

# The Alliance for **Malaria Prevention**

Expanding the ownership and use of mosquito nets

## LLIN Packaging: Old and Newer Issues for Consideration in Decision-Making

AMP Partners Meeting  
February 7<sup>th</sup>, 2017

## **Background**

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- Many concerns about packaging generated out of LLIN campaign distribution and management of millions of individual plastic bags (national and household)
- Countries expressed concern about what should be done with the individual bags that the nets came in





**World Health  
Organization**

**Recommendations on the Sound Management  
of Packaging for Long Lasting Insecticidal Nets (LLINs)**

**November 2011**

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## **WHO: Recommendations on the management of LLIN packaging – 1**

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- LLIN packaging waste is not the same as plastic bag waste – because the bags have trace amounts of pesticides after the LLIN is removed, they can be classified as used pesticide containers
- The *Guidelines for Procuring Public Health Pesticides* recommends that LLINs be packaged individually in sealed plastic bags that are sufficiently strong to prevent damage during transit (WHO 2012) and each package has specific labeling requirements

## **WHO: Recommendations on the management of LLIN packaging – 2**

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- The Do's:
  - Ensure that workers use proper personal protective equipment (PPE) during collecting, sorting, recycling, and disposing of LLIN packaging
  - Store used LLIN packaging to be recycled or disposed of in dry, ventilated, and secure facilities



## **WHO: Recommendations on the management of LLIN packaging – 4**

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- The Do's:
  - Consider recycling LLIN packaging
  - Incinerate LLIN bags and baling material only if specified conditions for pesticide-tainted plastic can be guaranteed
  - Dispose of LLIN packaging away from any residences, in a landfill that will not leach contaminants, if the manufacturer does not recommend recycling or incineration.



## **WHO: Recommendations on the management of LLIN packaging – 2**

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- The Do Not's:
  - Encourage the re-use of LLIN bags for any other purpose to avoid the risk of pesticide poisoning
  - Burn LLIN bags and baling material in the open air
  - Dispose of LLIN packaging as ordinary waste or in improper sanitary landfills







**USAID**  
FROM THE AMERICAN PEOPLE

# DELIVER PROJECT

## Long-Lasting Insecticide-Treated Bed Net Packaging Considerations



USAID | DELIVER PROJECT 2012

LLINs are packaged in individual bags and wrapped in an outer covering.

The use of long-lasting insecticide-treated bed nets (LLINs) to prevent the transmission of malaria is producing successful results worldwide. But, for some recipient communities, one result of this success has been the accumulation of used LLIN packaging. If managed incorrectly, this used packaging can expose local populations to toxic substances.

Stakeholders and partners in the malaria prevention community are responding to the challenges posed by accumulating LLIN packaging waste. For instance, the World Health Organization (WHO) developed draft recommendations for managing LLIN packaging waste. Manufacturers are also offering a choice in



## **USAID / JSI - LLIN packaging considerations**

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- Document highlights the different influences on decisions taken at time of procurement in terms of:
  - Providing information to users (information and messages printed on individual bags)
  - Facilitating compliance with local, national, and international regulations
  - Supporting LLIN distribution activities
  - Protecting LLINs during storage, local transport, and handling

# Procurement Options for Addressing Long-Lasting Insecticide-Treated Bed Net Packaging Waste



Cost



Programmatic



Storage



Transportation



Production Time



Environmental



Communications



Disposal



Waste Management



Handling



Regulatory

## **Packaging options**

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# Environmentalists complain over mosquito net packaging

By: MICHEL NKURUNZIZA

PUBLISHED: May 15, 2015 | News |  Print |  Email



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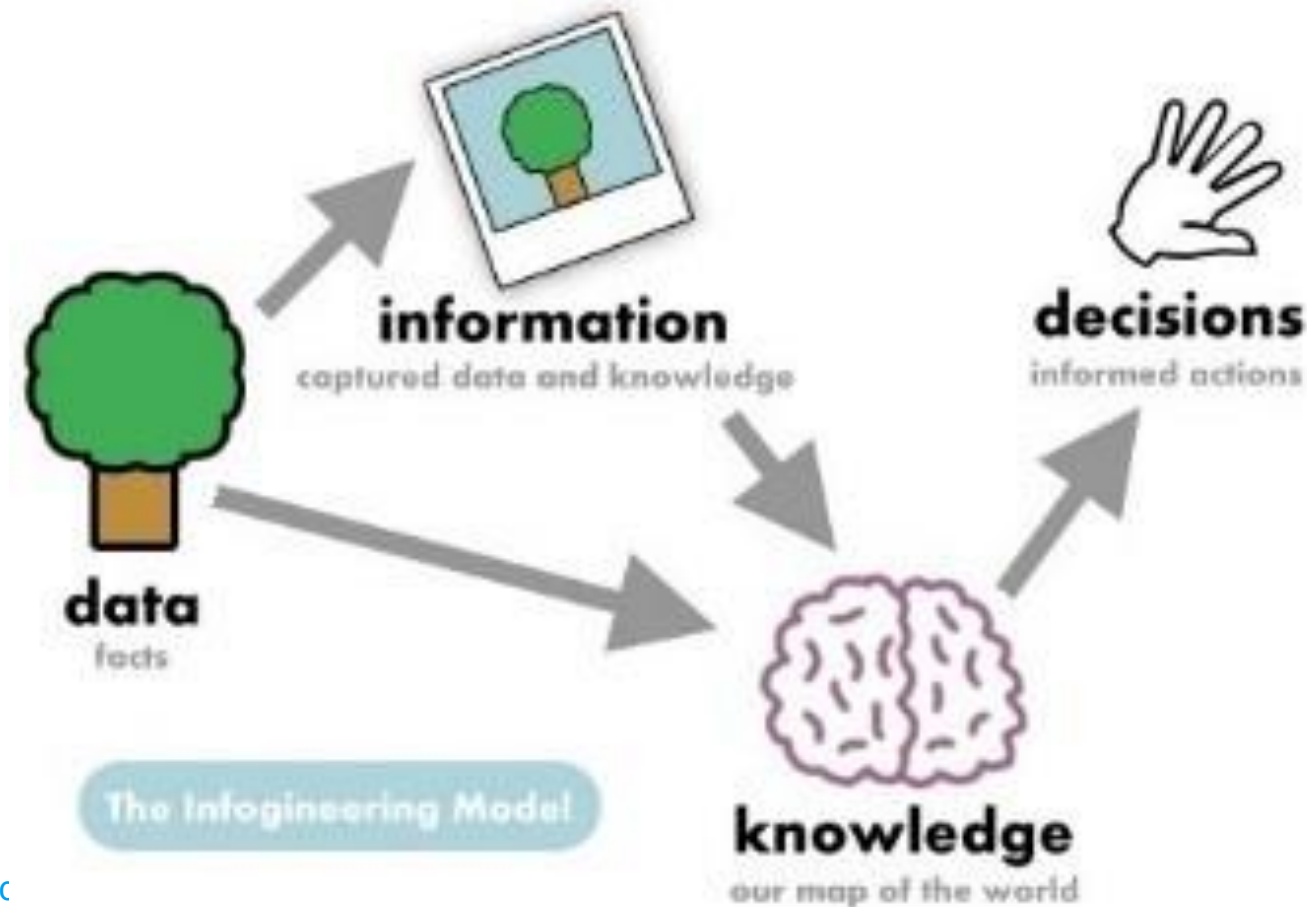
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Expanding the ownership and use of mosquito nets

# The Alliance for **Malaria Prevention**

**How is data generating new questions on packaging decisions?**



Expans



## Timing for LLIN replacement and continuous distribution

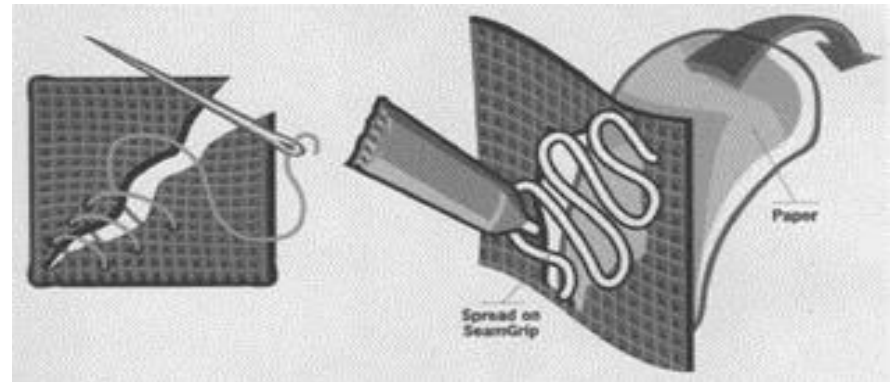
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- Replacement campaigns are every three years – estimated 50% loss based on modeling = less than 40% population coverage
- Routine and CD system reach and effectiveness is increasing in many countries vs initial campaign period
- Country data (timing, household behaviour)

## LLIN durability and care and repair

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**So...**

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- If we assume or agree that:
  - Most (all) countries are having repeat campaigns
  - Many countries are stepping up their routine or CD
  - Many households will have existing nets in their household at time of campaign distribution
  - Households are making subjective decisions as to the effectiveness of LLINs
  - Net care and repair behaviour is inconsistent

## **Then... (1)**

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- Additional issues and questions are raised related to packaging:
  - Is it likely that nets will be stored before hanging?
  - What happens to the insecticide quality on nets without packaging that are stored before being used?
  - How are we using country-level data and campaign implementation experiences to input on packaging decisions?
  - Are we giving out nets that will be damaged before use?
  - What are we doing with leftover nets at the end of the campaign?

## **Then... (2)**

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- Communication messaging becomes important:
  - Blanket messaging that “all old nets should be taken down and replaced with new nets” no longer works in most countries
  - How households should manage packaging if taken home
  - How households should be storing any nets not immediately used

## **And...**

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- If leftover nets without packaging are put into the routine system, is there information going to health facilities about the prioritization of these unpackaged nets for distribution to prevent damage during storage?



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## **The bigger issues...**

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- If decisions on packaging lead to the realization that coverage is likely to be high at the time the campaign is planned, should timing for campaign be reviewed?
- Or, are we looking at shifting to sub-national distribution?
- Or, are we reconsidering guidance on accounting for existing nets?
- Or, are we oversupplying and not communicating on how to properly store nets?

## **A few last points**

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- Need to align guidance (and feasibility) and practice
- Need to update guidance and decision-making tree in line with:
  - Environmental policies and procedures in countries
  - Capacities in terms of recycling opportunities
  - New packaging options (if any)
  - Implementation questions
  - Specific issues related to next generation nets?
- Communication planning and message / material development needs to adjust and align to decisions taken with focus on HH and, potentially, health facilities

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For additional information  
[www.allianceformalariaprevention.com](http://www.allianceformalariaprevention.com)  
and [allianceformalariaprevention@gmail.com](mailto:allianceformalariaprevention@gmail.com)