



Ministry of Health

DURABILITY MONITORING OF LLINS DISTRIBUTED IN 2020 MASS CAMPAIGN IN UGANDA

GF SR Performance Review Meeting

Date: 13/01/2023



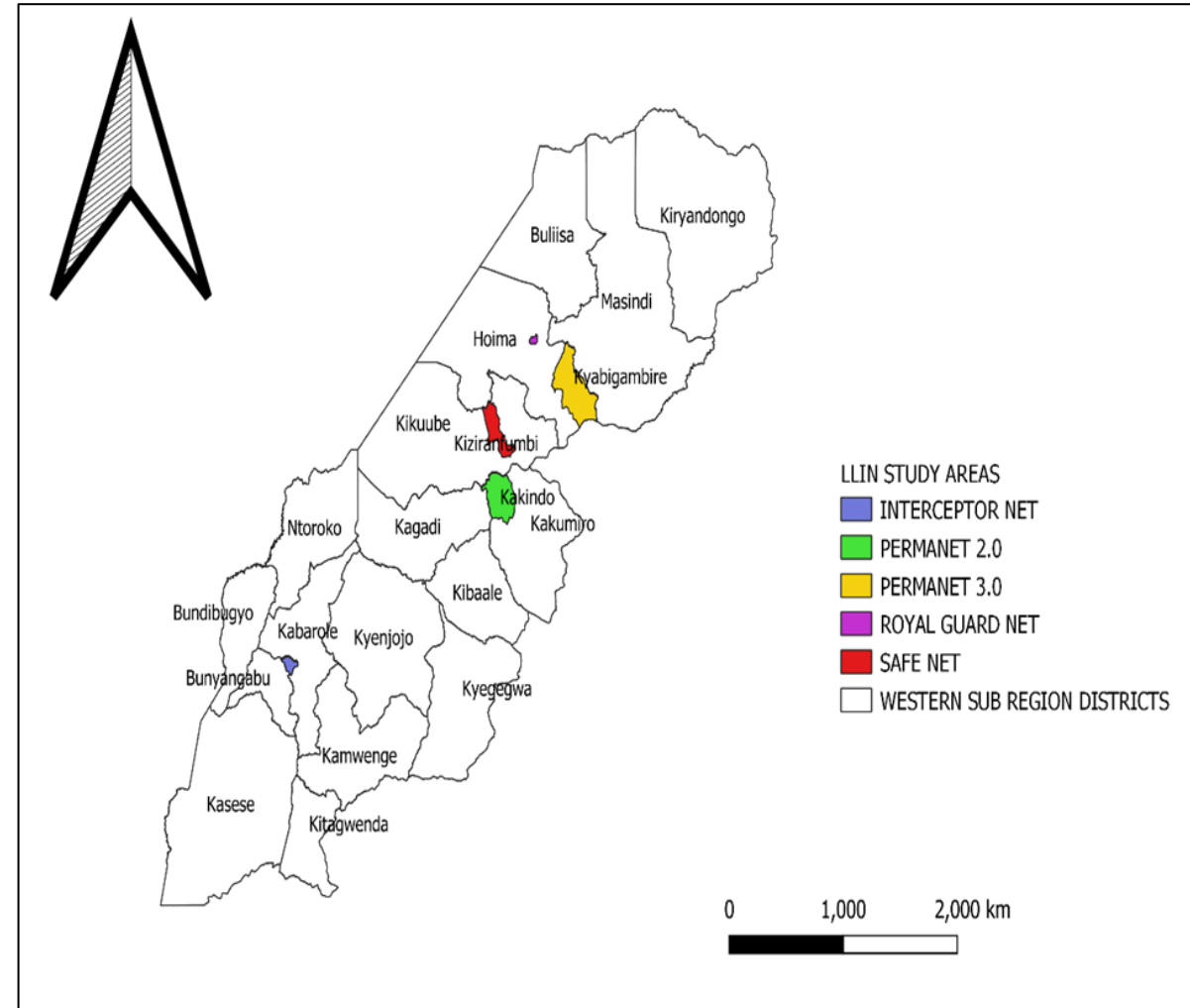
Study Objectives & Overview

Objective

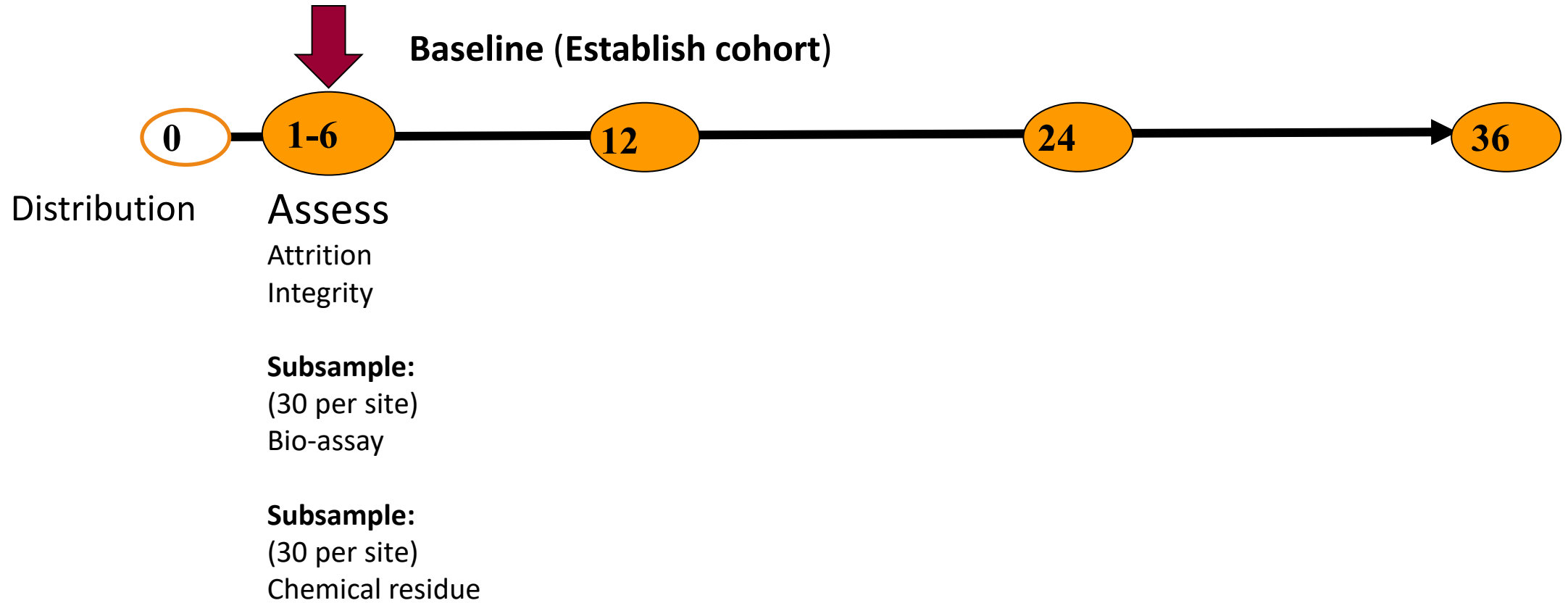
1. To assess the physical durability of LLINs, estimate median survival (Period at which 50% of the nets are no longer serviceable) & identify major determinants of field performance

Secondary objectives

1. To describe major behavioural aspects of net care and repair and their impact on physical durability
2. To assess the insecticidal effectiveness (residue and bio-assay) after three years of field use



Study design



Study Implementation progress Updates

- ❑ Baseline survey was conducted in February - March 2021
- ❑ The Baseline Bioassay and chemical residue was completed in December 2021
- ❑ Data cleaning and analysis for Baseline data
- ❑ The 12 months survey was implemented in August – December 2021
- ❑ Data cleaning and analysis for 12 months data
- ❑ The 12 months survey Bioassay and chemical residue was completed by December 2022.
- ❑ The 24 months survey data collection was conducted between August - December 2022.



Dissemination of Study Finding and Data use

Dissemination of both baseline and 12 months preliminary results were done, Global, National and district level through various platforms that include:

- NMCD quarterly meeting (5th September 2022)
- Integrated Vector Management (IVM) Meeting (27th July 2022)
- Malaria Partners meeting (5th September 2022)
- Results were also shared with the UCC 2023 planning team and NCC to inform strategic planning
- Presentation of BCC abstract paper at the WMD colloquium 2022
- ASTMH Ministry of Health Booth in Seattle Washington (USA)
- The study results were also utilized for the UMRESP Mid Term Review

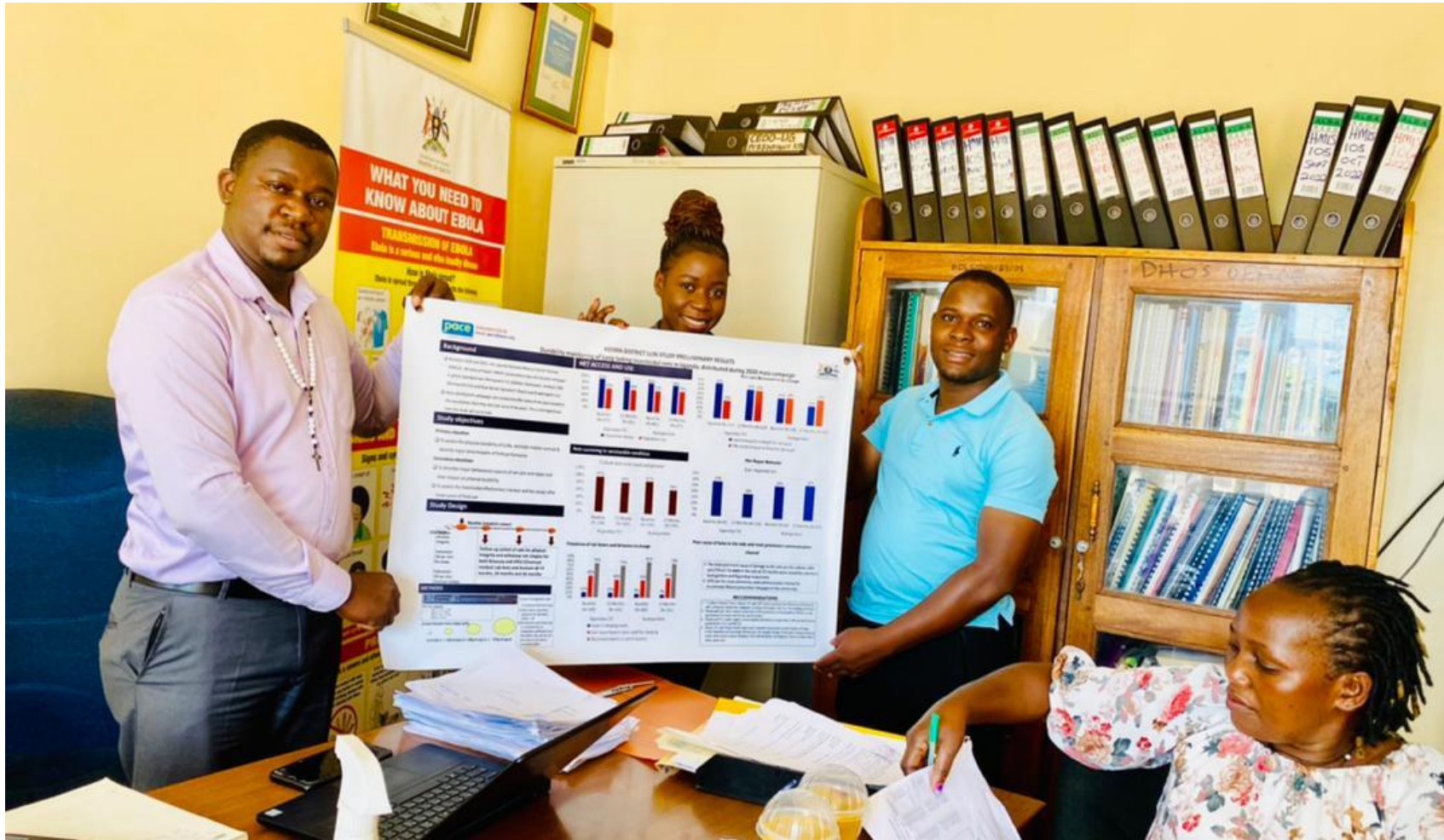


District Level Dissemination of Study Findings...

- ❑ Both Baseline and 12 months survey results were disseminated to the District and sub county Health Teams through the District feedback and joint action logs developed to address the nets use and community behaviours for effective malaria prevention and control.
- ❑ District and sub county Health teams were supported to develop action points for BCC messaging and talking points for radio talk shows to encourage net use and net repair.
- ❑ Most DHTs tapped into the available talk show airtime on radios offered by Implementing Partners in the districts to reach the beneficiaries



Dissemination of findings in Hoima District



LLIN Study team handing over a results summary poster to the DHO Hoima District



District Level Dissemination of LLIN DM Findings in Bunyangabu District



- Emphasis was placed on role of districts in Cascading SBCC messages on Net Use, Care and repair.
- Also, Highlighted causes of Net damage



Bioassay summary results (12 Months survey)

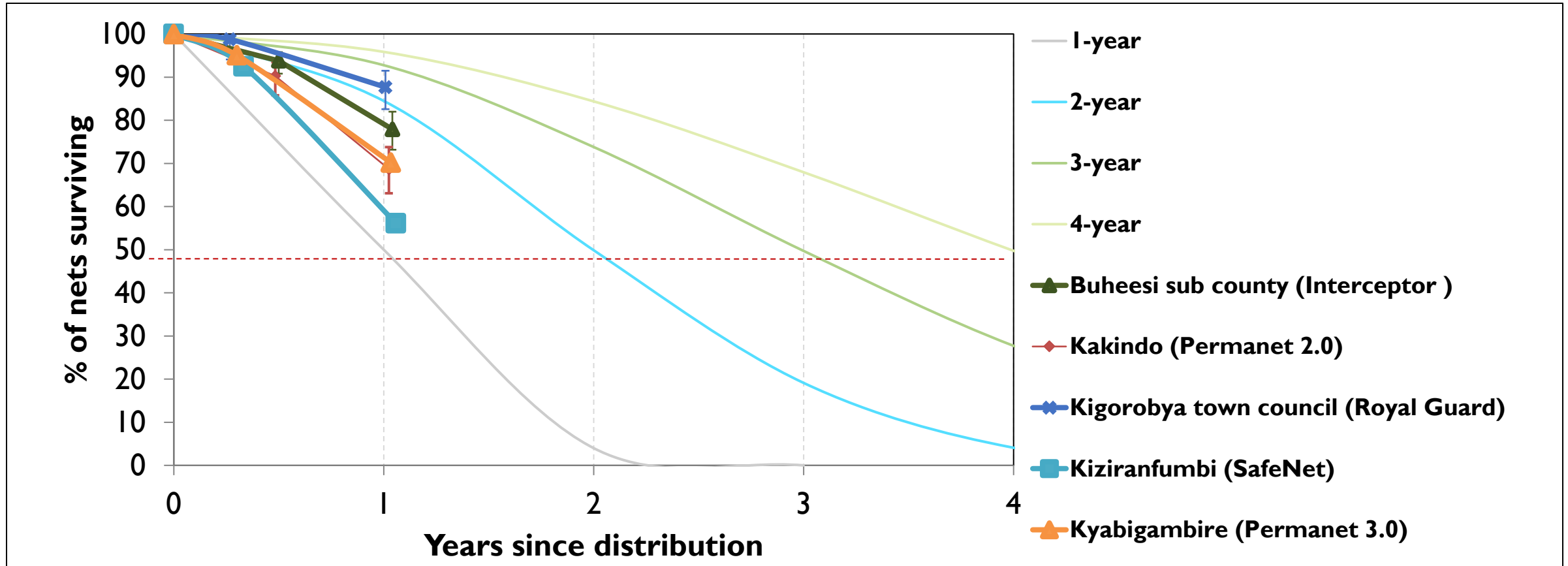
Proportion of nets that Attained Effectiveness by brand (Either KD \geq 95% Or Mortality \geq 80%)

Type	Net Brand [n=30]	Mosquito species used	Baseline	12 Months
Non PBO	Interceptor	Susceptible (An. Gambiae s.s Kisumu)	80%	13%
	Permanet 2.0	Susceptible (An. Gambiae s.s Kisumu)	67%	10%
	Safenet	Susceptible (An. Gambiae s.s Kisumu)	100%	33%
PBO	Permanet 3.0 (Roof)	Resistant (An. Gambiae s.s Busia)	100%	80%
	Permanet 3.0 (sides)	Susceptible (An. Gambiae s.s Kisumu)	93%	33%
Dual AI	Royal Guard sides	Susceptible (An. Gambiae s.s Kisumu)	100%	97%

For the Royal Guard oviposition tests at 12 months, Royal Guard showed a 5-fold difference in oviposition inhibition from pyriproxyfen activity, reducing the number of eggs laid per resistant female. An average of 59.3 eggs were laid per LLIN compared to 309.4 eggs per negative control LLIN



Physical integrity results summary [Median Survival Estimation]



Apart from the Dual AI (Royal Guard), All the other 4 brands fell below the 2-year curve at 12 months. As per NMCD policy LLIN nets are to last for 3 years and UCC are every after three years.

Way Forward and Next Steps

- ❑ Conduct the 24 Months Bioassay and Chemical Residue (HPLC) tests
- ❑ Dissemination of comprehensive 12 Months survey results with analysis of both field data and Bioassay and HPLC to NMCD, malaria partners and Global malaria fraternity .
- ❑ Data cleaning and analysis of the 24 months survey data
- ❑ Dissemination of the physical integrity preliminary results of the 24 months field survey
- ❑ Dissemination of the preliminary Bioassay and HPLC (Chemical Residue) results



ACKNOWLEDGEMENT

- ❑ Study Participants
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- ❑ PACE Research Team
- ❑ Study Research Assistants
- ❑ Ministry of Health
- ❑ National Malaria Control Division
- ❑ IDRC
- ❑ CRA-W lab, Belgium
- ❑ PSI
- ❑ Study Investigators (Phyellister Nakamya, Dr. Jimmy Opigo, Stephen Poyer, Dr. Damian Rutazaana, Dr. Catherine Maiteki, Dr. Henry Katamba, Dr. Samuel Gonahasa, Dr. Alex Ndyabakira, Mathias Kasule , Rebecca Babirye)



Thank you
Q&A



Interventions for Health Impact