Overview of SMC

Target population, eligible geographic area, model of delivery, integration with other preventive measures

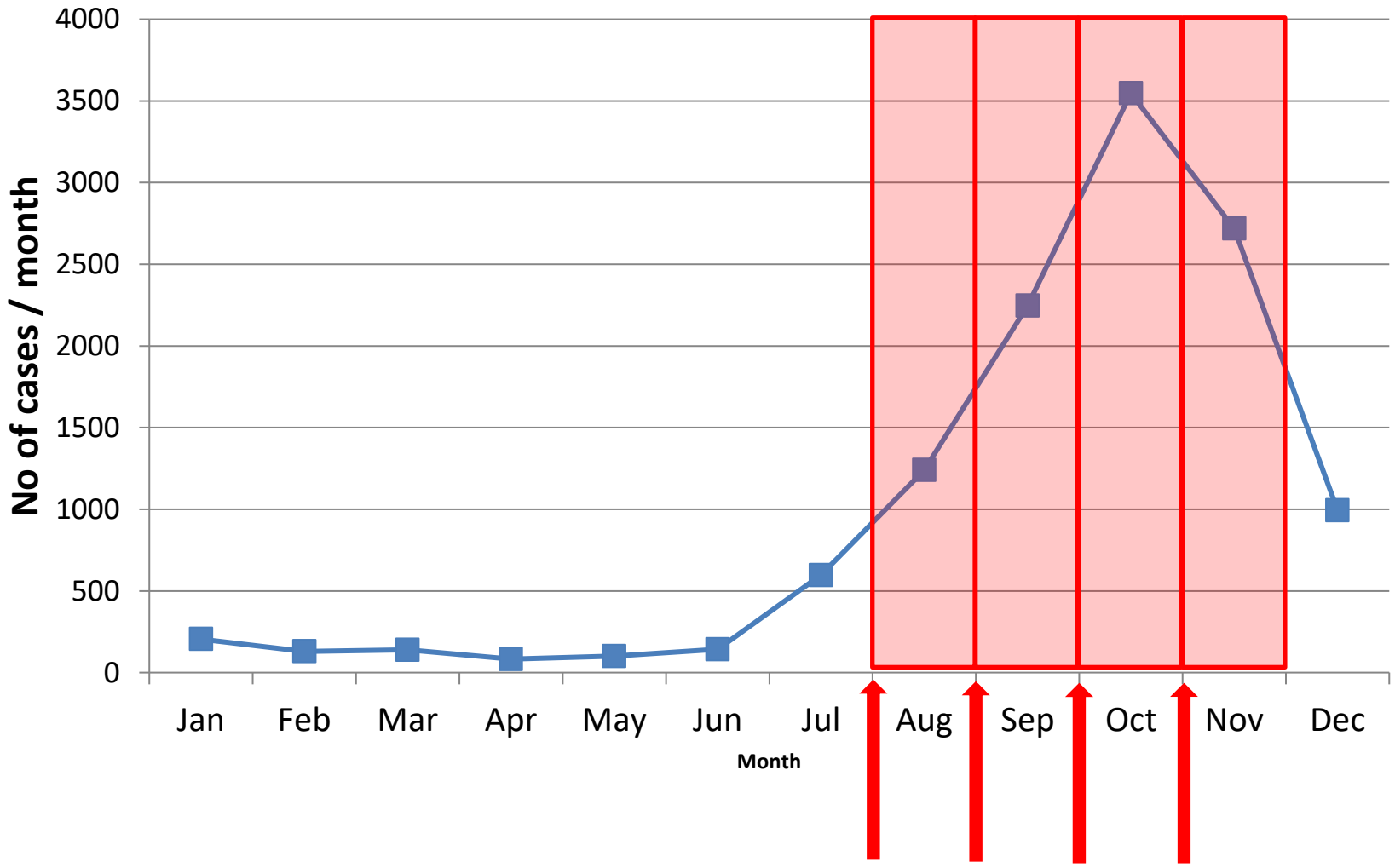
Dr Andre Tchouatieu

SMC: Seasonal Malaria Chemoprevention

- is the intermittent administration of a **curative dose of antimalarial** medicine during the malaria season, regardless of whether the child is infected with malaria.
- to establish **antimalarial drug concentrations** in the blood that clear existing infections and prevent new ones during the period of greatest malaria risk.
- is recommended in areas of **seasonal** malaria transmission, where **60%** of yearly malaria cases are concentrated within 3-4 months of the year.

https://www.who.int/teams/global-malaria-programme/guidelines-for-malaria

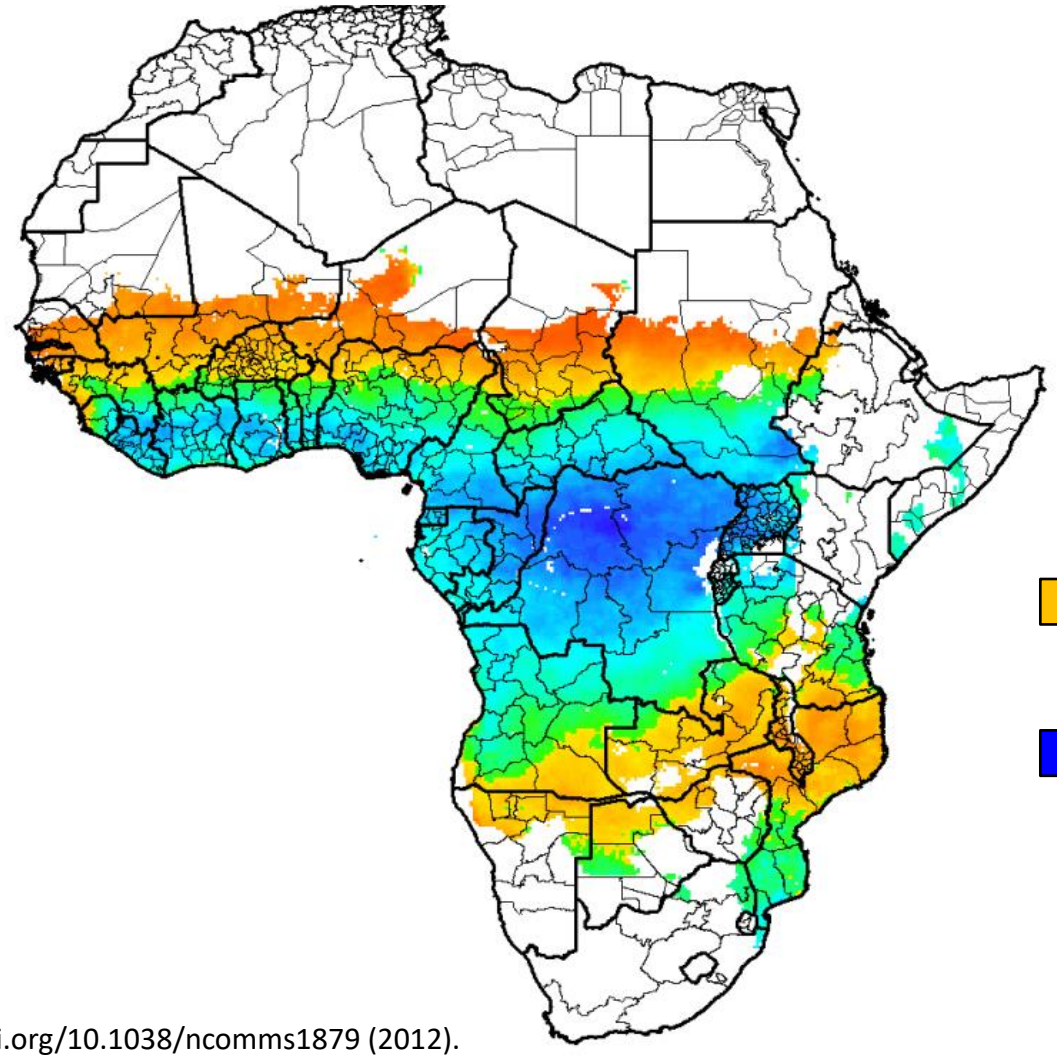
Illustration of SMC administration schedule



Areas suitable for SMC

Seasonality -
60% rainfall in 3 months

Incidence –
> 0.2 episodes per child per year



Highly suitable

Not-suitable

1. Cairns, M. et al. Nature Commun. http://dx.doi.org/10.1038/ncomms1879 (2012).

Evolution of SMC recommendations

Original recommendation – 2012	Updated guidance 3-Jun-22
In areas of seasonal malaria transmission, children belonging to **age groups at high risk of severe malaria** should be given **antimalarial medicines** during peak malaria transmission seasons to reduce disease burden.	
No more geographic restrictions / transmission intensity thresholds	
Restricted SMC use to the Sahel sub-region of Africa	Countries in other parts of Africa with highly seasonal variation in malaria transmission could also benefit from SMC
Numbers of doses or cycles no longer specified	
A maximum of 4 monthly doses of SMC during the malaria transmission season.	The **number of cycles should be informed by the duration of the high-transmission season, based on the local malaria epidemiology**, and the length of preventive efficacy of the selected drug combination
Specific drugs no longer recommended	
A complete treatment course of **AQ+SP** should be given to children 3 – 59 months at monthly intervals	**A combination medicines for SMC that is different from that used for first-line malaria treatment**. Safety and efficacy have been evaluated for several other drug combinations, **but the lack of widescale implementation means that fewer data are available on the potential risks of cumulative toxicity and impact on drug resistance.**
More flexibility in recognizing age-based risk among children	
Restricted SMC use to children less than 5 years of age	The age group targeted for SMC should be **informed by the local age pattern of severe malaria admissions**.

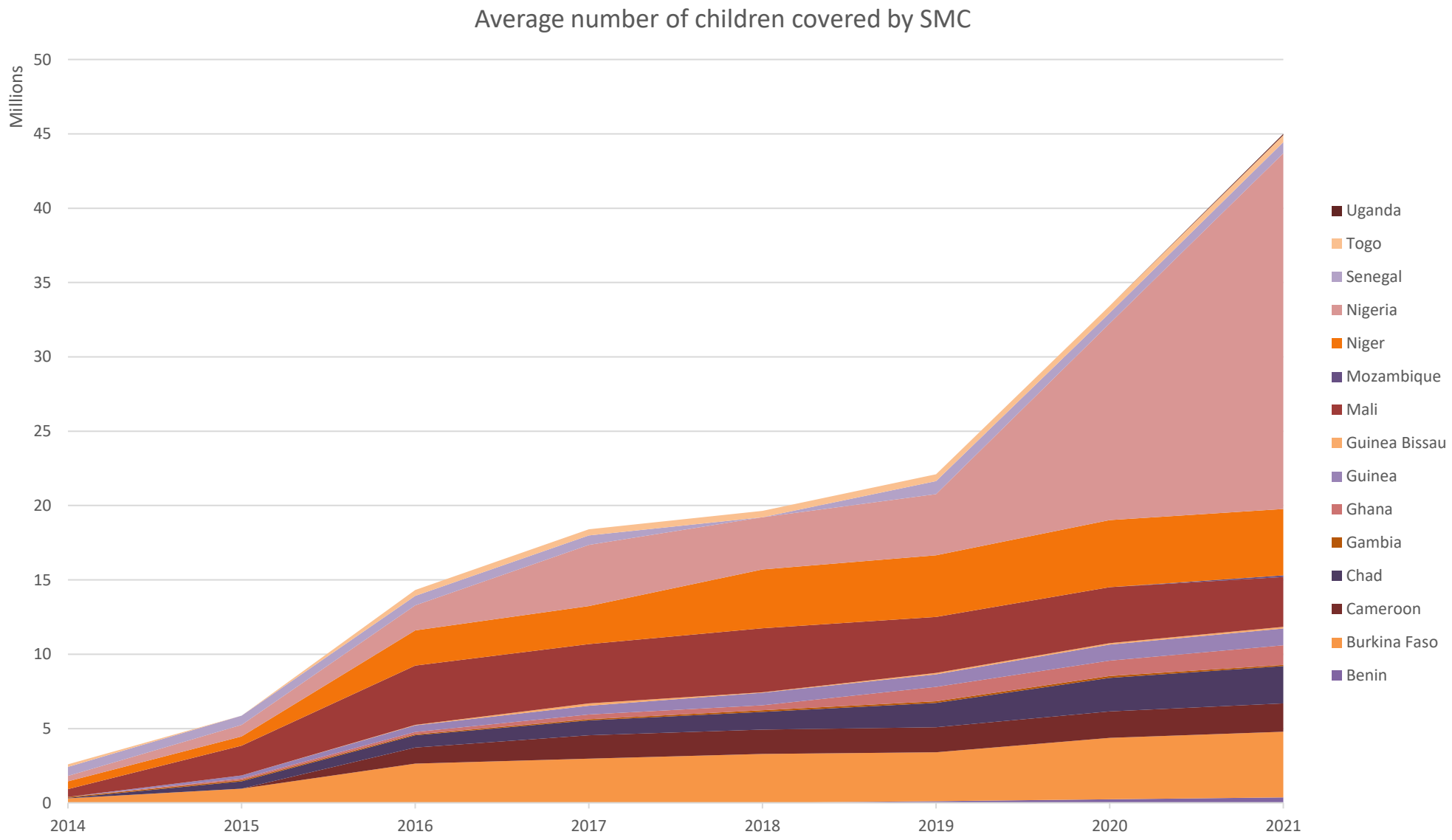
SMC Administration

- Campaign mode for a week within 3 to 5 consecutive months (considerable logistic and planning ahead)
- Using community health workers / volunteers
- Door to door for better coverage
- DOT for 1 or 3 doses for more effectiveness
- Coupled with other public health interventions






Trend in SMC


Average number of children covered by SMC
Millions
50
45
40
35
30
25
20
15
10
5
0
2014
2015
2016
2017
2018
2019
2020
2021
Uganda
Togo
Senegal
Nigeria
Niger
Mozambique
Mali
Guinea Bissau
Guinea
Ghana
Gambia
Chad
Cameroon
Burkina Faso
Benin

Thank you