

A group of women in a village setting are gathered around a document. One woman in a pink headwrap and orange shirt is pointing at the document, which is being held by another woman in a pink headwrap and pink shirt. A third woman in a pink headwrap and pink shirt is sitting on the ground, looking at the document. In the background, there are traditional thatched-roof huts and other people. The scene is outdoors, with trees and a dirt path.

Key Takeaways from AMP Partnership Meeting 2023

David Gittelman
AMP Core Group

amp

The Alliance for
Malaria Prevention

AMP Partners Meeting 2023 Themes

- ***Deployment of new ITN types***: Results from the New Nets Project and lessons learned for future planning
- ***Sub-national tailoring for ITNs***: Approaches and quantification
- Improving planning, measurement, outcomes, and availability of ***data for decision-making***
- ***ITN performance and quality*** and post-market monitoring



2022 summary – Planned campaigns

35
countries

236M
planned

191M
distributed

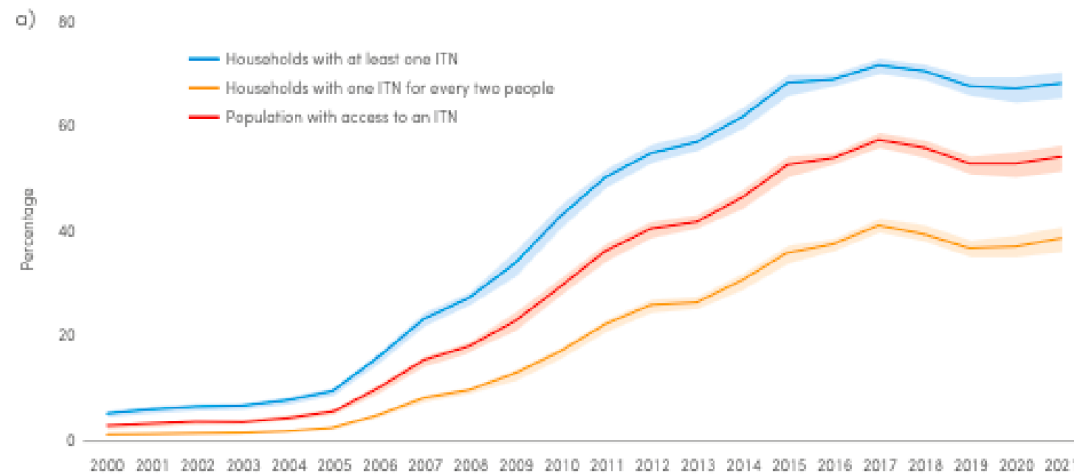
81%



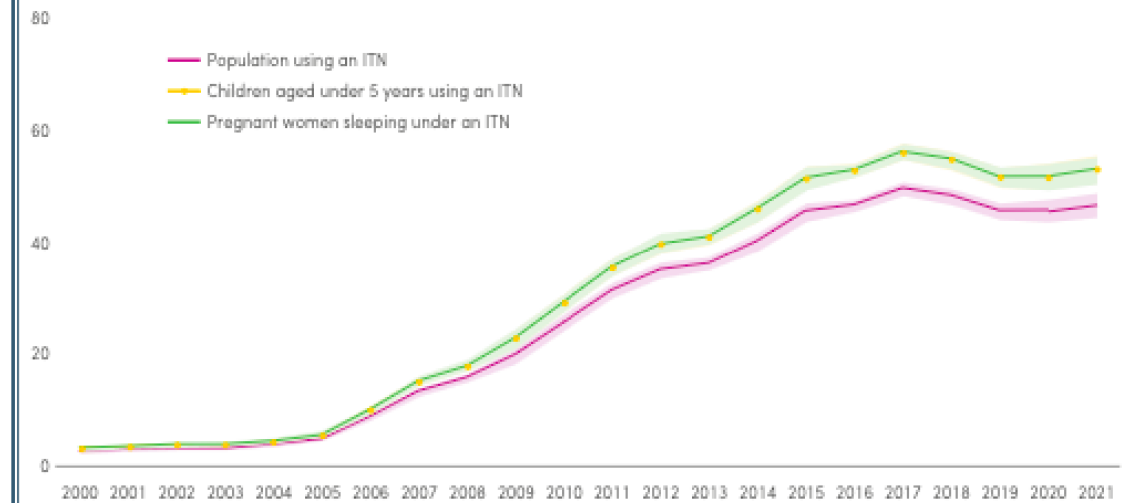
Overall, access to and use of ITNs remains below the levels observed in 2017 (WMR 2022)

ITN access

a) Indicators of population-level access to ITNs, sub-Saharan Africa, 2000–2021 and b) indicators of population-level use of ITNs, sub-Saharan Africa, 2000–2021 Sources: ITN coverage model by Malaria Atlas Project (68, 69).



ITN use



WHO World Malaria Report 2022:

WHO/AFRO's reminder of factors that threaten ITN effectiveness

Biological & Other Threats to ITNs

■ Declines in malaria transmission and burden in the period 2005–2015 are ascribed to ITNs particularly in settings with moderate to high transmission:

- LLINs remain effective and WHO encourages their continued use to prevent malaria.

■ Certain factors that impair effectiveness of LLINs in malaria prevention are important in progress against malaria. These factors include:

- Physical durability of the net (i.e. fabric integrity) and its chemical durability (i.e. bioefficacy),
- Operational and behavioural constraints (i.e. delivery, access, coverage and acceptability, use, maintenance and retention), and
- Vector dynamics (species biting and resting behaviours).

■ Pyrethroid resistance is the most recognized threat to the effectiveness of pyrethroid-based LLINs:

- A WHO multicountry trial (2018): ITNs remained highly protective against malaria, despite high pyrethroid resistance.
- Several experimental hut studies suggest that, as resistance to pyrethroids increases, the repellent and mortality effects on mosquitoes are greatly reduced.
- Modelling analysis further suggests that the epidemiological impact of ITNs is reduced at high levels of pyrethroid resistance.

■ The greater efficacy seen in randomized controlled trials of some of the newer generation of ITNs (compared with pyrethroid-only ITNs):

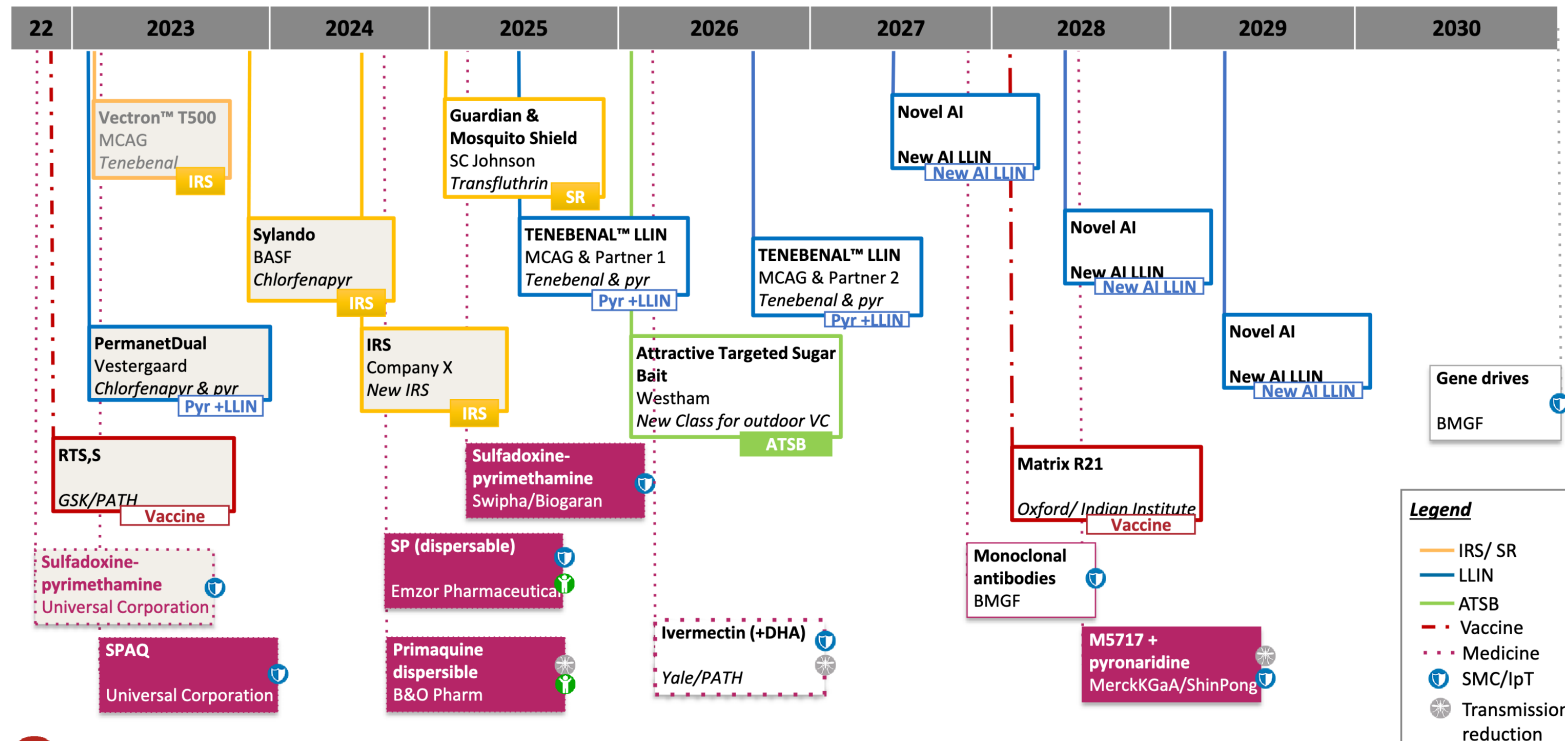
- suggests that insecticide resistance is having an effect on epidemiological outcomes.

■ Improving the effectiveness of ITNs will require:

- Improving the physical durability of LLINs
- Improving allocation efficiency of ITNs
- Improving maintenance and use of ITNs
- Mitigating the impact of widespread insecticide resistance

New vector control products

Future uptake of Dual AI nets – “New AI” LLINs will be next in an expanding toolbox for malaria prevention



Launch dates assuming 12 months from PQ submission to listing.

Building Partnerships • Creating Solutions • Saving Lives



- Malaria toolbox expanding
- Last stretch to “malaria-free world” will be costly
- None of new AI nets will sustain \$2/net price point despite increased demand
- Country data on net performance, durability, usage patterns and cost will impact decisions on net type and deployment

New Nets Project Results on Dual AI ITNs



Evidence for efficacy of dual AI ITNs

Benin RCT results published in Lancet February 2023

WHO policy recommendations for IG2 and Royal Guard issued 14 March 2023

- ***Strongly recommend deploying pyrethroid-chlorfenapyr ITNs vs pyrethroid-only nets***
- Conditional recommendation for:
 - Deploying pyrethroid-chlorfenapyr ITNs instead of pyrethroid-PBO nets
 - Deploying pyrethroid-pyriproxyfen nets instead of pyrethroid-only nets

Evidence of operational use, effectiveness and cost-effectiveness of dual AI ITNs

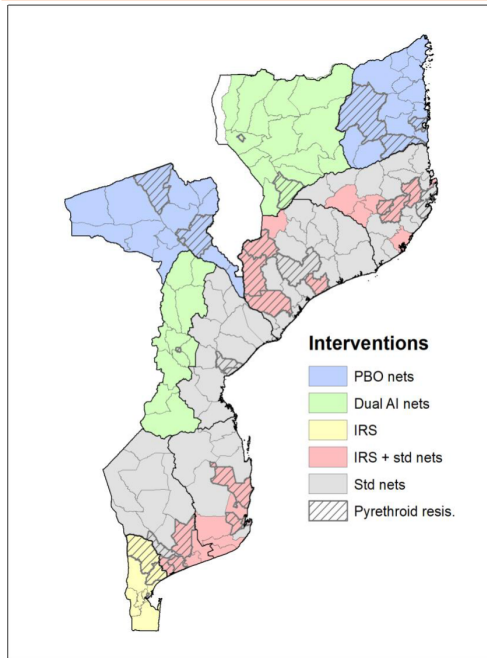
- Mass ITN distributions are strongly associated with increased ITN use and decreases in malaria transmission regardless of ITN type.
- In areas of SSA with pyrethroid-resistant vectors:
 - ***Distribution of IG2, PBO, or RG ITNs seem more effective at controlling malaria than distribution of standard, pyrethroid-only ITNs.***
 - Effect of IG2 distributions appears to last longer (e.g., beyond 12 months)
 - ITN durability likely affecting the duration of effect for RG and PBO (polyethylene) ITNs

Mozambique: using data to drive prioritizing & tailoring of ITN type (and malaria intervention choice)

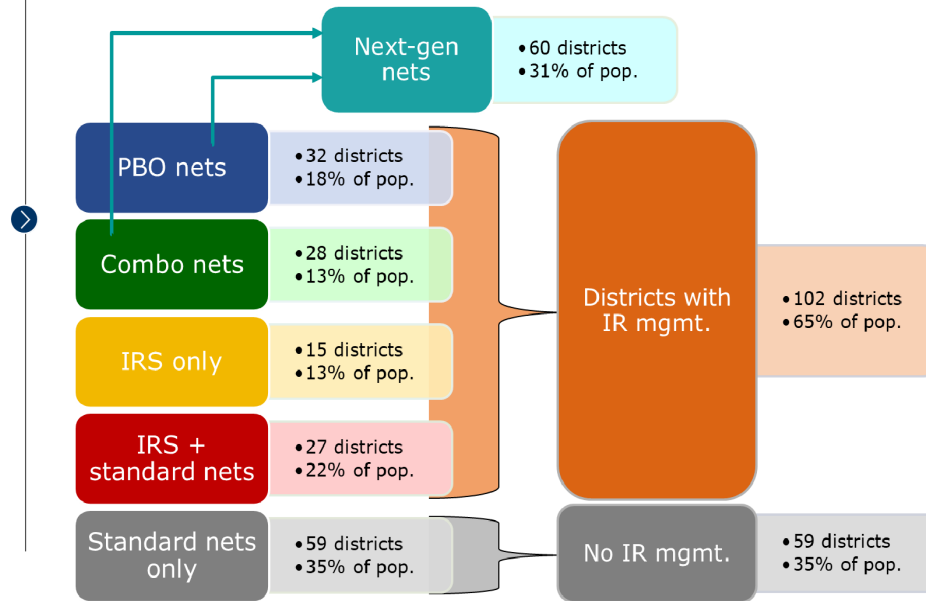


In immediate response to this data, through support of New Nets Project and GF, resources were re-allocated for targeted deployment of PBO and dual-AI ITNs

2019-20 LLIN distribution by type, with pyrethroid resistance detected



65% of the population will receive vector control that seeks to manage pyrethroid resistance



Malaria intervention stratification criteria:

- funding vs. cost
- malaria burden
- intervention effectiveness (e.g.: seasonality, insecticide & drug resistance)
- operational feasibility

Decision making tradeoffs for using ITNs:

- not “ITN for everyone/one size fits all”
- decide intervention mix to obtain greatest malaria reduction
- use burden of disease and insecticide resistance data

Uganda's experiences with multi-product campaigns



Considerations For the Macro planning Level

6. Warehousing and transportation

- ❖ Separate Warehousing of direct products
- ❖ Separate Loading, transportation and dispatch
- ❖ Separate Storage at facility level as per SOPs



Successes:

- Opportunity to scale up products based on insecticide resistance mapping
- Innovations based on new products, new tools

Challenges:

- Multi-tasking coordination from many players
- Some unmatched stakeholder interests
- Hybrid communication plan





Funding Landscape: implications for deployment of new types of ITNs



- Scale up of dual AI ITNs is urgent priority to sustain malaria control progress
- New WHO recommendation = higher demand for new net types
- Barriers: funding, product pricing, supply capacity
- GF & PMI advising countries to develop optimal plans for ITN coverage—given tough choices
- Recommendation: countries prioritize pyrethroid-PBO or dual AI ITNs (preferably pyrethroid chlorfenapyr nets) in areas previously received them
- Not revert back to standard nets

Guidance on the prioritization of insecticide-treated nets in situations where resources are limited

<https://apps.who.int/iris/rest/bitstreams/1493656/retrieve>



How many nets are needed to reach maintain universal coverage

Hannah Koenker, 8 May 2023

Quantification challenges three-year campaigns and continuous distribution

Recommended quantification factors for countries and scenarios

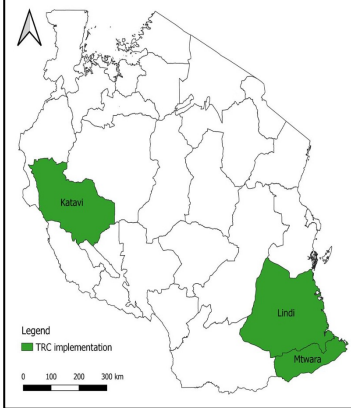
Country	Retention time (years)	Continuous Distribution ITNs = Population x X, annually		Mass Campaign ITNs = Population / X	
		Scenario 2: Full-scale continuous + routine	Scenario 3: Campaign + routine + continuous between campaigns	Scenario 4: Three-yearly campaigns	Scenario 5: Two-yearly campaigns
LBR	1.0	36%	35%		0.9
GIN	1.5	25%	16%	0.6	1.8
TZA	2.1	21%	11%	1.0	2.0
TGO	2.4	19%	8%	1.2	2.0
COG	2.9	15%	4%	1.5	2.0
CMR	3.5	13%	1%	1.7	2.0

The challenges

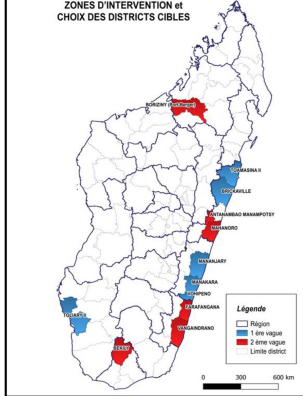
- Three-year campaigns not achieving 80% ITN access, provide incomplete protection for countries with median ITN lifespans <3 years (most countries)
- Need oversupply nets in 3-year campaigns so that HHs can use nets when first ones wear out.
- **Tailored 2-year campaign NOT the answer**—inefficient, require 67% more nets than status quo for same results

Recommendations

- **Need tailored quantification approaches** for campaigns and CD given variation in ITN retention across countries
- **Full scale continuous distribution of nets could provide continuous ITN access at 80%+,** with fewer nets compared to 3-year campaigns, for countries with ITN retention times ≥ 2 years.
- Countries & partners should increase numbers of ITNs distributed to those vulnerable to malaria, plus work to extend useful life of nets
- **Quantification guidance:**
<https://endmalaria.org/about-us-governance-partner-committees/countryregional-support-partner-committee-crspc>



Targeting to *sustain* ITN access



Tanzania: Targeting per epidemiological strata*

ITN DISTRIBUTION ACCORDING- STRATIFICATION

Service Delivery Mechanism	Malaria risk stratum
Only RCH and special risk group	Very Low
RCH	Low
Special risk group	Moderate
Targeted Mass Replacement	High
School Net Programme	High
According to epi stratum	Urban

*Reproductive & child health: ANC & immunization
Special risk groups: Elderly age 60+, <5y severe malaria, PLWHA

Madagascar: Targeted community-based distribution

- Supply/ replace ITNs for non-covered sleeping spaces
- Target districts: high incidence, ex-IRS, poor ITN coverage, pyrethroid resistance
- Engage community agents and mobilisers, schools
- Successes: decrease loss ITNs, students promoting net use at home
- Challenges: COVID-19 school closures, communities' misunderstanding of selection criteria for targeted households.

ITN performance and quality challenges: Pakistan

2020: ITNs out of specification, faulty

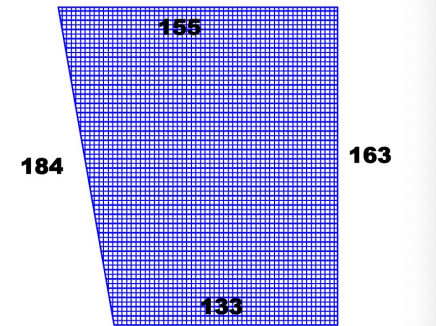
- NMCP/PRs only have post shipment inspection, not involved with pre-shipment quality control
- Nets failed specifications size, potentially chemical content
- Donor not agree to chemical analysis
- Inspecting agent had cleared all nets pre-shipment

Recommendations:

- PR accept shipments only per specifications
- Maintain $\pm 7.5\%$ margin of error in size
- NMCP/PR continue post-delivery inspection
- Blacklist manufacturer, procuring agent & supplier as required



>5600 wet bales



Inconsistent dimensions

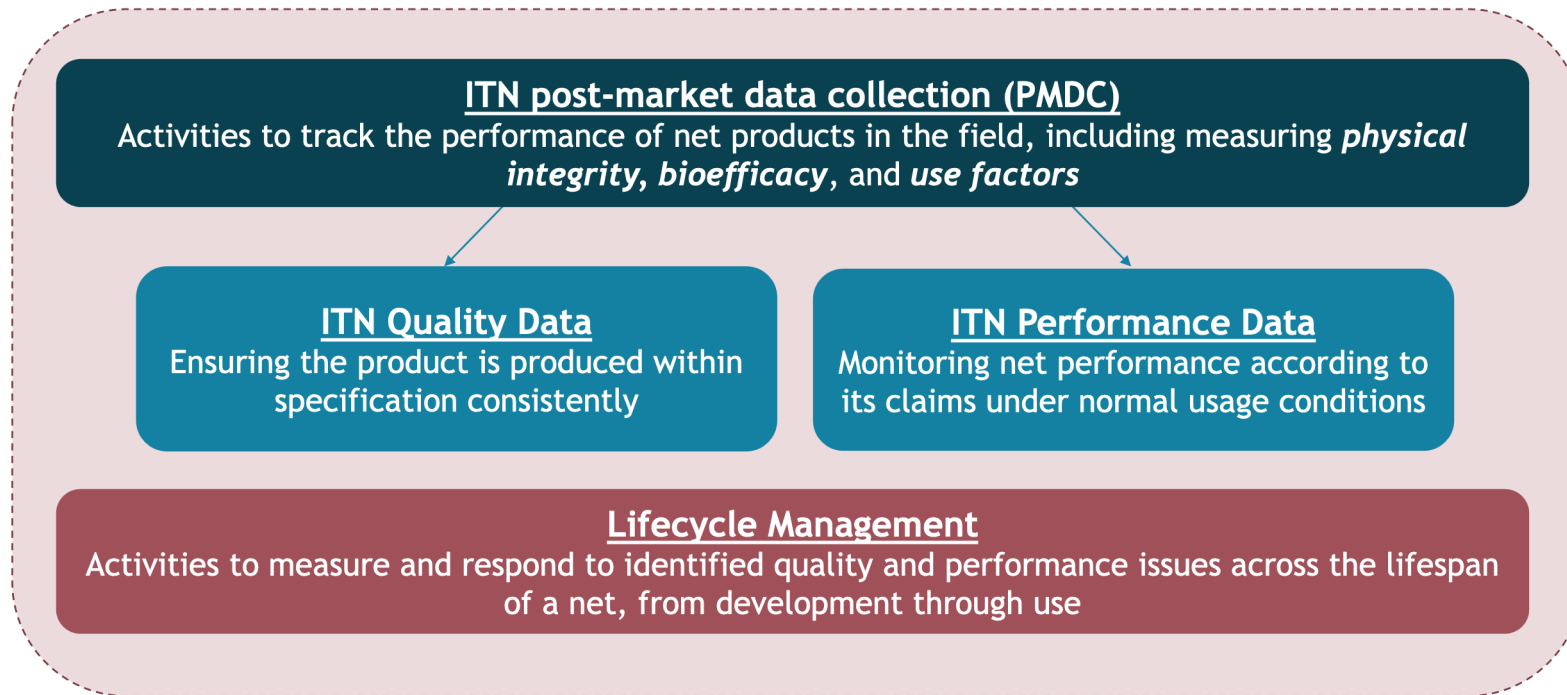


Faulty construction

Post-market data collection: (I2I & CHAI) Listening exercises with stakeholders



Working definitions of Post Market Data Collection



Need improve understanding of factors affecting ITN quality and performance, particularly for data availability and understanding

Countries want clearer data product quality before ITNs arrive

Narrower range for product specifications

Funding lacking for routine durability monitoring

Need expand knowledge of ITN usage practices

Using activity-based contracting (ABC) to improve outcomes: Kwilu Province, DR Congo

Example : LLIN Activity Based Contract (ABC) in the DRC

Under standard GF T&Cs, ineligible result from non-compliant documentation of procurement and financial management

Type of costs	Amounts at ZS level (USD)	In %
Fixed	5,992,406	49%
• Fuel	635,198	5%
• Per diems/ Collation	4,508,124	37%
• Travel	849,084	7%
Variable	6,128,542	Max 51%
• Accommodation	455,780	4%
• Supplies/ Equipment	296,987	2%
• Catering	793,231	7%
• Rental	1,576,535	13%
• Warehousing	367,995	3%
• Transport*	2,638,013	22%*
TOTAL AMOUNT AT ZS LEVEL	12,120,947	100%

* Includes last mile (bike) transport which is fixed.



Compliant procurement and invoicing for:

- Transport Services
- Hall Rentals, Catering/Food
- Paper, Pencils, Bags
- Warehousing

Compliant accounting for Per Diems

- Registration & Distribution workforce
- Data collectors
- Supervisors

“In DRC, we move more paper than nets”

Under PfR Modalities, payments are at least partially withheld till after proof of delivery and verification of programmatic performance. Ineligibles result from under-performance or over-reporting.

ABC Deliverables	Portion of Contract
1. Households Covered (Registration & Distribution)	70 - 80
2. Campaign Workforce Trained	5
3. ITNs Accounted For	10 - 25



Quality Programmatic Milestones:

- Accurate pricing, quantification and planning
- Campaign workforce has skills to deliver the campaign
- Household registration achieves full coverage
- ITNs (bednets) reach last mile for delivery and are accounted for
- Bednet distribution to households achieves planned coverage
- Data tracking coverage is complete and accurate

Addresses issues of:

- Recurring delays
- Inconsistent justification of expenditures

Benefits:

- Improve quality and timeliness of service delivery
- Sustainability
- Accountability
- Operational efficiency
- Fraud controls

“In DRC we move more paper than nets”

Guinea: improving campaign outcomes by integrating immunizations and routine ITN distribution into SMC



PILOT: 10 health districts in 3 regions

PHASE ONE (five days):

- First round SMC with SPAQ
- Identify children and pregnant women for immunizations
- Plan for fielding teams to catch up

PHASE TWO (six days):

- Teams depart on day 2 to identify those needing immunizations and ANC.

Target populations:

- Children 3-59 months (SMC)
- Children <5 and pregnant women (immunizations, ITNs)

Focus on zero-dose, hard-to-reach populations

- identifying missed children via vaccination cards & SMC records
- Identifying missed pregnant women through ANC records

Intervention results during SMC:

- Zero-dose children: 80% vaccinated for Penta1, 72% measles
- Missed pregnant women: 82% completed 1st ANC visit, 91% first SP dose, 69% ITN

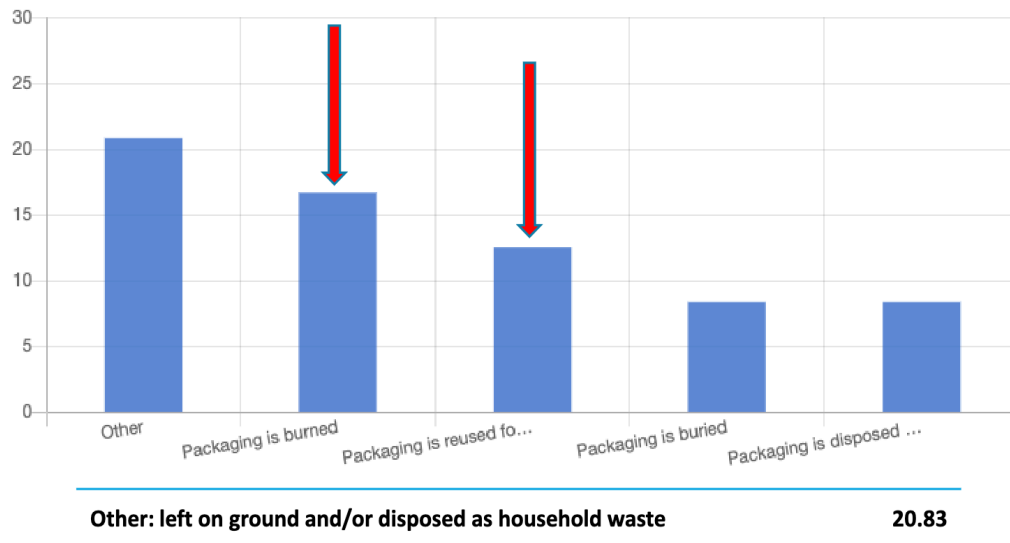
Challenges

- Coordination different ministries
- Supply access in hard-to-reach areas
- Client compliance
- Mobilising additional resources

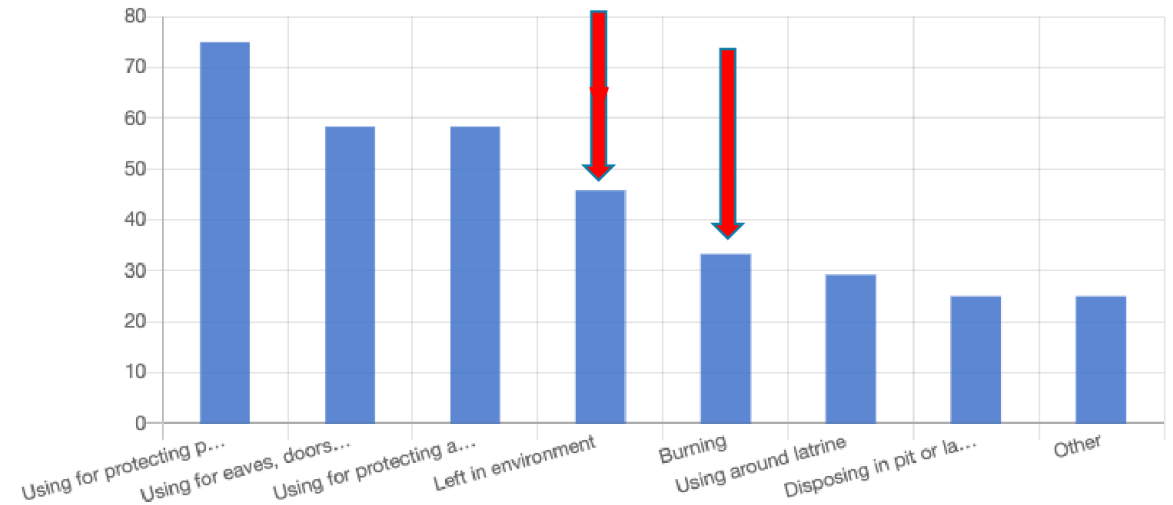
IEWG: Waste management and end of life ITNs – preliminary survey results

Topics addressed: plastic bans, waste management policies, incineration, plastic recycling, packaging specifications, cost of procuring bulk vs. individually packages nets, HH level packaging management, EOL nets

How is ITN packaging material managed at household level?



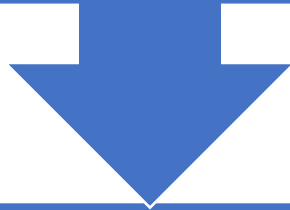
What are households doing with unserviceable or end-of-life nets that they are no longer using to sleep under?



Most countries do not have EOL policies in place or collect EOL ITNs

IEWG: Reaching IDPs, refugees, last-mile populations

In 2021, malaria was the second most common cause of morbidity among refugees among 20 countries reporting.



Three roundtables on addressing malaria in displaced and last-mile populations recommended:

Donors: improve pre-stocking of malaria commodities and coordination

Countries: include refugees/IDPs in health service delivery planning

Humanitarian partners: work through community-based actors to meet populations' needs.



Kenya Red Cross activities:

- Distribute nets to refugees and asylum seekers
- Include ITNs in relief packs
- Vector control in displacement camps
- Risk communication & community engagement
- ITNs to hard-to-reach populations
- Concerns: inadequate ITN supplies, addressing outdoor biting

Marcy: looking ahead to 2023-2024

Maintaining focus on the core mandate

- I. **Coordination of partners** – weekly call/annual meeting
- II. Development and dissemination of **operational guidance** – identified gaps/iterative learning
- III. Provision of **technical assistance** – on request



SUPPORT AND CAPACITY-BUILDING

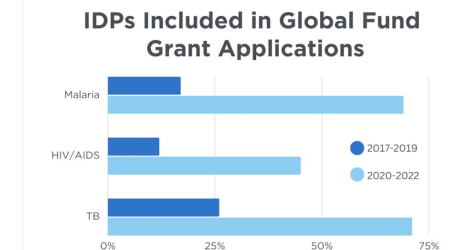
Based on requests from national malaria programmes, AMP provides globally-recognized expert technical assistance through distance and in-country missions to help countries successfully plan and execute complex ITN distribution campaigns. Since 2004, AMP has supported countries in sub-Saharan Africa, Asia-Pacific and the Americas. In addition, countries have participated in AMP-organized workshops and trainings aimed at strengthening and sharing the skills of national malaria programmes and partner organization staff in ITN campaign planning, logistics, social and behaviour change, implementation, monitoring and evaluation and continuous distribution.



SUPPORT EFFORTS TO "FIX THE DENOMINATOR" USING GEOSPATIAL MAPS

Reaching everyone

- IDPs, refugees and last-mile populations have been increasingly included in funding applications



- Shifting from blanket universal coverage approaches to more **tailored approaches** based on data → will require different operational strategies (CD) and SBC
- **Improving ITN access** = moving beyond status quo of three-year campaigns and routine distribution

ITN performance and quality need to be addressed to maintain trust in ITN efficacy

- **Support post-distribution monitoring frameworks and operationalization**



Chad NMCP: Dr. Samuel Smith Award for Leadership



Sudan FMOH & NMCP: Award for First National Campaign



DRC NMCP & SANRU: Dr. Jorge Arrozo Award for Data for Decision-Making





**Let's ensure that every pregnant women, every child
and every person at-risk is sleeping under an ITN**



Credit: PMI VectorWorld

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