New Nets Project Results

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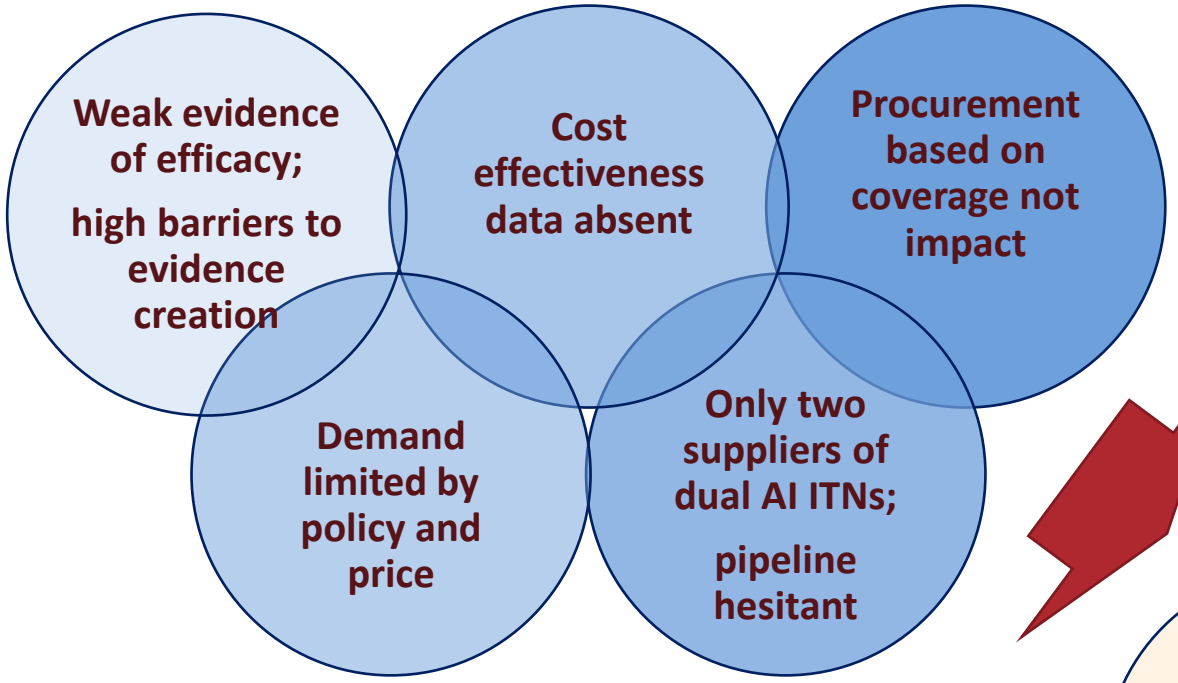
AMP Partners Meeting - Natobi

New Nets Project Scope



Pre-NNP status of Dual AI ITN Market

Funding Partners

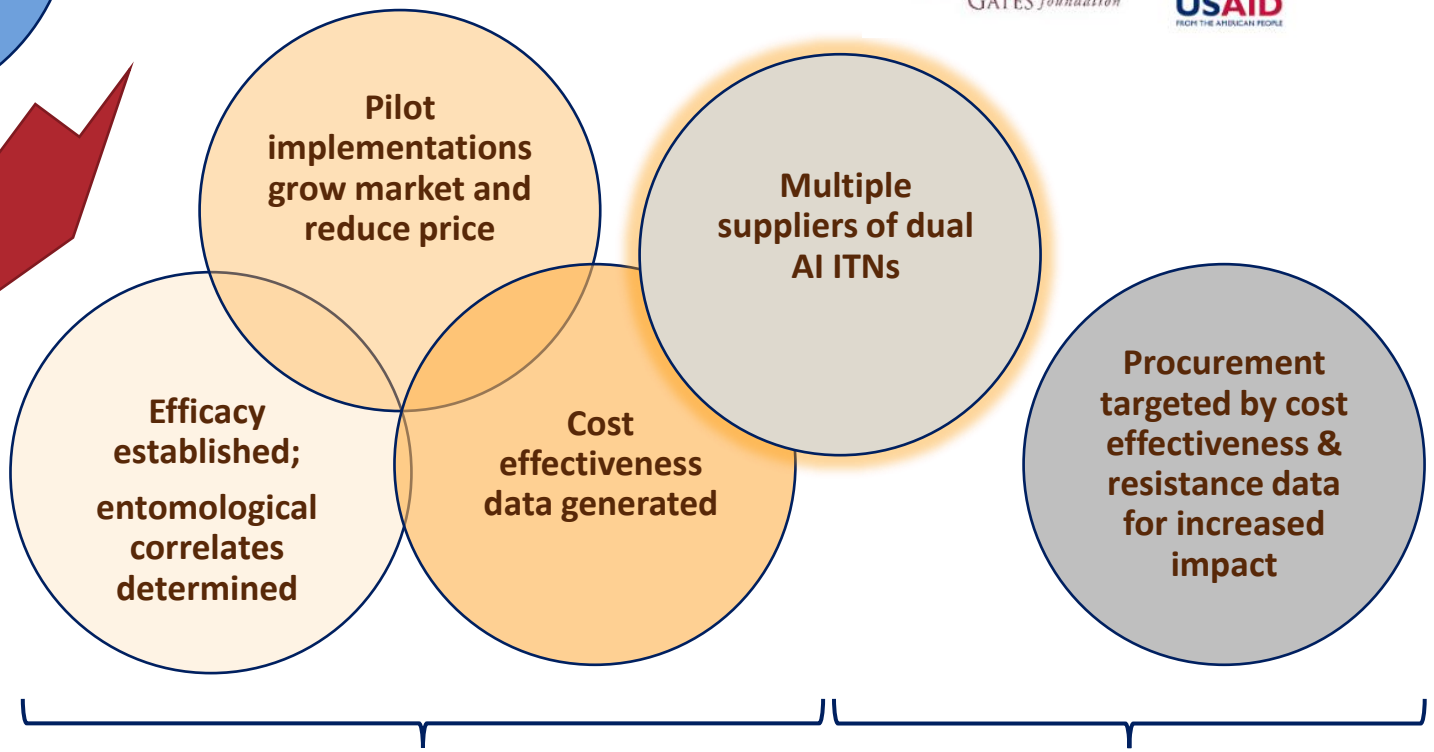
Unitaid Innovation in Global Health

The Global Fund

Supporting Partners

Bill & Melinda Gates Foundation

USAID From the American People



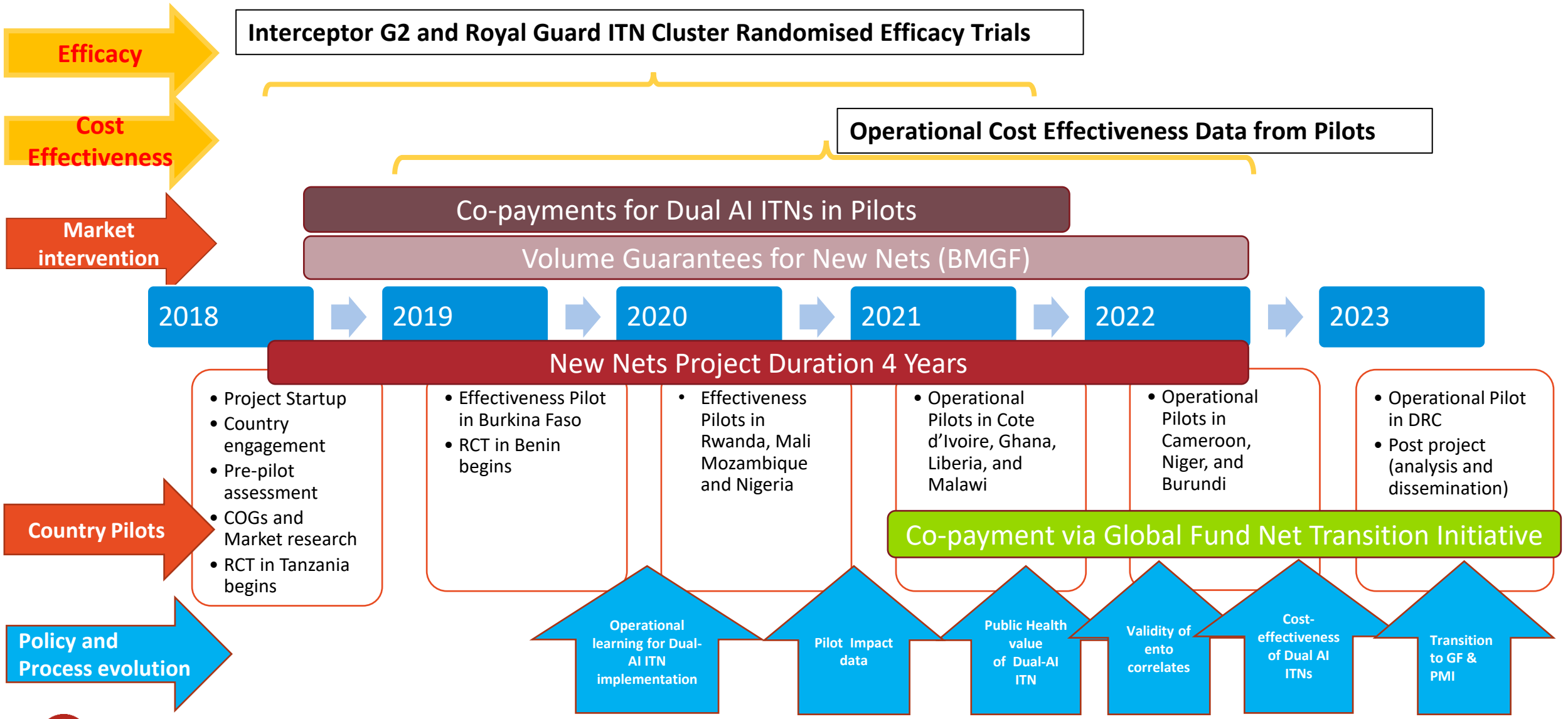
Outcome of the New Nets Project

Next Phase TBD

New Nets Project Outputs

Output	Description	Key activity	Leading partner
1	Evidence for efficacy of dual AI ITNs created and disseminated according to WHO and VCAG requirements, and entomological correlates explored to aid the policy and PQ process	RCTs to generate evidence to support VCAG review	LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE
2	Pilot implementation of dual AI ITNs, and operational learning of effective methods for their planning and implementation disseminated in close coordination with AMP	TA in coordination with AMP to ensure effective implementation of pilots and learning on operational aspects	psi The Alliance for Malaria Prevention
3	Work with countries to provide evidence of operational use, effectiveness and cost-effectiveness of dual AI ITNs created and disseminated	Evidence of effectiveness and cost-effectiveness generated during pilots	PATH
4	Co-payment and other market intervention levers used to establish affordability of dual AI ITNs for the pilot implementations and then sustainably thereafter	Co-payment and other levers to enable pilots, stimulate market and reduce price	IVCC

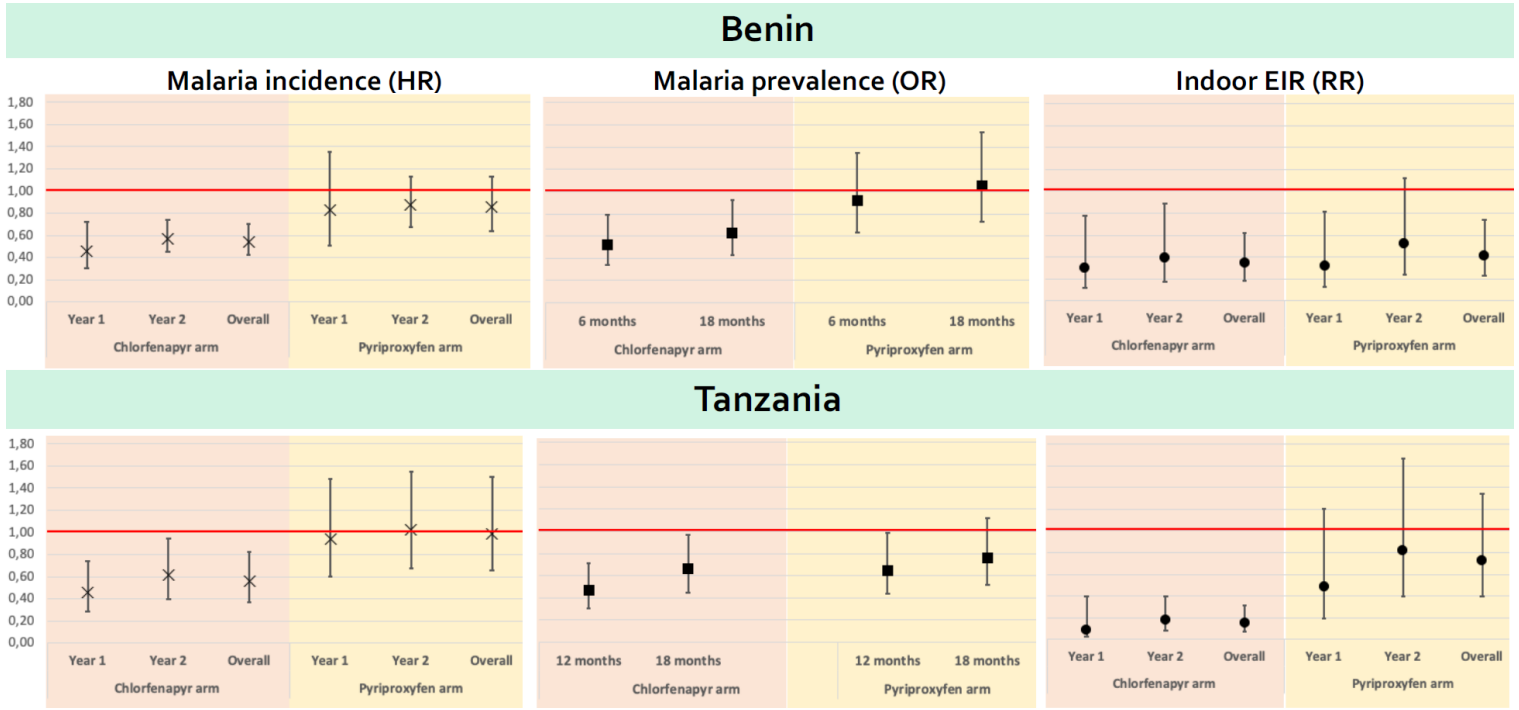
New Nets Project Overview



Output 1 - Benin RCT Results

- **Chlorfenapyr**-Py LLIN (IG2) vs. Std-Py only LLIN
- Significant reduction for malaria incidence (46%)
- Significant reduction in odds of malaria infection prevalence (52% at 6 months and 39% at 18 months)
- Significant reduction in malaria transmission (for both indoor and outdoor EIR)

- **Pyriproxyfen**-Py LLIN (RG) vs. Std-Py only LLIN
- No significant protection for malaria incidence and prevalence
- Significant reduction in malaria transmission (only for indoor EIR)
- Physical integrity and bio-efficacy of the nets up to the 2 years of use?
- Lower net usage over 24 months



- Benin results published in Lancet February 2023
- WHO policy recommendations for IG2 and Royal Guard issued 14 March 2023
  - *Strong recommendation for* the deployment of pyrethroid-chlorfenapyr ITNs vs pyrethroid-only nets
  - *Conditional recommendation for* the deployment of pyrethroid-chlorfenapyr ITNs instead of pyrethroid-PBO nets
  - *Conditional recommendation for* the deployment of pyrethroid-pyriproxyfen nets instead of pyrethroid-only nets

Output 2 – Key Operation Issues Identified

Packaging, particularly individual ITN packages

- Waste management is an increasing concern from national programmes; little known about management of ITN packaging from CD channels (~70M ITNs); limited options

Desynchronized ITN arrival for multi-product campaigns under NNP

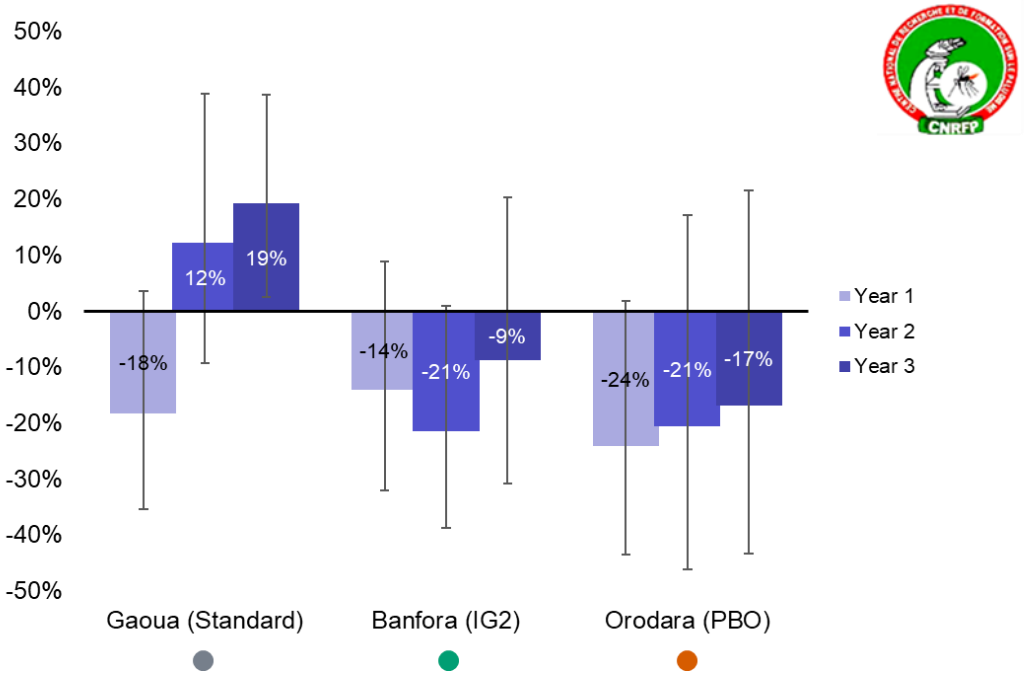
- Likely to be a problem beyond NNP
- Need for plan B or contingency, including financial implications, from macroplanning stage
- Supply chain challenges

Guidance Documents:

- Guidance on managing waste generated during mass insecticide-treated net (ITN) distribution campaigns in the COVID-19 context (2020)
- Training for implementation of ITN mass distribution campaigns (2021)
- Planning and operational recommendations for multi-product ITN campaigns (2021)
- Messages on hanging of new types of insecticide-treated nets (ITNs) (2021)
- Planning for Transition of Insecticide Treated Net (ITN) Types through Routine and Community Channels Post Multiproduct Campaign (2022)
- Standard Operating Procedures: Management of More than One Net Type for Campaign, Routine, and Community Channels during Storage and Transport (2022)
- Guidance on ITN prioritization in the context of limited resources (2022)

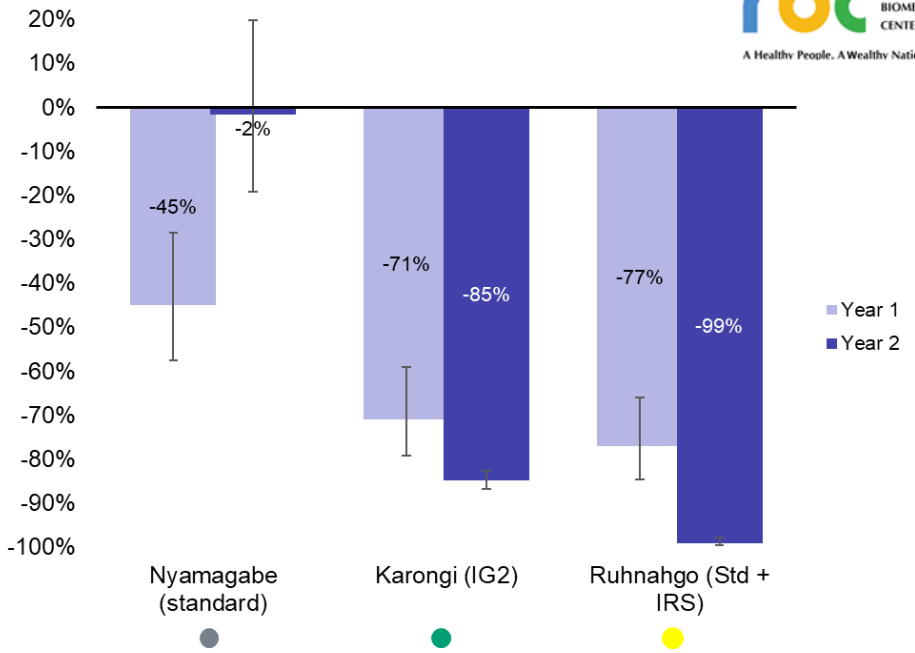
Output 3 – Effectiveness Pilot Results

Burkina Faso - % reduction in case incidence from baseline year



- 19% greater reduction associated with IG2 and 25% greater reduction associated with PBO
- Estimated 3,400 (1,000 – 6,100) cases averted per 10,000 residents by distributing IG2 instead of standard ITNs and estimated 4,400 (2,500 – 6,500) cases averted per 10,000 residents by distributing PBO instead of standard ITNs

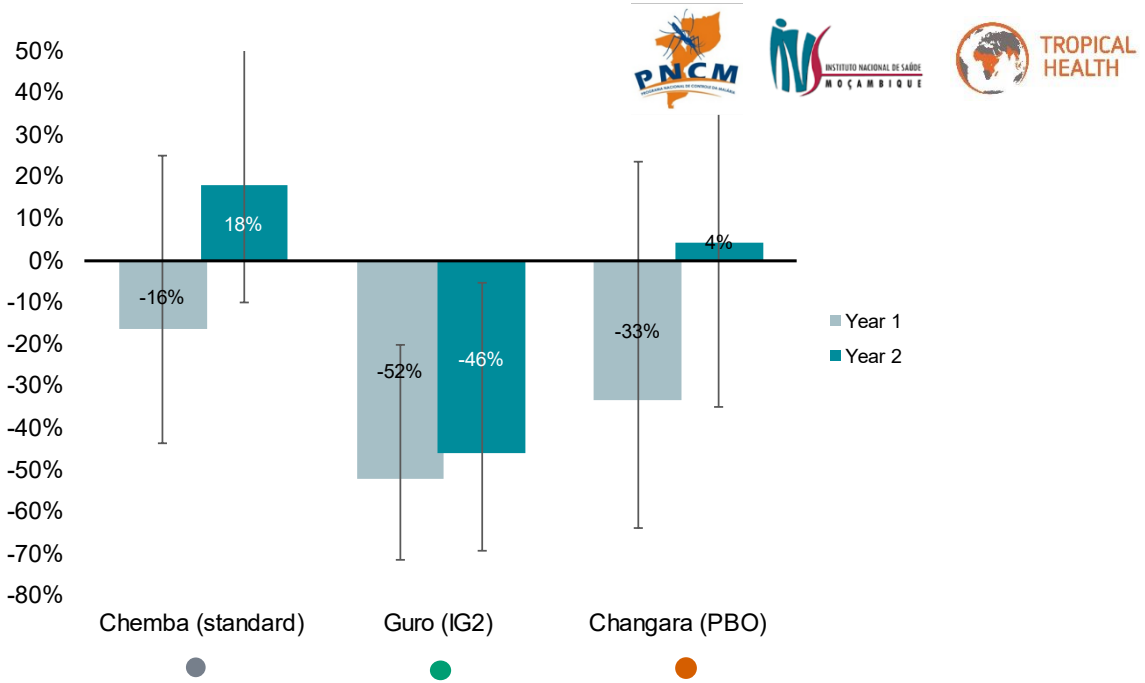
Rwanda - % reduction in case incidence from baseline year



- 56% reduction associated with IG2 and 71% greater reduction associated with standard nets + IRS district
- Estimated 2,000 (1,000 – 3,700) cases per 10,000 residents averted by distributing IG2 instead of standard and estimated 5,700 (3,500 – 8,800) cases per 10,000 residents averted by utilizing IRS in addition to standard ITNs

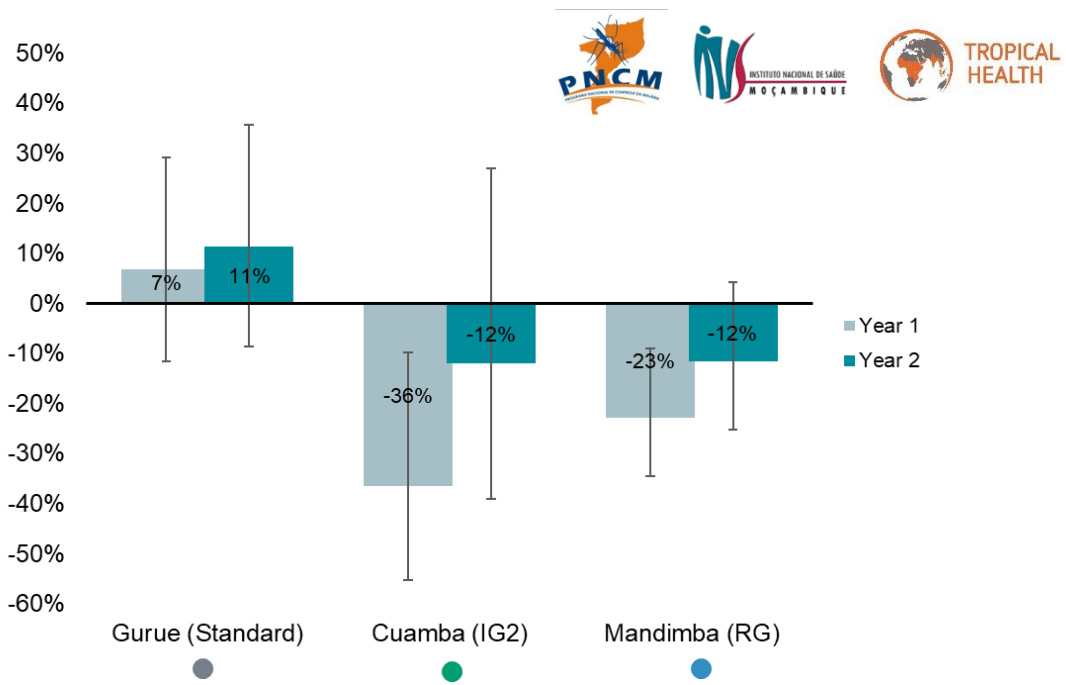
Output 3 – Effectiveness Pilot Results

Western Moz - % reduction in case incidence from baseline year



- 56% greater reduction associated with IG2 in Guro while the 5.2% reduction associated with PBO ITNs was not statistically significant
- Estimated 6,950 (3,200 – 12,400) cases per 10,000 residents averted by distributing IG2 instead of standard

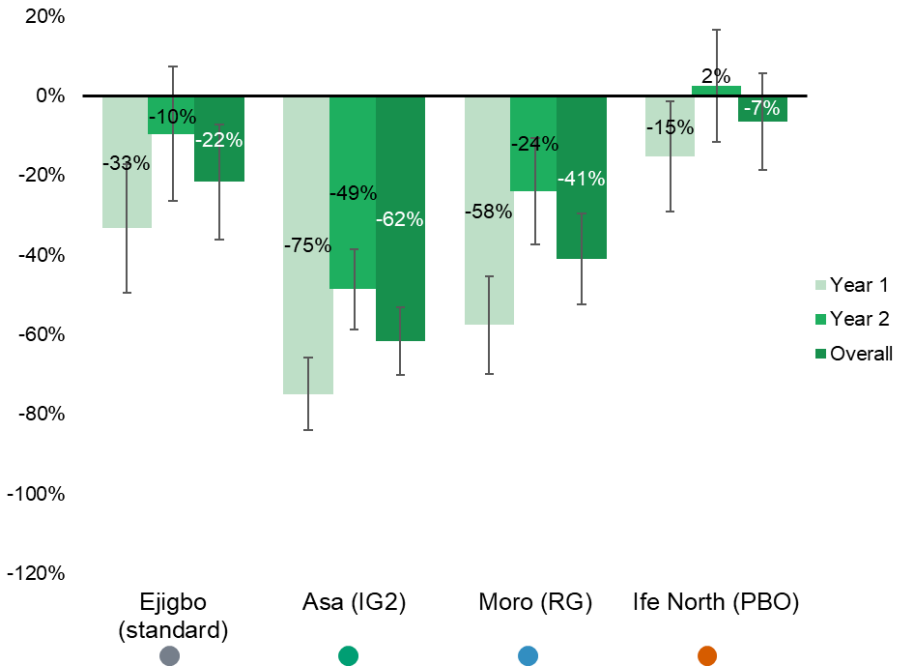
Northern Moz - % reduction in case incidence from baseline year



- 35% greater reduction associated with IG2 and 28% greater reduction associated with RG
- Estimated 3,200 (1,100 – 5,900) cases averted per 10,000 residents by distributing IG2 instead of standard ITNs and estimated 3,000 (1,300 – 5,100) cases averted per 10,000 residents by distributing RG instead of standard ITNs

Output 3 – Effectiveness Pilot Results

Nigeria - % reduction in prevalence from baseline year



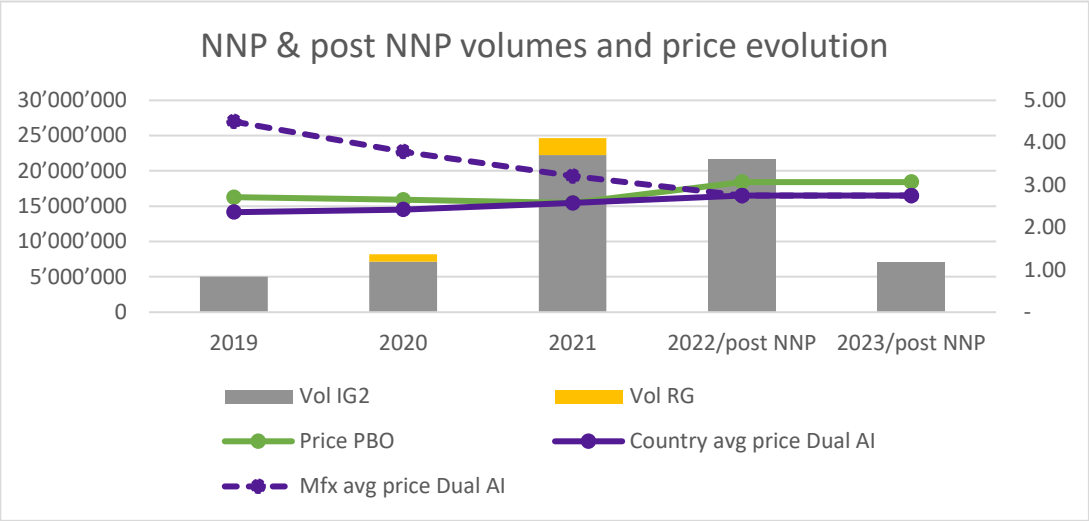
- Incidence data is confounded by migration, suboptimal reporting, and inconsistent use of public health sector
- Largest decreases in prevalence from baseline to Year 1 were observed in Asa and Moro, **but these LGAs also received four rounds of SMC prior to the Year 1 survey**

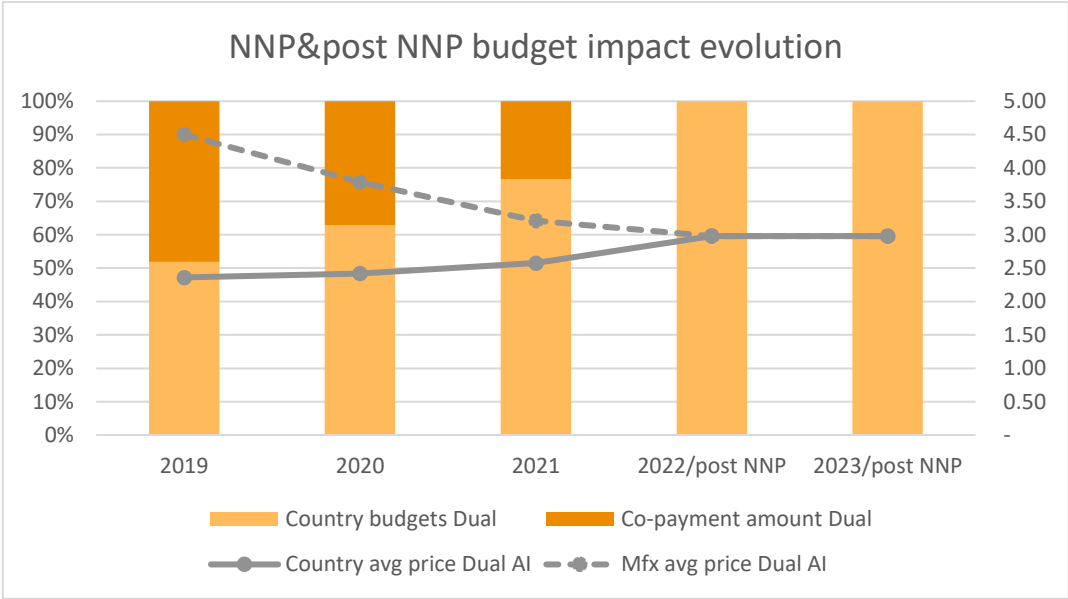
Output 3 – Effectiveness Pilot Results

Key Takeaways

- Mass ITN distributions are **strongly associated with increased ITN use and decreases in malaria transmission regardless of ITN type**.
- In areas of Sub-Saharan Africa 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 (physical, biochemical, and attrition)
    - These pilot study results align well with results from the cluster randomized trials in Tanzania and Benin.

Output 4 – Market Intervention Results





- **2019 (**NNP launch): avg. manufacturer price >$4 ≈ $2.40/net country price w/co-payment
- **2021**: Volume guarantee threshold of 35 mil nets reached one year early
- **2022/23**: 31 mil Dual AI nets ordered – manufacturer and country price ≈ $2.70/net, similar to PBO price

- **If the initial uptake of Dual AI LLINs required an additional support of almost 1:1 ratio, by end of 2021 NNP countries had taken over close to 80% of the cost of net, with a full inclusion of the price in current programmatic budgets from 2022 onwards**
- **Production capacity ramping up to meet demand (13% ITN market in 2022) – BASF to 50M nets/yr and Vestergaard PermaNet®Dual PQ listed on 17 March 2023**
  - Addition of Vestergaard capacity will satisfy updated short/medium-term forecast
  - Both companies have ability to scale up as needed with notice of 12-18 months
  - PQ listing of Dual creates healthy market competition and spread supply chain risk across multiple countries

Key priorities for NNP wrap up and future questions

Key priorities for the next six months:

- Continued coordination among stakeholders with manufacturers on production planning for dual-AI nets
- Publication of effectiveness pilot and cost-effectiveness results
- Presentation at AMP meeting and symposium at PAMCA
- Analysis of year-3 Benin RCT results

Key outstanding issues/questions:

- Effectiveness and cost-effectiveness of combining dual-aI nets and long-lasting IRS?
- Comparison between dual-aI nets and long-lasting IRS?
- Monitoring for chlorfenapyr resistance development
- Why do we see reduced efficacy of IG2 nets in some hut trials (although they still perform better than other net types)?

Questions