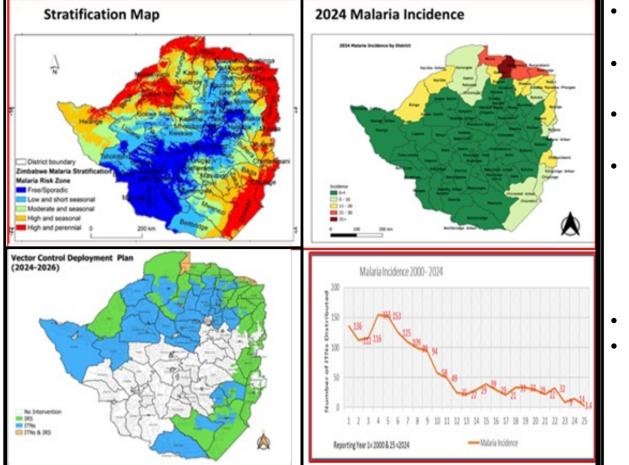
Assessment and selection of channels for ITN distribution in Zimbabwe

W. Chauke

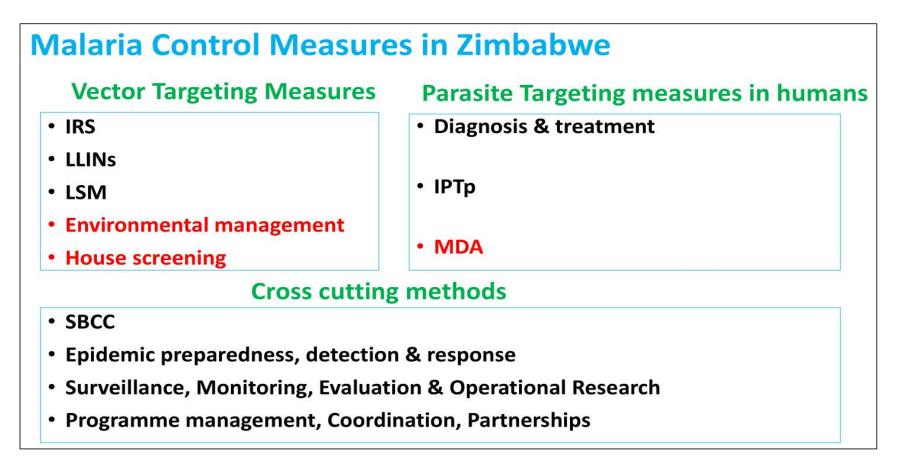
National Malaria Control Program, Zimbabwe

Malaria and Vector Control, Zimbabwe



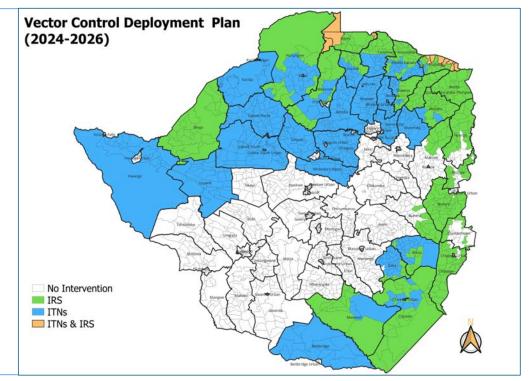
- Zimbabwe is residence to above 15 million people (2022 census)
- **67.5%** live in known malaria transmission areas
- There are 5 transmission strata in the country (stratification map)
- Deployment of core vector control interventions is targeted based on the malaria burden – IRS targets areas with API of <u>>5/1000</u> and ITNs in areas with <5/1000 population (*NMSP 2024-2026*)
- Burden remains along the borders
- There is hope for malaria
 elimination in Zimbabwe should
 current funding levels and
 coverage be maintained (*API 2024 was 3.4/1000 population*)

Malaria Control Strategies in Zimbabwe



ITN Distribution – 1

- One of the core vector control interventions
- 48% of the population is targeted by ITNs and 23% IRS with 24% having no interventions (very low malaria burden – reactive response)
- Targeted mass ITN rolling campaign done to replace ITNs distributed 3 years back



ITN Distribution – 2

- 3 channels used ANC, EPI and community
- ANC, EPI and Community are done continuously including in campaign years to address gaps in sleeping spaces
- Continuous distribution at facility level (ANC and EPI) and at the community level (Community Coupon system) is done in between campaigns following mass distribution to ensure universal access to ITNs by targeted communities
- Both CD channels (ANC, EPI and Community) were implemented starting 2017 on completion of pilot project



1. ITN Community Based Distribution by VHW



2. Centralized/fixed site Mass Campaign

3. Facility based EPI CD channel

The Process of Selecting Ideal CD Channels

- 2015 to mid 2017 country conducted a pilot study for CD to determine channels for efficient delivery of ITNs
- Four channels tested: School targeting grades 3s and 7s annually, ANC, EPI (measles rubella vaccination) and community

Rationale for school channel

- Vulnerability with reasonable level of responsibility (grade 3)
- Grade 7, replacement of ITNs at 3 years and at exit of primary school

Rationale for ANC/EPI channels

- Vulnerability of pregnant women
- Motivation for institutional booking and deliveries
- Motivation for primary vaccination completion marked by measles vaccination

Rationale for community channel

- To cover the general population needs where pregnant women, school children and under 1 year olds are not available.
- Cover new sleeping spaces and ITN attrition

Pilot study: Scope and indicators measured

- 36 months study that sought to:
- a. determine the value of CD post ITN distribution
- Number of people that received ITNs through CD post ITN Campaign
- b. determine the CD channels that would optimize access to ITNs in between campaigns
- Number of ITNs distributed through each channel
- Availability of ITNs at H/H level by distribution channel
- c. Assess ITN adequacy and utilization at H/H level
- Number of ITNs per at H/H level
- Number of people per ITN
- Number of people sleeping under ITNs
- Observation was that (i) H/H with legible school children had more nets than required (ii) More ITNs were found still in their packaging due to over supply (iii) Push system over supplied ITNs compared to demand as per need from the community

Decision to Select Community Channel viz School Channel

At close of the pilot study, data analysis was done using NetCalc application

- \checkmark A consultant was engaged to take the country through the application
- \checkmark Country need for CD was done, including anticipated coverage
- Contribution for each channel to the country need was determined from the pilot, mirroring results from NetCalc
- School channel was noted to have been over supplying ITNs compared to all other channels
- ✓ ANC and EPI only could not meet the country need
- Community channel was a perfect match as an additional channel as it did not oversupply ITNs
- In 2017, the country adopted the community channel as one of the CD methods
- Community channel uses coupon system (1 coupon = 1 net or 1 sleeping space)

2022: Assessment of ITN distribution channels

- Zimbabwe conducts community distribution in the years between mass campaigns, to offset the loss of nets post-campaign, including creation of new sleeping arrangements
- Quantification for community was calculated for 2020-2023 to replace 8% of nets in the 1st year post-campaign, 20% of nets in the 2nd year, and 50% of nets in the 3rd year.
- This is the typical loss rate of nets post-campaign but is different from recommendations for continuous distribution.

RBM CRSPC Guidance

- In November 2022, RBM CRSPC issued guidance for countries (*CRSPC Guidance Note on malaria gap analysis tools*).
- Mass campaigns no change in guidance:
 - Population in target area for the campaign /1.8
 - Consider including a 10% buffer if the census is more than 5 years old or use previous campaign data to justify a buffer.
- Continuous distribution

- "For community distribution between campaigns, quantification recommendations are available at the <u>same link above</u>, in the Scenario 3 section." pp 4

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		Scenario 2 (full continuous distribution strategy)			Scenario 3 (continuous distribution between mass campaigns)			
			Т	argeted ITN	access leve	el:		
Country Code	Retention time (years)	70%	80%	90%	70%	80%	90%	
DJI	1.0	29%	36%	43%	27%	34%	37%	
LBR	1.0	28%	36%	46%	27%	35%	39%	
SSD	1.0	29%	37%	44%	28%	35%	38%	
TCD	1.0	29%	36%	44%	27%	35%	38%	
AGO	1.1	27%	35%	45%	25%	32%	39%	
BEN	1.1	28%	36%	43%	26%	33%	40%	
MRT	1.1	23%	42%	46%	21%	27%	38%	
BDI	1.3	25%	32%	41%	19%	26%	36%	
ETH	1.3	25%	32%	38%	19%	26%	27%	
MWI	1.3	24%	32%	41%	19%	26%	35%	
MOZ	1.3	24%	31%	40%	18%	26%	35%	
ZMB	1.3	24%	32%	41%	19%	26%	35%	
COD	1.4	24%	30%	37%	17%	24%	25%	
GNB	1.4	20%	33%	40%	13%	19%	34%	
SEN	1.4	20%	34%	41%	14%	20%	35%	
GIN	1.5	20%	30%	38%	11%	16%	31%	
SLE	1.5	23%	30%	36%	16%	22%	24%	
BFA	1.6	22%	28%	34%	14%	20%	21%	
GMB	1.6	17%	27%	37%	8%	14%	28%	
MDG	1.6	23%	27%	36%	12%	19%	26%	
RWA	1.6	24%	28%	37%	13%	20%	28%	

Zimbabwe-specific quantification guidance from CRSPC

 Given CD is done between campaigns in Zimbabwe, we look at Scenario 3 here Assuming the target is 80% ITN access, the quantification factor for CD is population x 5% in each year between campaigns. 		Minimun	n quantifier	(population	x quantifie specified	r, annually) t target level	o sustain ITI	N access a	t or above
					Scenario 2 (full continuous distribution strategy)		Scenario 3 (continuous distribution between mass campaigns)		en mass
					Targeted ITN access level:				
		Country Code	Retention time (years)	n 70%	80%	90%	70%	80%	90%
		ZWE	2.8	10%	16%	22%	0%	5%	12%
District X	2023	202	4	202	25	20	26	2	2027
Population	400k	412	k	425	ik	43	7k	2	150k
Quantification approach	Pop / 1.8 (campaign)	Pop * 5% (CD)	Pop * 5% ((CD)	Pop / 1.8 (campaig		Pop * 5	% (CD)
ITNs for CD/mass	222,220		20,600		21,250		242,780		22,50

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2024-2026 ITN quantification based on new RBM recommendations

Unit	Community Channel	2024	2025	2026	Total
Population	Population targeted for mass campaign : use 51% of the projected endemic population (A)	6,145,591	6,207047	6,269,117	18,621,755
ITNs	ITNs quantified for NFM4 Funding Request for community channel: multiply the population (A) by 5%	307,280	310,352	313,456	931,088
	EPI	208,950	211,040	213,150	633,140
	ANC	235,069	237,420	239,794	712,282
	Total	751,299	758,812	766,400	2,276,510

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Key Findings and Recommendations Community channel

Assessment criteria	Observations	Recommendation	Action	Progress
Strengths	 Coupon system – criteria for eligibility/prioritizing Reporting system 	Emphasis to service providers that none should be missed.	DEHOs initiate regular reminders via feasible channels	Done. Regular reminders being done by both DEHO, DNO and ITN IPs
Areas of improvement	 Storage at outreach: VHWs are given few quantities of nets but no clear formula for allocations Redemption of ITNs at facilities: Service providers do not review the coupons Coupon eligibility criteria boxes sometimes not checked Redemption of ITNs at outreach points: It solely relies on the VHW's perception Districts do not review and analyze data Limited supervision from district level CD LLINs not recorded in the store books 	 Need a clear guidance on quantities to be given to VHW Orientation to district teams, service providers and VHWs Clear guidance on type and level of analysis of data Facility and household level monitoring 	 A guide to determine quantities to be given to VHW Job aids to guide coupon verification process prior to issuing ITNs to a beneficiary 	Done. Based on population served, a VHW gets between 50 and 100 ITNs per month for the hard to reach communities. Trainings on CD done to cover recommended actions.

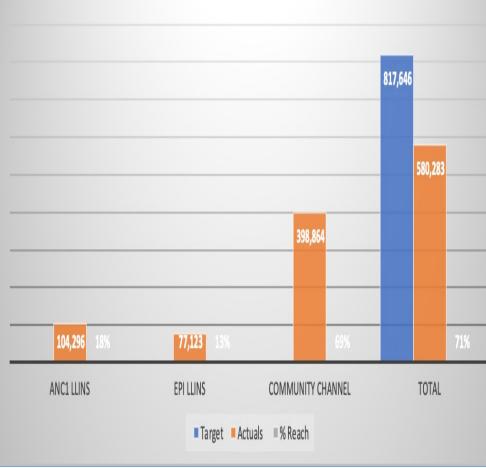
Key Findings and Recommendation

LLINs delivery and storage

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CD Program _ 2022 Annual Consumption Trends

Findings from 2022 field assessment

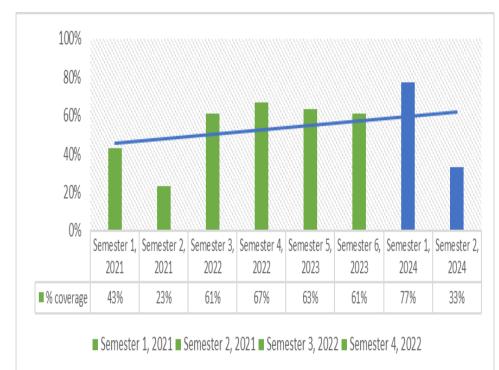
- Overall, Zim distributed 71% of LLINs targetd for 2022.
- More LLINs (69%) were issued through the community channel as compared to ANC1+EPI which together count for 31%.

Questions

- Low coverage on ANC1 + EPI?
- Missed out? YES, no formal column for ITNs in ANC register leading to poor records
- Data quality? YES (recording omissions)
- LLIN stockouts? YES, at times due to delays in requesting or deliveries
- ➤ Quantifications? NO
- More LLINs through community channels
- Mass campaign missed out? NO
- Loose coupon redemption criteria? NO
- Data issue? Etc. NO (more community [91.5%] than targeted 1st ANC and EPI = 8.5%)

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Impact of improved quantification and appropriate selection of channels



Semester 5, 2023 Semester 6, 2023 Semester 1, 2024 Semester 2, 2024

Year	Jan-June (peak season)	Jul-Dec
2021	43%	23%
2022	61%	67%
2023	63%	61%
2024	77%	33%

- 2022 saw an increase in CD coverage, a jump from 43% to 61%
- A steady increase was noted from 2022 through 2024 during peak transmission, from 61% to 77%
- The country had a countrywide shortage of ITNs in 2024 (July to October)

Lessons learnt

Community Channel	ANC/EPI channels			
 Have a strong community-based malaria component 	- Data collection tools at service levels should be well defined and			
 Use the structure to integrate ITN distribution 	should have mandatory fields - Integrate ITNs during outreach			
 Strengthen support systems for tracking performance and compliance for community level 	services for improved access and prevent missed opportunities			
	 Ensure a consistent supply of ITNs to avoid stock outs which may 			
 Engage community members for demand creation 	contribute to missed opportunities			
 Collection points to be as close to the target population as possible. 	- Strengthen interdepartmental collaboration i.e. Maternal and Child Health with NMCP for enhanced			
 Have a consistent product supply to retain community confidence – keep the promise. 	programme performance thorough supervision			

Conclusion

- The adoption of the community channel over the school channel has made it possible for the community to determine their needs and minimise over subscription of ITNs which often results in misuse community channel is demand driven instead of push system.
- The CBD system has also improved the ITN collection/coupon redemption rates, leading to more people accessing ITNs. Distance to health facilities is no longer a barrier or demotivator for collection of CD ITNs.
- With improvement in quantification for the community channel, there is more equitable distribution of ITNs across the targeted populations.
- The country envisions increasing distribution of ITNs as the country realizes significant decline in malaria cases to below 5 per 1000 population, a strategic criteria for the deployment of ITNs in Zimbabwe.

END!