amp | The Alliance for Malaria Prevention

ITN care, repair and repurposing

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Working session

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Before these two presentations, how familiar were you with ITN care and repair strategies?

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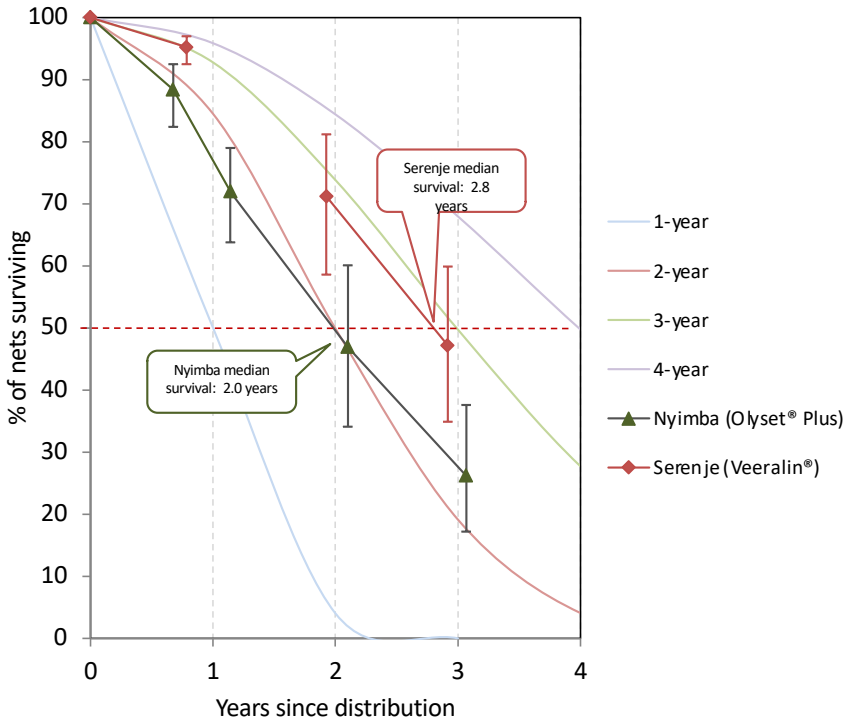
Why is ITN care and repair important?

Net durability

- ITN attrition rates are well above what we expect.
  - These are different across countries and even, within the countries
- We need to expand the ”returns on investments”

- https://www.durabilitymonitoring.org/



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What does ”care for their nets properly” mean?

Good net care practices

- Washing your ITNs
  - How to wash
  - What products to use
  - How to dry
  - Washing frequency
- How to protect ITN from holes and tears
  - Tying up your ITN during the day
- Repairing holes and tears

- These key messages should be informed by data.

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Does washing frequency increase ITN attrition rates?

Washing frequency and ITN durability

Analysis of 17 studies by Tropical Health

The majority (11 out of 17 studies) reported no significant relationship between wash frequency and the outcomes:

- physical integrity (four out of eight studies)
- chemical content (three out of four studies) or
- bioefficacy (four out of five studies)

- We want to extend the life (both physical and chemical) of an ITN

- Certain washing products can be particularly detrimental to ITNs; the lower the alkalinity of the soap used for washing, the less damaging the process is for the insecticide. Locally made or bar soap is less harmful than industrial detergents, and bleach is especially harmful not only to the insecticide but also to the textile fiber.
- The physical process of washing and drying of ITNs also provides opportunities for holes to form or enlarge, potentially exacerbating existing damage caused, for example, by snags, burns, or rodents, and reducing physical durability of the net.

- **Take home message: We don't just look at how often nets are washed, but also how they are washed.**

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Does your NMP have an ITN care and repair strategy and activities as part of ITN mass campaign?

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Does your NMP have an ITN care and repair strategy for ITNs distributed through continuous distribution channels?

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What is the biggest barrier to implementing ITN care/repair strategies in your context?"

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What do NMPs need to implement effective ITN care and repair strategies and activities?

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In one or two words, what should AMP prioritise to support successful ITN care and repair strategies and activities by NMPs?

Repurposing ITNs

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Before these two presentations, how familiar were you with ITN repurposing strategies and activities?

Consensus statement on repurposing of ITNs

Definitions

- New ITN: An ITN obtained from the most recent campaign or distribution.
- Old ITN: An ITN obtained in an earlier distribution (e.g., a previous campaign or from an antenatal care visit), which may still be used to protect a sleeping space.
- Inactive ITN: An ITN that is no longer used by a household to protect a sleeping space for whatever reason, including that it could be torn, dirty or no longer needed. Inactive could also refer to a presumed lack of insecticide if the owner no longer perceives the net to be killing insects.
- **Only the household can decide whether an ITN is active or inactive**

Consensus statement on ITN repurposing

Type of repurposing

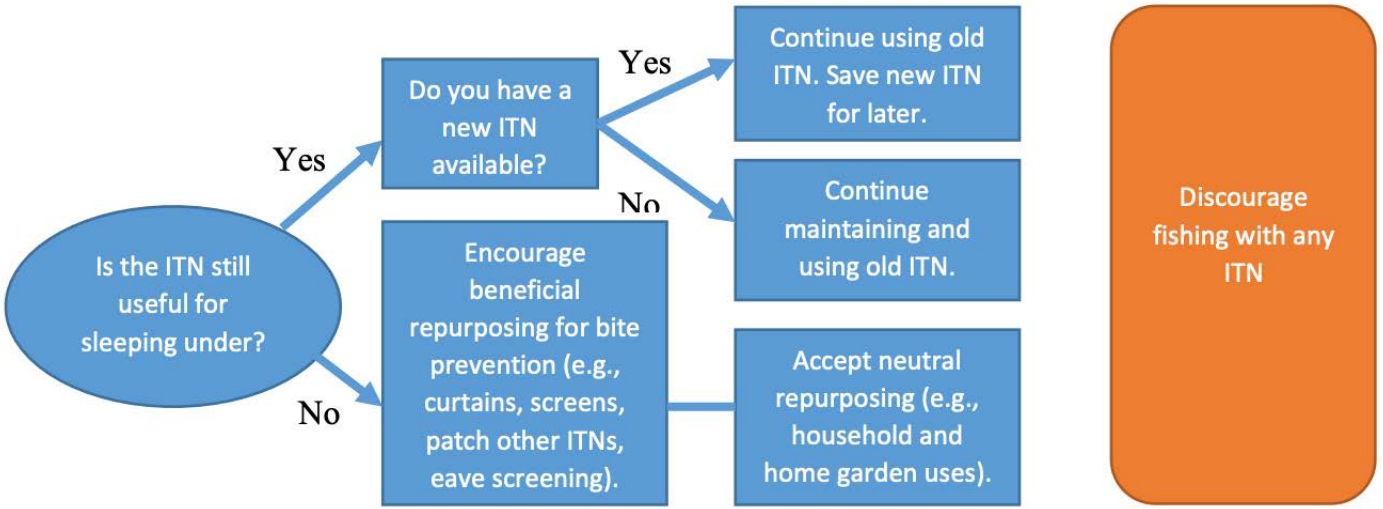
- Beneficial repurposing: The use of inactive ITNs for purposes other than for sleeping under to protect against malaria infection. It is considered beneficial because the ITN material continues to act as a barrier against mosquitos. Examples of beneficial repurposing include using old or inactive ITNs as curtains, patches for holes in viable nets, stuffing eaves, and constructing window or door screening.
- Neutral Repurposing: The use of inactive ITNs for household uses that do not prevent mosquito bites. Examples include covering latrines, protecting seedlings, fencing, transporting and storing crops, screening of poultry or animal enclosures, tearing into strips for tying objects, and other household uses.

- Misuse:
  - The use of an active ITN for purposes other than its intended use as a bed net to protect against malaria infection, with added environmental harm. Misuse of ITNs is not acceptable under any circumstances and not only defeats the public health purpose of providing protection from malaria, but can also have negative environmental outcomes.
  - Using a new or old ITN—one that is still useful for sleeping under—for another purpose is misuse. Using any ITN, whether new, old, or inactive, for fishing, is the prime example of misuse.

https://endmalaria.org/sites/default/files/Consensus%20Statement%20on%20Repurposing%20ITNs.pdf

Recommendation

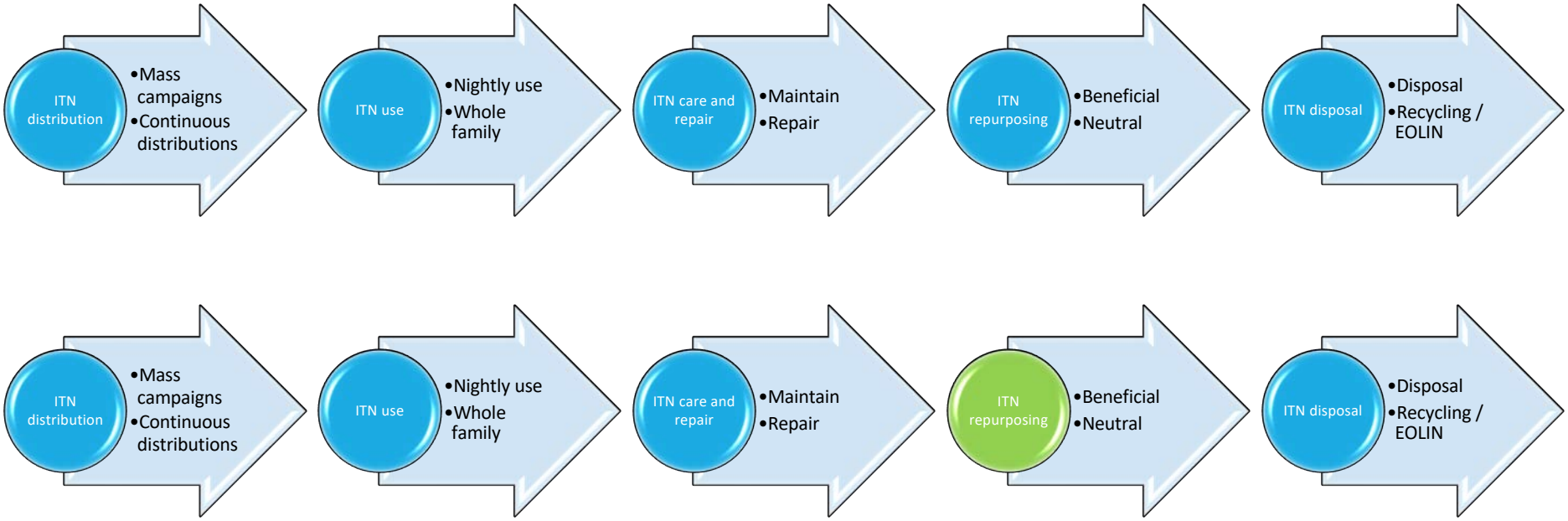
Figure 1: Flowchart of recommendations for ITN use and repurposing



Evidence based

- Toxicity of pyrethrins and pyrethroids to humans:
  - The field use of pyrethroids poses little or no hazard to people
  - Pyrethroid insecticides are approved for use on ITNs due to their safety
    - shown to pose very low health risks to humans and other mammals
  - Note that ITNs repurposed for doors (latrines, fencing, vegetable covers) would be subject to intense sun exposure, leading to accelerated breakdown of pyrethroids compared to indoor use.
- Human exposure via transfer to edible crops:
  - Pyrethrins and pyrethroids adsorb strongly to soils and are not taken up substantially by the roots of vascular plants.
    - These compounds have been widely used in agricultural pest control; little hazard is posed to mammals (including humans)
  - Use of old ITN netting on edible crops is unlikely to result in any acute exposures to the insecticides.
- Toxicity of pyrethrins and pyrethroids to fish and other aquatic life:
  - Pyrethroid compounds do bioconcentrate in aquatic organisms and can be extremely toxic to fish.

The process during planning and implementation



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- Do you believe that there is a need for “ITN repurposing” at the household level?

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- What specific support do Programmes need from AMP and partners to successfully develop and implement an ITN repurposing strategy and activities?

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What kind of repurposing is this?

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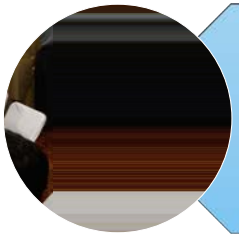
How is AMP helping?



Technical assistance

Guidance

Coordination

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- What is your main take away from this session?


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