4: LLIN procurement and pipeline monitoring

A definition of procurement that can be used for long lasting insecticide treated nets (LLINs) is: "the process of acquiring" …commodities, i.e. LLINs… "at the best possible cost, in the right quantities, of desired quality, in the right place and at the right time"[1]. In the case of LLINs, the minimum requirement is a World Health Organization (WHO) Pesticide Evaluation Scheme (WHOPES) Phase II recommendation[2], currently held by a number of suppliers. New products are under evaluation and are reviewed in detail in the *Landscape of new vector control products* published in September 2015.

The need to accelerate the availability of new vector control innovations, including LLINs, has led to the formulation of the *Innovation to Impact* initiative that will lead to changes to the vector control product evaluation process beginning in 2017 that will "streamline product-evaluation process to comply with ongoing practice in medicines, vaccines and diagnostics (under the WHO Prequalification programme)". Presented to the WHO Malaria Policy Advisory Committee in September 2015[3], the reform has four primary outcomes, leading to changes in the procurement policy relating to LLINs:

- Stimulate development of more innovative products
  - Increased drive for innovation in development of vector control products for public health
- Accelerate availability of vector control products
  - Improved efficiency and transparency of WHO vector control evaluation process
- Improve quality of vector control products
  - Enhanced quality management by WHO for vector control products across the system
- Increase appropriate use of innovative vector control interventions
  - Strengthened normative guidance functions

More information can be found at: apps.who.int/prequal/vector_control/key_resources.htm and innovationtoimpact.org

Procurement and supply management (PSM) activities are fundamental to good programme implementation and performance. While the procurement process and many of the procedures are similar for many commodities, with potential problems and their solutions well documented, the procurement of LLINs for mass distribution programmes has particular challenges. Different countries have encountered different issues causing bottlenecks in the LLIN supply chain. This brief updated chapter will discuss some of the common challenges experienced and lessons learned.

4.1 The procurement life cycle

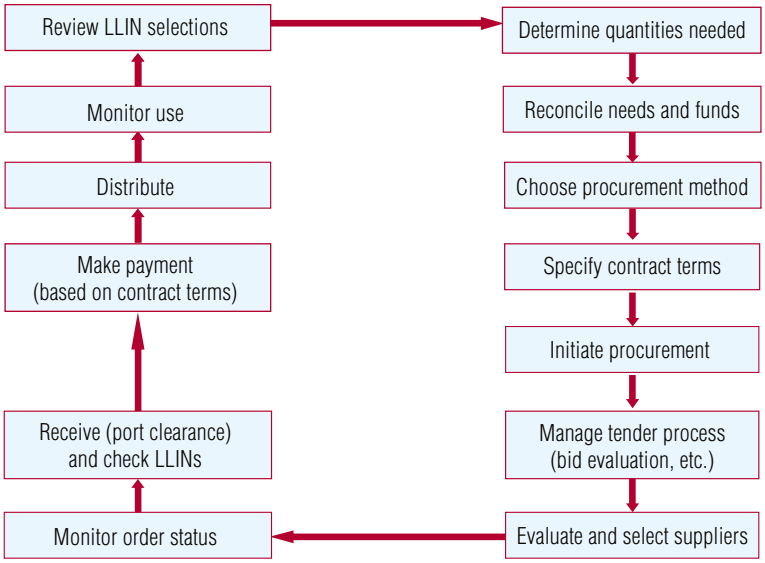
The LLIN procurement life cycle goes through three phases:

1. Pre-procurement:
- determination of availability of funding
- identification of the product and specifications
- decision on quantity required
- identification of target date for receipt
- undertaking market research to find suppliers who can satisfy the requirements

2. Procurement and contract management
- identification of procurement method
- preparation of tender/bidding documents with clear terms and conditions
- development of evaluation criteria
- issuance of the tender documentation
- evaluation of offers and adjudication
- contract award and signature of contracts
- follow-up on implementation of the contractual terms and conditions
- receipt of supplies
- processing of payment in line with contract

3. Assessment and evaluation
- assessment of overall historical performance of the supplier and, based on that assessment, recommendations on whether supplier(s) is reliable and can be used for future purchases
- evaluation of the procurement activity and assessment of any remaining requirements (gap)

The LLIN procurement process is shown in the following simplified illustration[4]:



See Resource R4-1 (on the website) for an overview of the LLIN procurement and supply process. While some of the content and links are old, the information regarding procurement challenges and processes is still applicable and may be useful as an overview.

The objectives of good LLIN procurement are to:
- procure the right nets in the right quantities at the lowest possible purchase price that meet the required specifications and evaluation criteria for the intended population
- select reliable suppliers of quality products (currently WHOPES recommended)
- ensure fair market competition respecting public procurement
- ensure ethics in the procurement process
- ensure timely delivery and notification
- ensure the lowest possible total cost of the operation of assured quality

Procurement of LLINs generally happens long in advance of the establishment of coordination structures (described in Chapter 2 of the AMP Toolkit 2.0) or the development of the plan of action (described in Chapter 3 of the AMP Toolkit 2.0). In most cases, needs are estimated by the Ministry of Health (MoH) and funding organizations to ensure timely delivery based on a general annual plan of activities. Procurement, whether initiated by the MoH or a procurement agency, is the responsibility of the MoH, through various departments, such as procurement and finance.

Good practice in LLIN procurement ensures that:
- procurement is in accordance with donor's timelines and procedures
- procurement is in bulk to ensure economies of scale
- the bidding process is competitive and transparent
- quantities are ordered based on a reliable estimate of overall need
- funding is available at the right time through good financial management
- pre- or post-shipment quality assurance and quality control (QA/QC) mechanisms are in place

Zanzibar. © Maggie Hallahan /Sumitomo Chemical

4.2 Planning for procurement

Universal coverage campaigns are generally on a national or sub-national scale, usually requiring huge quantities of LLINs to be procured. This massive task must be carefully planned. Once funding has been secured, the development of a structured procurement plan is essential. This will contain information on the requirements for goods or contracts, the method of procurement and procedures for review of the plan. The method of procurement needs to be decided, based on donor guidelines and country policy, and a timeline for the entire procurement and campaign process, from initial research to receipt by beneficiary, must be determined. Different funding agencies have their own timelines and it is important to ensure strong donor coordination to avoid problems with delivery timelines that affect implementation. While the main processes will be similar, it is essential to be guided by the donor's own processes and procedures. The main difference is between pooled procurement, or joint purchasing, and individual or ad hoc procurement. For pooled procurement in particular, good coordination and meticulous planning are critical. As examples, best-case timelines for major donors such as the Global Fund Pooled Procurement Mechanism (PPM), The World Bank, UNICEF and USAID/PMI are given in the Appendices and in Resources R4-2 to R4-5 (see the AMP website), showing the differences in procedures and responsibilities, as well as terminology.

4.3 Donor organizations and funding

Major sources of funding include, among others, governments, DFID, the Global Fund, UNICEF, USAID/PMI and the World Bank. The various funding agencies each have their own rules and regulations regarding procurement, which must be taken into consideration when making funding requests. Procurement must also be in accordance with national and international laws.

A number of checklists and other documents, relevant to the major donors, are available to give guidance on their regulations and procedures. Among these are:

- Guide to the Global Fund's Policies on Procurement and Supply Management[5] (Resource R4-6) – currently under revision
- Roll Back Malaria Toolbox: Procurement of LLINs. Technical data and manufacturers[6]
- UNICEF Long-Lasting Insecticidal Nets (LLINs) Suppliers Meeting[7]. There are a number of procurement-related presentations on this link, which are updated following the yearly meeting of suppliers.
- The Global Fund and UNICEF LLIN Suppliers Meeting - September 2015[8]

Once needs have been quantified, coordination between donors, where there are multiple sources of funding for LLIN procurement, is crucial. It is important that all donors attempt to meet the specified timelines for delivery to the country. This may be as general as "before the rainy season" in the case of a non-integrated campaign, or may be quite specific where campaigns are integrated and the platform (for example EPI) has fixed campaign dates.

In cases where bottlenecks in procurement affect efficiency in implementation, countries may decide to outsource procurement. In parallel, countries should work towards addressing the existing bottlenecks. Countries with limited staff capacity or time, as well as countries seeking to expedite the procurement process, should seek support from partners, stakeholders and third parties to ensure rapid delivery of commodities, including port clearance. Malaria programmes facing procurement bottlenecks may also seek collaboration with countries experienced in best practices in LLIN procurement.

4.4 Sources of LLINs

Different kinds of issues make the secure procurement of a sufficient quantity of quality-assured WHOPES recommended LLINs a challenging task. Suppliers will not proceed with an order until contracts are signed and verified. In some countries this may take a considerable amount of time, which needs to be built into the timeline. Bottlenecks should be avoided by ensuring that time needed for mandatory processes such as bid evaluation, preparation of contracts, inspection, etc. is not underestimated.

Regulatory issues also need to be considered. Experience has shown that for the majority of countries and the majority of donors, regulations mandate that nets receive a WHOPES recommendation. In some cases, however, countries may also require product registration, which may limit competition. This requirement should be validated during the procurement planning process; lack of registration should not

A to Z factory, Tanzania, © Maggie Hallahan/Sumitomo Chemical

bar WHOPES recommended suppliers from bidding. The numbers of both WHOPES recommended products and suppliers have grown in recent years, and are published by WHOPES[9]. LLINs, which are currently being evaluated, are also listed[10] and updated regularly.

Suppliers must give assurance that they can meet contract requirements, including deadlines. Part of the task of a bid evaluation process is to ensure that the supplier has a history of meeting delivery schedules and the capacity to deliver on time and in the right quantity. Contracts should contain penalty clauses, which must be enforced in the case of breach of contract through late or inadequate delivery.

4.5 Procurement issues

Specific parts of the LLIN procurement process are key to the successful completion of the operation. The following are included because of their potential to cause problems:

1. **Putting out a tender:** This requires a clear specification of requirements, including deadline and award criteria. Transparency is vital in order to avoid any future problems resulting in delays. Tender documents should include a detailed and clear specification of the product, using variables that can be met by all suppliers, in order to avoid the sole-source procurement of a particular brand and to eliminate unfair competition. Suppliers must be aware of the evaluation criteria, how they will be notified of results, and so on. They should also be aware of procedures such as fines for non-compliance, lateness, etc.

A standard bidding document (Resource R4-7) produced by the World Bank is one example of documentation that ensures the tendering process is clear and precise[11].

For practical purposes when dealing with very large quantities of LLINs, as is often the case with universal coverage campaigns, it is recommended that the tender is split into a number of lots, by region or district for example. This attempts to mitigate on the ground operational challenges of different kinds of nets being distributed in the same area, and difficulties any one supplier might have with production or shipment.

2. **Evaluation of bids:** This requires a strict deadline and transparent procedures for evaluation. In most cases, particularly in government-led procurement with donor funding and not through a pooled procurement method (Global Fund/UNICEF), only sealed bids should be accepted. Public bid openings should also be put in place and publicly announced. The evaluation process should be based on established criteria and will determine not just the costs involved, but also the ability of the supplier to comply with all necessary regulatory aspects, adherence to the delivery schedule, quality control and past performance.

3. **Guidelines:** It should be noted that the lowest bidder might not be the most appropriate. Depending on the donor's regulations, responsibility for evaluation may be taken by the purchaser, in the form of a procurement committee, or by the procurement agent.

4. **Regulatory issues, quality assurance and quality control:** Pre-delivery inspections may be carried out by both supplier and purchaser. Suppliers may arrange for batch inspection, but purchasers may independently do pre-delivery inspections for each shipment. This should be clearly identified in the bidding documents and also in the contracts. Pre-delivery inspections should be based on pre-defined criteria for minor and major defects. Generally, if there has been adequate pre-delivery quality inspection, post-shipment inspection, except for loss and damage, will not be required.

5. **Human resource capacity:** There is a need for a clear definition of roles and responsibilities of procurement staff and their involvement in the planning process. In general, there is a limited number of staff with adequate experience and training to carry out LLIN procurement and supply functions at different levels. Procurement staff should be part of the wider procurement and supply management team, and should include staff with technical and logistics expertise for the functions of receipt, clearance, storage and transport, as well as project staff to monitor the use of the product. There is also a requirement to build and sustain country capacity for the future via training, monitoring and evaluation.

6. **Shipping, transport and storage** issues are discussed in Chapter 5 of the AMP Toolkit 2.0.

4.6 Packaging

When specifying LLIN requirements, attention should be paid to the packaging. LLIN packaging includes the plastic bags used to wrap individual nets, the plastic wrappers on the outside of the bales, and the bands and straps used to keep the bale in shape. Used packaging, unless managed correctly, can accumulate within communities and expose local populations to toxic substances. Because LLIN packaging has been in contact with treated netting and may have absorbed insecticides such as pyrethroids and others under development, it may have a serious environmental impact through the pollution of soil and ground water, and if burnt in the open air, the emission of dangerous toxins.

There are various LLIN packaging options available that can be specified during the procurement process. The primary decision in selecting the most suitable kind of packaging will depend on the method of last-mile LLIN distribution and on whether proper disposal methods are in place.

LLINs may be packed in individual bags, or may be packed in bulk, without individual bags. Either way, the LLINs can be packed together into bales of up to 200 LLINs. AMP, however, recommends packing fewer nets per bale in order to ensure that, at distribution points, as close as possible to the required number is delivered. Too many nets at one distribution point may lead to a shortage at another. Packing fewer nets into one bale also aids transportation, and stops bales having to be broken open before delivery, which may lead to leakage. AMP, therefore, recommends that bales be packed with 50 or fewer bags or nets.

Considerations for the use of individual LLIN packaging[12]

Is distribution of LLINs continuous/ routine or via a mass distribution campaign?	• With continuous, routine channels, given the lengthy storage time, individual packaging for LLINs allows them to remain protected and clean until distributed. • Individual packaging increases programmatic flexibility because the LLINs can be used as needed, whether for mass distribution campaigns, or for routine distribution.
How will LLINs be transported to their end destination?	• Individual packaging protects the product during prolonged storage, transport and handling. It also supports product stability over time, by limiting exposure to heat, humidity and sunlight. The WHO *Guidelines for Procuring Public Health Pesticides* (2011) recommend that LLINs are packed individually in sealed plastic bags strong enough to prevent damage during transit.
Are the LLINs distributed close to end users?	• The possibility of damage before hanging increases when the distance between the distribution point and end-user household also increases.
Is packaging used for messages, such as malaria prevention or social marketing?	• Messages can be widely disseminated within communities with individual packaging carrying messages.
Is packaging used for information, such as local language or pictogram versions of proper hanging, use and care?	• Information on proper hanging, use and care of nets can be widely disseminated.
Can the programme comply with regulations of the national pesticide regulatory authority, if there is one?	• The treatment and disposal of LLIN packaging should follow the national laws and regulations concerning the safe handling and disposal of pesticide-tainted waste. Where no specific regulations or laws exist, international standards and guidelines developed by WHO or other institutions should be applied to ensure the safety of health workers, the population at large and the environment.
If an individual bag is required, could biodegradable packaging be used?	• This type of packaging contains chemical additives that, in the presence of light and oxygen, accelerate the degradation of the plastic films into small fragments that are biodegradable. These bags typically cost more than standard bags and sourcing them in quantity may extend procurement lead times. Even if biodegradable bags are used, the outer bales and other packaging should still be treated as used pesticide containers and disposed of accordingly.
Is recycling an option?	• Recycling means the processing of materials from the LLIN packaging so that it can be used to make other products. It is important to determine if recycling plastics treated with insecticides is available in your country. Some recyclers may not accept certain plastics, so it is important if LLIN packaging is to be recycled that information about which polymers will be acceptable is acquired before the procurement process. In order to ensure that the recyclers use proper controls for their materials and processes and do not risk contamination from handling, programmes should alert recyclers about how the packaging was generated. • Manufacturers should be encouraged to provide detailed information on the exact composition of materials, and should provide guidance on disposal and/or recycling.

Considerations for the use of bulk packaging

Can safety practices be ensured when distributors are handling nets?	• Pesticide exposure through repeated handling of the LLINs by distributors may cause skin irritation. Safety practices need to be promoted.
Can the waste be safely disposed of?	• Bulk packaging does significantly reduce the amount of waste, but does not eliminate all waste. The packaging of bales, bands and straps must still be handled as pesticide containers.
Can opened bales be stored properly?	• Maintaining shelf life of LLINs may be a problem after bales are opened. There may also be risk of damage to LLINs once bales are opened. • If there are concerns about damage to the LLINs occurring after distribution at a fixed point, bulk packaging may only work well in a door-to-door delivery campaign.
What are the regulations on transporting dangerous goods?	• The UN Recommendations on Transport of Dangerous Goods could be interpreted as limiting the amount of active ingredient that can be transported within a single unit of packaging. This may limit transport options if bulk packaging is used. Packing LLINs in bulk might change their shipping classification because of the increased risk of toxicity to terrestrial and aquatic life.
How could messages or information be conveyed?	• There would be little opportunity to use packaging for messages or information, although this concern could be addressed by using additional literature, or sewing an information tag into each LLIN.
Is cost a major issue?	• There is potential for overall cost saving with the procurement of LLINs without individual bags, both for manufacture and transport.

Management of packaging

WHO has drafted *Recommendations on the Sound Management of Packaging* (2011)[13].
Recommendations include:

Do not

- 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

Do

- Ensure that workers use proper personal protective equipment during all stages of operations for collecting, sorting, recycling and disposing of LLIN packaging
- Incinerate LLIN bags and baling material only if specified high-temperature incineration conditions for pesticide-tainted plastic can be guaranteed, and if Food and Agricultural Organization (FAO)/WHO and Basel Convention guidelines[14], as well as national regulations and requirements, can be strictly followed
- Store used LLIN packaging to be recycled or disposed of in dry, ventilated and secure facilities
- Consider recycling LLIN packaging as described above
- Dispose of LLIN packaging away from any residences, in a landfill that will not leach contaminants, if the manufacturer does not recommend incineration or incineration is not possible in the country

4.7 Monitoring and evaluation

As more universal coverage campaigns are undertaken, lessons have been learned about LLIN procurement, but there is a requirement to set performance indicators so that proper monitoring and evaluation (M&E) can be put in place. These are required for the procurement process itself, and also for the end use of LLINs to ensure that the procurement and supply management process functions well. Lessons from both will be used to improve future implementation of malaria prevention programmes, inform future training needs, modify procedures and build country capacity wherever possible.

Nigeria. © Maggie Hallahan/Sumitomo Chemical

4.8 Resource materials

R4-1: Procurement and Supply Management of LLINs Workshop. Roll Back Malaria. October 2009. Pdf.
R4-2: World Bank procurement timeline: Excel version of Appendix 4A.
R4-3: Global Fund procurement timeline: Excel version of Appendix 4B.
R4-4: GHSC-PSM project procurement timeline: Excel version of Appendix 4C.
R4-5: UNICEF procurement timeline: Excel version of Appendix 4D.
R4-6: Guide to the Global Fund's Policies on Procurement and Supply Management. Pdf.
R4-7: World Bank Standard Bidding Document: Procurement of Health Sector Goods. Pdf.

Appendix 4A: World Bank procurement timeline*

Activity	Responsibility/Notes	Weeks																								
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
		SPECIFICATION, REQUESTS FOR BIDS AND BIDDING																								
Determine forecast	Purchaser	X	X	X																						
Determine quantities to be purchased	Purchaser	X	X	X																						
Reconcile quantities against budget	Purchaser	X	X	X																						
Review and agree on LLIN specification	Purchaser	X	X	X																						
Assess state of the LLIN market	Purchaser	X	X	X																						
Select procurement method	Usually during project appraisal of a Procurement Plan. In general, International Competitive Bidding (ICB) is recommended, and exceptionally, Limited Competitive Bidding (LIB) or Direct contracting through the UN in case of emergencies.	X	X	X																						
Prepare bidding documents (BD)	Purchaser				X	X																				
Submit bidding documents for No Objection to the Bank	Purchaser				X	X																				
Advertise	Based on the method, may require international or national advertising						X	X	X	X																
Issue bidding documents to requesting parties	Purchaser							X	X	X	X	X	X													
Bidding period	Minimum of 4 weeks for national and 6 weeks for international							X	X	X	X	X	X													
Bid closure and bid opening	Purchaser												X	X												
Evaluate bids	May take 3—5 weeks														X	X	X	X	X							
Make recommendation for award	Purchaser																	X	X							
Seek No Objection to award contract to lowest evaluated bidder	Purchaser																			X	X					
Award contract	Purchaser																				X	X				
Contract progress monitoring	Imposed in BD, usually from 2 to 4 months																					X	X	X	X	X
		PRODUCTION AND DELIVERY																								
Production lead time	Imposed in BD																					X	X	X	X	X
Ready for inspection (QA)	Purchase is made on CIF/CIP basis: pre-shipment inspection is recommended																					X	X	X	X	X
Released for shipment	Supplier's responsibility as purchase if made on CIF/CIP basis																						X	X	X	X
Booked for shipment	Purchaser																						X	X	X	X
Transit time	Depends on country logistics, purchaser's responsibility																						X	X	X	X
Arrival at final destination	Purchaser																						X	X	X	X
Clear customs, receive, count and check for loss/damage	Purchaser under CIF/CIP																						X	X	X	X
Payment to supplier	Usually by Letter of Credit, for the most part (80%) at time of shipment																						X	X	X	X

*See ResourceR4-2 for MS Word version of the timeline.

Appendix 4B: Global Fund Pooled Procurement Mechanism (PPM)

The eight major steps in the PPM process are as follows, and as indicated in the flowchart:

1. PR sends Request for Quotation (RFQ) with product specifications, quantities and desired delivery dates to the PPM team.

2. The PPM team and PSA screen the procurement request and request clarifications, if needed.

3. PPM (sourcing) team works with the PSA to confirm allocation with suppliers. The PSA submits price quotation to PR based on the Global Fund Framework Agreements with the suppliers.

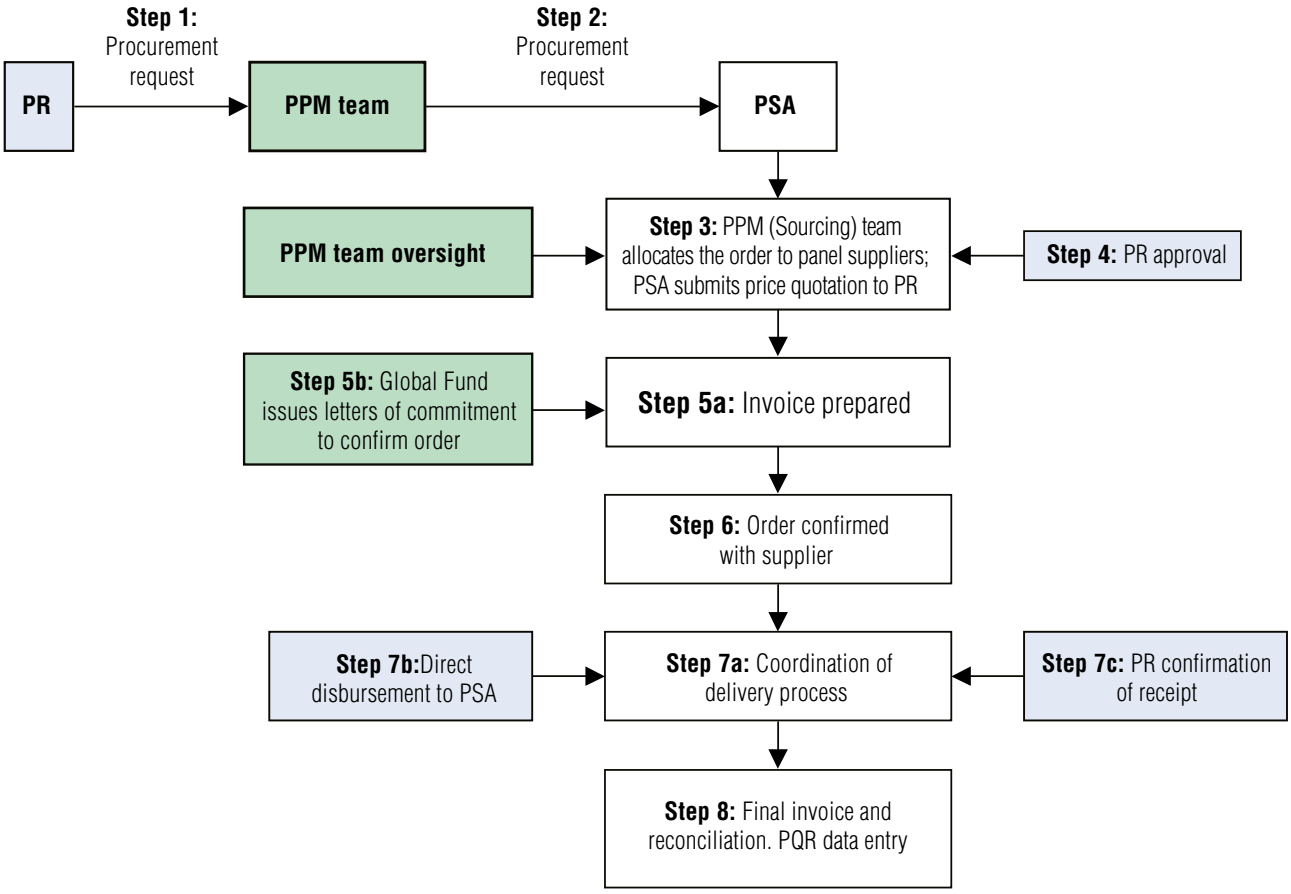
4. PR reviews the quotation and accepts (or declines) the price quotations and returns a signed copy to PSA and PPM team

5. Global Fund issues letters of commitment to confirm orders.

6. PSA confirms the order with the suppliers on receipt of commitment letter from the Global Fund.

7. a) PSA provides periodic updates to the PR on expected delivery and coordinates the delivery process for the PR.
   b) Global Fund disburses funds to PSA.
   c) PR confirms receipt of goods.

8. PSA reconciles the account and submits a final invoice to PR. PSA enters data into the Price and Quality Reporting system (PQR).



Appendix 4B: Global Fund Pooled Procurement Mechanism (PPM) timeline**

Activity	Responsibility/Notes	Weeks																									
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Identification of needs	Principal Recipient (PR)	X																										
Finalization of specifications[15]	PR (a dedicated request form should be filled)	X																										
Reconcile quantities and budget	PR	X																										
PR submits request to the Global Fund (Sourcing Department) for screening and allocation	PR and the Global Fund		X	X																								
Sourcing Department works with the PSA to confirm allocation with suppliers and submits price quotation to PR	Procurement Service Agency (PSA)			X	X																							
PR reviews price quotation and accepts/declines	PR				X	X	X																					
Global Fund issues letters of commitment to confirm order	Global Fund (depending on the availability of funds)				X	X	X	X																				
Upon receipt of funding confirmation, PSA confirms order with supplier	PSA (1–2 weeks)						X	X																				
Production (if relevant, PR review and approve artwork prepared by manufacturer)	Typically 2–3 months (depending on the volume and production capacity available)						X	X	X	X	X	X	X	X	X	X	X											
Pre-shipment inspection (sampling and testing)[16]	Coordinated by the PSA										X	X	X	X	X	X	X	X	X	X	X							
Freight/transit time	4–10 weeks depending on destination														X	X	X	X	X	X	X	X	X	X	X	X	X	X
Customs clearance	PR/PSA depending on incoterm (1–4 weeks)																		X	X	X	X	X	X	X	X	X	X
Receipt, reporting of receipt and any discrepancies or damage	PR																				X	X	X	X	X	X	X	X

**See Resource R4-3 for Excel version of the timeline.

Appendix 4C: Global Health Supply Chain Procurement and Supply Management Project (GHSC-PSM), supporting USAID/PMI-funded programmes: timeline***

Estimated time from receipt of Commodity Procurement Information Request (CPIR) to delivery

Activity	Weeks																																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
CPIR and clarification: • Procurement specialist assignment • Establish relationship with client • Clarify specifications and lead times	X	X																																	
Request for Proposal (RFP)/Request for Quotation (RFQ) process • Draft and publication RFQ • Check quotes for compliance with RFQ • Prepare evaluation and send recommendation • Obtain client concurrence			X	X	X																														
Office of Acquisition and Assistance (OAA) preparation and approval • Obtain freight estimate[17] • Commodity Costing Sheet (CCS), prepare and submit OAA pack • Obtain OAA approval						X	X	X	X	X	X																								
Order processing • Approve Requisition Order (RO) and prepare Sales Order (SO), Purchase Order (PO) • Fund validity form • Obtain signature on PO												X																							
Production lead time													X	X	X	X	X	X	X	X															
Quality assurance (QA) process[18]																					X														
Shipping lead time (average)[19]																						X	X	X	X	X	X	X	X	X	X	X	X	X	X

Total estimated lead time = 35 weeks. Final lead time could be more when in-country distribution applies.

***See Resource R4-4 for Excel version of the timeline.

Appendix 4D: UNICEF timeline[20]: a pooled procurement model****

Part 1: Annual procurement process (long-term contract)

Activity	Notes	Duration in weeks																												
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Annual country forecast process initiated	Annual forecasting tool is shared with all countries	X	X	X	X																										
Forecast received from countries						X	X																								
Clarification on forecasts	All countries finalize their annual forecast							X																							
Finalize annual forecast	Annual forecast overview							X	X																						
Review and agree on LLIN specifications (WHOPES Phase II recommended minimum for award of contract)	Regular review on new available WHOPES-recommended specifications ongoing	X	X	X	X	X	X	X	X																						
Quality assurance protocol	Reviewed if needed	X	X	X	X	X	X	X	X																						
Determine estimated projected outlines	As per forecast and regular updates									X																					
Selection of procurement method	Procurement method selected										X																				
Sourcing – only WHOPES recommended products	Based on WHOPES updated recommendations (regular review of new products under evaluation)	X	X	X	X	X	X	X	X	X	X																				
Procurement strategy	Update./ finalize procurement strategy											X	X	X																	
Issue tender or Request for Proposal	Tender documents issued to eligible suppliers – mid November														X	X															
LLIN industry meeting/pre-bid meeting																	X														
Tender / RFP closes	Last date for submission of completed tender documents – mid December																			X											
Public tender opening	If required by donor or national regulations																			X											
Complete evaluation	Commercial and financial																				X	X	X	X							
Make recommendation for award																									X	X					
Recommendation accepted																											X	X			
Contract award	Annual contract issued																												X	X	
Contract progress monitoring	Regularly																														

****See Resource R4-5 for Excel version of the timeline

Part 2: Execution of individual purchase orders

Activity	Notes	Duration in weeks																												
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Placement of individual purchase order	2—5 days after receipt of funds if no deviation of requirement from forecast	X																													
Production lead time	Depending on quantity of order and availability on the market (may vary 2—8 weeks)		For small quantity		For medium size orders			For large orders or non-commonly produced LLINs																							
Ready for inspection (QA)	For available LLINs 3—8 days after placing the order, as per schedule adjusted to production lead times. Duration of inspection is 2—3 days depending on the quantity of nets procured										X																			
Released for shipment	7 days after inspection date											X																			
Booked for shipment	Within 10 days from inspection												X	X																	
Transit time	May vary 20—70 days depending on country location (i.e. longer lead times for landlocked countries), but also on quantity														Close to origin					Country with ports			Landlocked/ huge volumes							
Arrival and clear customs at final destination	Different timelines for customs clearance – country specific																														
Clear customs, receive, count and check for loss or damage	Different for different countries – immediate check on arrival																														
Insurance claim procedure in the event of any loss or damage	Short shipment reported at receipt – starts immediately on arrival																				X										
Payment to supplier	Within 30 days from delivery date																														
IMPORTANT: The order placement starts in one week as all the preparedness for procurement is based on pooling annual procurement through annual forecast and annual contracts with suppliers, which enables pooled procurement.																															

****See Resource R4-5 for Excel version of the timeline

Endnotes

1. From Procurement and Supply Management of LLINs Workshop, Global Fund PMU/Roll Back Malaria PSMWG, October 2009. See Resources R4-1.
2. WHO Pesticide Evaluation Scheme. See www.who.int/whopes/en/ under the tag "WHOPES recommended".
3. Innovation to Impact – WHO change plan on evaluation of pesticides. See www.who.int/malaria/mpac/mpac-sept2015-innovation-impact-presentation.pdf?ua=1.
4. From Procurement and Supply Management of LLINs Workshop, Global Fund PMU/Roll Back Malaria PSMWG, October 2009.
5. www.theglobalfund.org/documents/psm/PSM_ProcurementSupplyManagement_Guidelines_en/.
6. www.rollbackmalaria.org/commodity-access/llins-and-irs/procurement-of-llins
7. www.unicef.org/supply/index_56727.html and www.unicef.org/supply/index_59717.html.
8. www.theglobalfund.org/documents/p4i/events/P4I_2015-09-15-GlobalFundUnicefLLINSuppliersMeeting_Presentations_en/
9. www.who.int/whopes
10. www.who.int/whopes
11. http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/PROCUREMENT/0,,contentMDK:20062738~menuPK:84284~pagePK:84269~piPK:60001558~theSitePK:84266,00.html
12. http://deliver.jsi.com/dhome/newsdetail?p_item_id=27781126&p_token=24BD2A6C83DAEAEB0F6EA535230970F8&p_item_title=New%20Brief%20on%20Long-Lasting%20Insecticide-Treated%20Bed%20Net%20Packaging%20Considerations
13. www.who.int/malaria/publications/atoz/recommendations_management_llin_packaging_nov11.pdf.
14. Food and Agricultural Organization (FAO) (1995) Guidelines on good labelling practice for pesticides.
See: www.fao.org/3/a-i4854e.pdf. FAO (1995) International Code of Conduct on the distribution and use of pesticides.
See: www.fao.org/docrep/005/y4544e/y4544e00.htm. FAO/WHO (2008) Guidelines on management options for empty pesticide containers.
See: www.who.int/whopes/recommendations/Management_options_empty_pesticide_containers.pdf
WHO (2012) Guidelines for procuring public health pesticides. See: www.who.int/malaria/publications/atoz/9789241503426_pesticides/en/
15. Slow response defining LLIN specifications from the recipients, slow finalization of the artwork and country-specific additional pre-shipment inspection requirements are the main bottlenecks that can affect the timelines.
16. Some of the activities, such as production and pre-shipment inspections take place in parallel.
17. Freight quote may take longer when multiple destinations are required.
18. The length of the QA process will depend on the number of batches to be tested, and whether sterility testing (which is lengthy) is required.
19. Average shipping lead time includes pre-shipment approval, booking, transit time and customs clearance.
20. UNICEF undertakes procurement for the main donors.

Bamako, Mali. © Doug Mole, IFRC