level	NRL
Clinical Diagnosis	Clinical assessment of fever and associated signs including signs of severity	Clinical assessment of fever and associated signs including signs of severity	Clinical assessment of fever and associated signs including signs of severity	Clinical assessment of fever and associated signs including signs of severity	Quality Control of microscopy at Hospital level
Parasite Testing	Malaria RDT	Malaria RDT	Microscopy (or RDT if microscopy not available	Microscopy	PCR (for research purpose)

Malaria Treatment

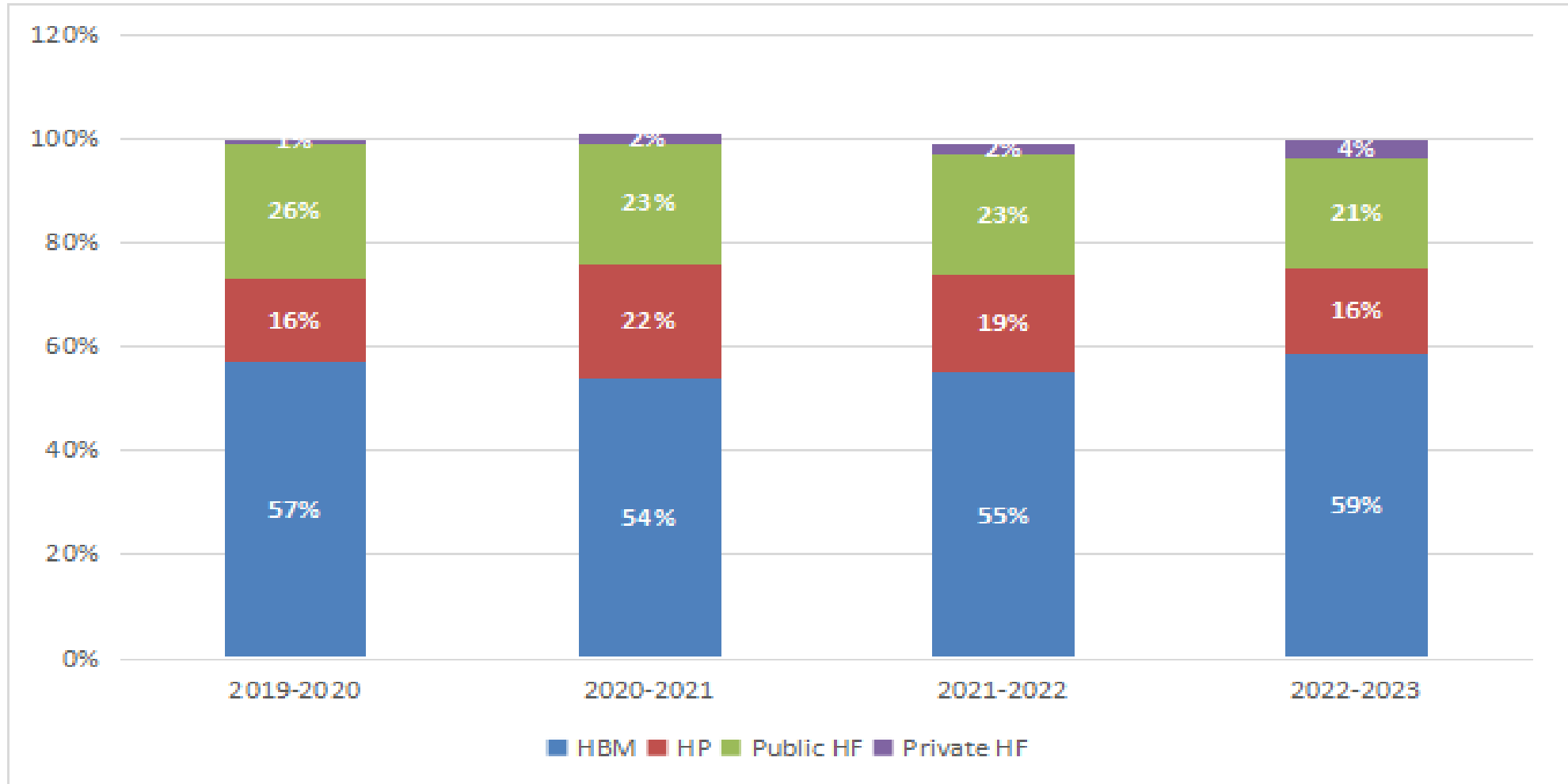
Type	Community/H P	Health Center	DH	RH
Simple Malaria	ACTs	ACT quinine	ACT quinine	ACT quinine
Simple Malaria with Minor digestive symptoms	ORS for diarrhea in Under five years oold. Refer	Observation for 24 h on Artesunate inject, refer if deterioration of no unable to take treatment per os.	Observation for 24 h	Observation for 24 h
		Artesunate Injection or	Artesunate Injection	Artesunate Injection
		Quinine Injection (pregnant women, 1st trim)	Quinine Injection (pregnant women, 1st trim)	Quinine Injection (pregnant women, 1st trim)
Severe Malaria	Refer	Pre Transfer treatment, with Artesunate of Quinine injectable (1st trimester pregnant women) then refer	Artesunate of Quinine injectable (1st trimester pregnant women)	Artesunate of Quinine injectable (1st trimester pregnant women)
Complications	Refer	Hypoglycemia, Dehydration	Convulsions, impaired conscienceness, acidosis, Hypoglyceamia, aneamia, Jaundice, pulmonary oedema, shock	Convulsions, impaired conscienceness, acidosis, Hypoglyceamia, aneamia, , pulmonary oedema, shock, advanced AKI, Liver fail lure, Multisystem organ fail lure.

Trend of Malaria Cases treated at all Levels of Service Provision, 2014-2022



79% Reduction in Malaria Cases from 2016/2017 to 2021/2022

Contribution of CHWs to Malaria Case Management, 2019-2023 (source : HMIS)



Early seeking of health Care services

Two strategies were put in place to scale up Health services closer to the population:

- ❖ **Home Based Management** of under five childhood illnesses was extended to children above 5 years old and Adults increased of the proportion of malaria patients seeking care in the community from 13% to 59% in 2015-2016 and 2022-2023 respectively.
- ❖ **The introduction of Health Post** in the health system, is a new strategy adopted by the GoR to scale up health services closer to the community and alleviate workload for the CHWs.

Referral system: Fever cases referred to HCs

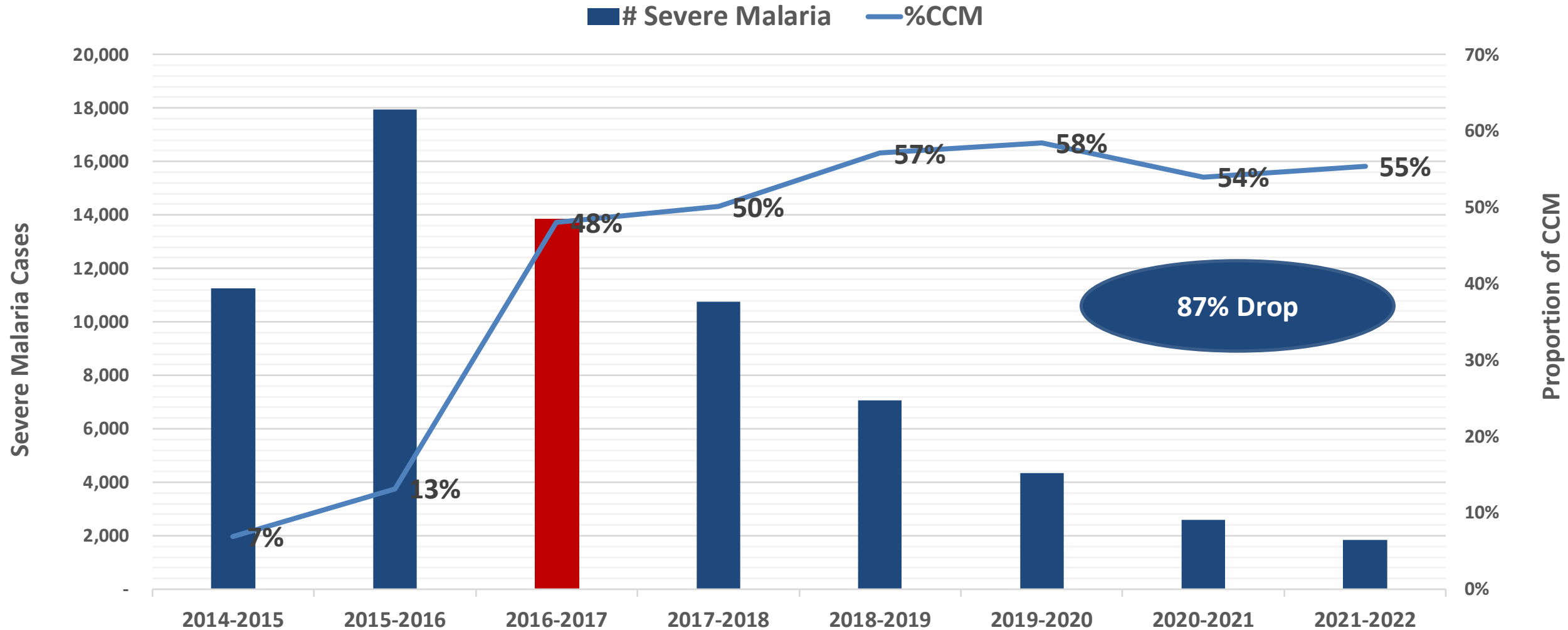
All fever cases that present to the CHWs are tested for Malaria. Those **who tested negative for Malaria are referred to HCs for more exploration , regardless the presence of signs of severity or not.**

Positive cases without signs of complications are treated and sent home with follow up plan.

Positive cases with signs of complications are referred to HC with a Rapid sms notification.

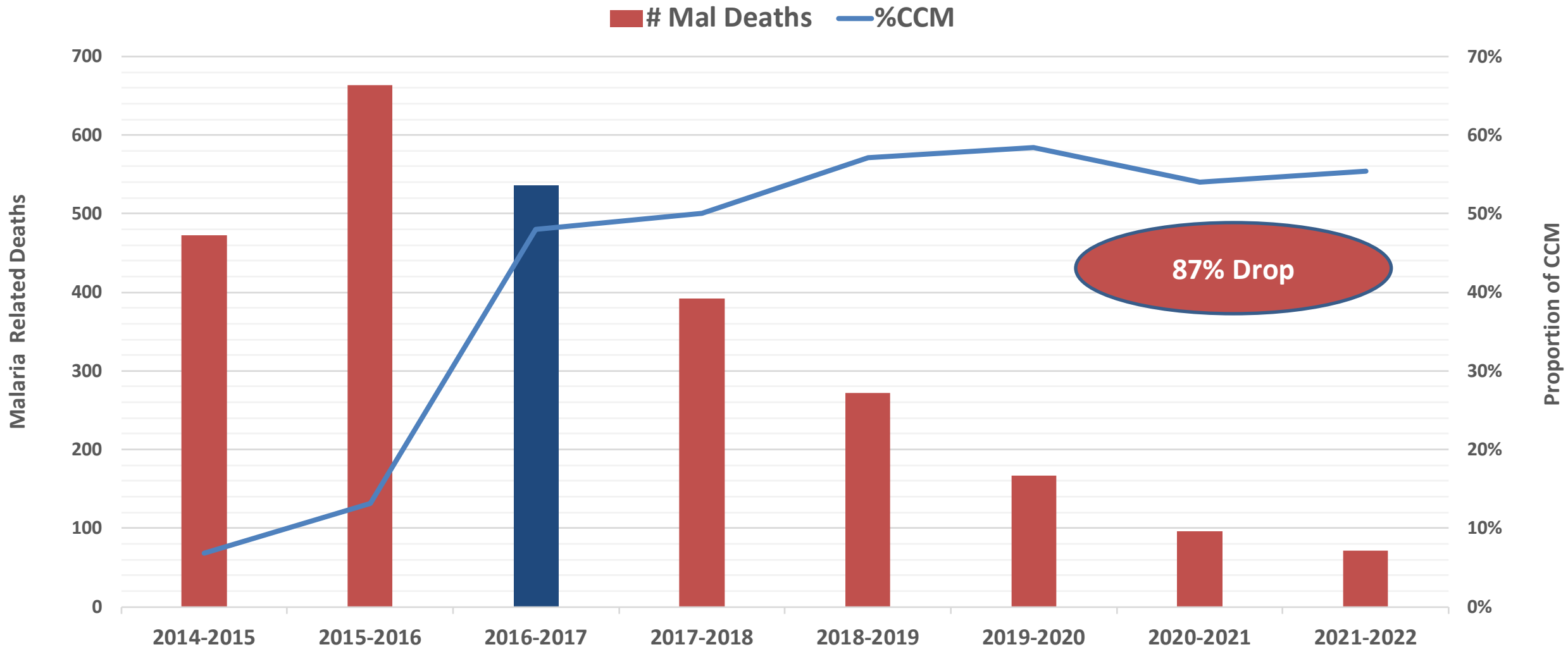
Follow up : all cases treated for Malaria are visited at home on the 2nd day of treatment to evaluate the improvement the health of the patient.

As a result: decrease of severe Malaria Cases, 2014-2022 (annual report)



87% Reduction in Severe Malaria Cases from 2016/2017 to 2021/2022

And decrease of Deaths Due to Malaria, 2014-2022



87% Reduction in Deaths Due to Malaria from 2016/2017 to 2021/2022

- **Parasite**

- **Emerging Drug Resistance***: Risk of Artemisinin resistance due to Kelch 13 mutation , IPTP not done because of SP resistance
- Reservoir (asymptomatic people)

- **Human**

- Decline of immunity
- Some interventions not used effectively
- Vulnerable/High Risk Groups (under five and pregnant women)
- Population movement

- **Funding**

- Increase in the price of products (IRS, LLINs, ACTs, etc)
- CHWs PBF, Training cost, ...

Evidence guided interventions: Use of data for Decision Making

- Scorecards: Guiding the deployment of interventions and Local NGOs and HF efforts
- Malaria Vulnerable and High-Risk Groups were identified and orient our interventions so that no one is left behind (Malaria Matchbox Assessment Guiding New Interventions)
- Malaria death audit: review of Patient files to check for best practices in terms of Malaria treatment and referral system and provide feedback in regards to area of improvement.
- Use of Rapidsms by CHWs to notify cases of fever with signs of severe Malaria to alert the receiving Health facility for a better preparation.

Sustain effective interventions

- High coverage in Home Based Management of malaria (55%)
- ACTs remain highly effective amid emergence of the Kelch 13 mutation identified.

Best Practices

- **Prioritization of preventive interventions:** as way to decrease the work load for health care providers: LLINs and IRS at the top of funded interventions (58%)
- **Political will and Multi-Sector Collaboration:**
 - ✓ Ministry of Agriculture, Ministry of Education, Ministry of Environment
 - ✓ Ministry of Local Government, Rwanda Meteorological Agency, Private Sector, Local NGOs paying a vital role in early consultation through SBCC, etc.....)
- Community Engagement in Malaria control interventions (CHWs, Farmers, Mining Company Staff,..)
- Drone-based Larviciding for targeted areas in order to decrease the transmission in non IRS regions.
- Cross Border Collaboration (GLMI)

THANK YOU