

Risk assessment and mitigation planning for an ITN distribution campaign in the COVID-19 context

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Remember the COVID-19 infection prevention measures¹

Understand the management of risk

There are many definitions of risk. The UNESCO Risk Management Training Handbook (2010)³ uses the following: “Risk is the expression of the likelihood and impact of an uncertain, sudden and extreme event that, if it occurs, may impact positively (opportunity) or negatively (threat) on the achievement of a project or programme objective” (p. 12).

Risk = Likelihood x Impact

Why is it important to manage risk? The ultimate purpose of the exercise of risk identification and analysis is to prepare for risk mitigation. Risk mitigation is the process of taking steps to reduce adverse effects and/or events. Mitigation includes the reduction of the likelihood that a risk event will occur and/or reduction of the effect of a risk event if it does occur⁴, e.g. risk mitigation can help to minimize potential negative effects on the different aspects of the ITN campaign, such as road conditions leading to transport delays of ITN and personal protective equipment (PPE) delivery during the logistics operation or the possibility of refusals during the household registration process.

Inherently, large-scale ITN distribution campaigns have many uncertainties and rapidly changing events or situations. In order to plan for success, it is important to identify these potential risks at the earliest stage of campaign planning. Some broad categories of risks to consider are:

Risk categories	Examples
Strategic factors: those risks that affect the entire strategy planned for the campaign	<p>Strategy to run a national standalone universal coverage campaign with fixed site distribution, but country context does not allow for groupings of individuals (e.g. Ebola, COVID-19 community transmission or complex operating environments)</p> <p>Strategy to decentralize deliveries of ITNs, but no organization is prepared to tender to achieve this</p> <p>Strategy does not include a maximum number of ITNs per household and ITNs are insufficient for the registered population</p>
Operational factors: those risks that affect, in part or wholly, ability to implement the operation as planned	<p>Budget does not adequately cover every aspect of the operation</p> <p>Insufficient structures or personnel to meet the planning for storage, transport and implementation</p> <p>Unrealistic expectations of possible achievements in operational implementation leading to blockages, delays and failures in the implementation</p> <p>Management of crowds insufficient, affecting security of commodities, personnel and ITN recipients</p>
Financial factors: those risks associated with budget and financing	<p>Budgets inadequately developed and do not reflect real costs</p> <p>Changes in exchange rates or costs for necessary items, such as fuel, due to inflation or contextual changes in the target area</p>

³ Source: UNESCO Risk Management Training Handbook, 2010. Bureau of Strategic Planning. BSP-2010/WS7. Available at unesdoc.unesco.org/images/0019/001906/190604E.pdf

⁴ Source: National Academies Press. The Owner’s Role in Project Risk Management (2005), Chapter 5. Available at: www.nap.edu/read/11183/chapter/7

Risk categories	Examples
	<p>Failure of timely customs clearances of consignments, which may lead to additional demurrage charges</p> <p>Delays in campaign implementation leading to increased storage costs</p> <p>Security not adequate at warehouses, leading to theft or other loss of ITNs or PPE</p> <p>Paperwork not filled out or archived correctly to allow for an audit trail for the ITNs, resulting in loss of accountability</p> <p>Lack of functioning banking system in some or all parts of the country increasing risks for payments of campaign workers</p>
Compliance risk: those risks associated with legal penalties when there are actions not in accordance with laws, regulations or internal policies	<p>Improper procedures followed for financial disbursement and justification leading to ineligible expenditure with financial partners</p> <p>Improper contracting process or contract template used</p> <p>Improper procedures followed for local and/or international procurement</p>

Note that some issues may have implications in more than one category. National malaria programmes may also add other categories, e.g. political risks.

Define likelihood and impact

Two key elements to consider for each identified risk are the likelihood of the risk occurring and the impact if the risk occurs. The table below shows one approach to categorizing each of these factors.

LIKELIHOOD OF RISK/PROBABILITY	IMPACT OF RISK	Example of colours if using heat map ⁵
Unlikely	Negligible	Low
Likely	Insignificant	Moderate
Possible	Moderate	High
Almost certain	Significant	Extreme

Every campaign will have a variety of risks related to each aspect of the campaign implementation and each of these risks may have an effect across all areas of operations (technical and monitoring and evaluation, logistics and communication, security, finance, etc.). Often, it will not be possible (or necessary where risks are unlikely and of limited impact) to map all risks, so a consolidated risk table with the most important risks can be considered. See the table below for part of an example risk mitigation framework developed for the ITN campaign in Burundi in 2016. It outlines the “top four” risks.

Top four	Risk	Category of risk	Risk to whom
	Late arrival of ITNs at provincial level (production delays, maritime transport delays, delays on arrival in country, customs delays,	Operational	FM/PPM ⁶ NMCP

⁵ A heat map is a data visualization technique that shows magnitude of a phenomenon (in this case the risk) as colour.

⁶ Global Fund/Pooled Procurement Mechanism

Top four	Risk	Category of risk	Risk to whom
Supply chain	delays in transport to provinces)		
	Changes to policy on import of goods and purchases (for example, taxes not covered by sponsors)	Strategic Operational Financial	NMCP/MOH
	Delays in delivery from provinces to communities/distribution sites (delays in call for tenders, delays in contracting transporters)	Operational	NMCP/PR
	Failure to identify and verify sufficient and appropriate storage in each community/distribution site for the quantity of ITNs being received	Operational	NMCP/PR
Security	Difficulty of access to some zones	Operational	NMCP/PR, transporter
	Refusal to register during household registration	Operational	NMCP/PR
	Difficulties in urban areas (such as the capital of the country)	Operational	NMCP/PR
	Displacement of population	Operational	NMCP/PR
Seasonality of operations	Difficulty of access to some zones due to rains	Operational	NMCP/PR, transporter
	Volunteers demotivated in difficult working conditions (rainy season implementation)	Operational	NMCP/PR
ITN quantification	Insufficient ITNs after household registration (e.g. quantification based on census carried out several years before)	Operational	NMCP/PR

Risk has become an increasingly important element in planning for ITN distribution campaigns given the need to ensure that the funds invested in the procurement and distribution of the ITNs are well utilized. Even where a national malaria programme has not been requested to submit a risk assessment and mitigation plan as part of the campaign macroplanning documents, it is good practice for the campaign team to go through the process of identifying any potential risks to the overall campaign, the accountability of the ITNs and the security of campaign personnel. In addition, in the COVID-19 context, the safety of household recipients during household registration and/or ITN distribution should be considered.

Focus risk mitigation on every aspect of the campaign

In past campaigns, risk assessment and mitigation planning in general focused on logistics and the overall supply chain but planning for mitigation of risks should cover more than just logistics. For example, there is sufficient global evidence pointing to the importance of household registration for ensuring that families receive the correct number of ITNs. Therefore, identifying the risks that households may not be reached or may not be registered correctly during the household registration can be a good way to strengthen planning for this activity. It should be noted that many of the risks identified by a national malaria programme planning team are likely to be related to experiences from previous campaigns, so it is good practice to look back at reports (particularly sections on lessons learned and recommendations) in order to refresh memories on where challenges happened, which warning signs were noted and how bottlenecks were resolved.

Countries should consider risk assessment as a critical aspect of the terms of reference for all sub-committees (logistics, technical/M&E and communication⁷), and use identified risks and mitigation measures to develop timelines and budgets for activities to improve the quality of ITN campaign implementation. During the macroplanning phase, it will be possible for the central level team to identify the general risks that may affect the overall campaign planning and implementation, but during microplanning, these assessments of risk can be more localized and show specific risks in only small parts of the district or health facility catchment area.

Once risks have been identified, the risk owner (e.g. the Ministry of Health, the national malaria programme, the implementing partner, the third-party logistics operator, etc.) can work to develop tools/plans to assess, determine, safeguard and implement suitable corrective actions to mitigate the risk in the planning.

In exceptional situations, the risk may need to be tolerated. Transferring the risk responsibility by contracting out certain activities to third parties (e.g. transportation or warehousing) is an option. But if transferring the risk is the preferred option, the goal of delivering campaign ITNs to the targeted households must be the highest priority and the ongoing close scrutiny of a contractor’s activities would be a logistics sub-committee function needing attention. Similarly, if the monitoring of the implementation of the communication plan for timing and frequency of radio and television spots is contracted out to an independent party, the SBC sub-committee would need to ensure that the duties are performed to the level required. In addition, the risks associated with contracting out an activity would need to be considered and evaluated.

Plan for increased and specific COVID-19 risks

In the COVID-19 context, there will be different risks associated with the different campaign phases and activities, for example:

Activity	Potential risk
Macroplanning	Inability of teams to meet face-to-face to coordinate and align on strategy adaptations and detailed planning for activities Unreliable connectivity for virtual meetings
Microplanning	Inability of teams to travel to the field Limited equipment, such as computers, leads to a lack of respect for COVID-19 infection prevention measures such as physical distancing during microplanning workshops
Procurement	Movement restrictions for transport of goods from central to decentralized levels (both international and national procurement) Timing for delivery on orders not guaranteed in the case of unforeseen lockdowns Unavailability of PPE
Household registration	Refusal of household members to be registered due to fear of COVID-19 transmission Late production of vouchers for household identification

⁷Terminology may differ between countries but function of sub-committees should be similar. There may also be other sub-committees, e.g. security, finance, etc. who should all consider risk assessment.

Activity	Potential risk
	Lack of respect by household members and/or campaign personnel for COVID-19 infection prevention measures during household registration
Logistics	Unloading difficult because of rules about people gathering in groups Possible surface transmission of COVID-19 on plastic wrappings Potential for theft or leakage of ITNs during last mile transport
SBC	Lack of respect for COVID-19 infection prevention measures during interpersonal communication or during advocacy meetings, media briefings or other activities Spread of rumours threatening implementation of the campaign or the safety and security of staff and commodities Mis- and disinformation on social media
Data	Poor quality data from microplanning used for pre-positioning ITNs leading to stock-outs for single-phase campaigns Accountability challenges at fixed distribution points due to non-use of vouchers and/or signatures of household recipients
Supervision	Restricted movement of teams from central to decentralized levels Limited contact with households (movement restrictions, decisions to reduce household contacts with campaign workers from central levels, etc.) leading to limited data collection
ITN distribution	Poor quality management of fixed sites with lack of respect for COVID-19 infection prevention measures Difficult terrain for last mile logistics Poor accountability during last mile logistics Lack of adequate waste management options and non-adherence to procedures
Monitoring	Restricted monitoring activities in line with limited contact with households External monitors unable to travel or travel only to targeted areas
Payment	Late identification of personnel and provision of needed information, including justifications Delayed implementation of activities Personnel who fall ill during the campaign Personnel drop out if COVID-19 testing is required Cost of paying sick workers and replacing them

Update the risk assessment and mitigation plan on a regular basis

During macroplanning the development of a risk mitigation plan alongside the core campaign documents is important. It is an ongoing process, as risks will change over time (e.g. hotspots for COVID-19, etc.) and it is important for the risk mitigation plan to be kept as up to date as possible to avoid problems during implementation.

The risk assessment and mitigation plan should be seen as a key component of the macroplanning package and should be submitted at the same time as the campaign plan of action, logistics plan of action, communication plan of action, M&E plan of action, timeline and budget.

The risk assessment and mitigation plan should be kept in a central data storage location, such as on a Google sheet, to allow the different sub-committees to regularly update the plan as discussions continue and the context changes. The different sub-committees must continually monitor and discuss the ongoing risks. As risks will change over time, the risk assessment and mitigation process is continuous.

Risk assessment and mitigation plans can be standalone or can be integrated into the campaign timeline to allow for both to be updated easily during national coordination and sub-committee meetings.

The example in the Annex is adapted from different risk assessment and mitigation plans that have been developed by national malaria programmes and their partners in 2020 as part of campaign planning in the context of the COVID-19 pandemic. See also the Resources.

Resources

- R developed for a Nigeria 2020 ITN campaign (Excel)
- 2018 Madagascar ITN campaign integrated timeline version (Excel)

Annex: Example of part of a risk assessment and mitigation plan

Campaign area	Risk	Detail of risk	Likelihood	Impact	Heat map	Mitigation plan	Risk owner	Timing for addressing risk
PPE funding and procurement	Timely quantification, specification (e.g. reusable or disposable masks, infrared thermometers for daily health checks, etc.) and procurement of PPE and transport to operational levels	Late quantification, specification, procurement or transport to the operational levels will incur campaign delays. Pressures on the market, both international and national, for COVID-19 related PPE or IPC materials difficult to forecast.	3 Possible	4 Significant		Early planning and decision-making, budgeting, approvals and procurement of required PPE	MOH (NMCP)	Approvals received minimum of six months prior to planned distribution date from financial partners.
Quantification	Insufficient ITNs available for single-phase distribution	ITNs are insufficient to cover the targeted households because updated needs from household registration are not available in advance of ITN distribution (e.g. pre-positioning based on microplanning figures)	3 Possible	4 Significant		Pre-position contingency stock (if available) at district or regional level for deployment as needed based on data during implementation. If no contingency stock available, consider capping the number of ITNs per household either prior to or during the implementation of the registration or distribution based on data received.	MOH (NMCP)	During planning and implementation of the distribution

Campaign area	Risk	Detail of risk	Likelihood	Impact	Heat map	Mitigation plan	Risk owner	Timing for addressing risk
ITN storage at community level	insufficient secure pre-positioning sites (PPS) to facilitate resupply of door-to-door distribution teams	Many PPS are required to avoid a need to resupply ITNs to teams with other means such as motorcycles or tricycles. In some targeted areas, it may not be possible to find the required number of PPS that meet the minimum criteria for security.	2 Likely	3 Moderate		Early identification of areas with problems during microplanning. Where storage exists but security is the issue, plan for local security to reinforce any existing measures in place. Where no storage exists, determine alternate means for resupply of teams.	MOH (NMCP)	Verification of storage gaps at community level immediately after microplanning consolidation and validation
Resupply of door-to-door ITN distribution teams	Difficulties in quantifying and ensuring sufficient resources for regular resupply of door-to-door ITN distribution teams	Teams may move more slowly or quickly than planned, making the timing and frequency of resupply difficult to establish. Urban areas add additional complexity with traffic and other conditions. Risk of delayed distribution to households if the resupply cannot be planned in a timely manner. Financial implications of extending days of distribution.	3 Possible	4 Significant		Identify PPS as close as possible to door-to-door teams to reduce the need for resupply of ITNs. Monitor implementation of the resupply on the initial distribution days and make adjustments as needed – ensure contingency funding is available in the budget after microplanning.	MOH (NMCP)	After microplanning consolidation and validation and during implementation
COVID-19 infection prevention and control	Non-adherence to physical distancing and proper use of PPE	Risk of transmitting COVID-19 during campaign activities	3 Possible	3 Moderate		Adequate training of campaign personnel on safety measures during campaign activities. Ensure supervision and monitoring includes adherence to guidelines on use of	MOH (NMCP)	During planning and implementation of all campaign activities

Campaign area	Risk	Detail of risk	Likelihood	Impact	Heat map	Mitigation plan	Risk owner	Timing for addressing risk
						PPE and maintaining physical distancing.		
Waste management of ITN packaging and PPE	<p>Possibility of residual chemicals from the ITNs adhering to plastic materials used to package ITNs being spread into the environment.</p> <p>Spread of COVID-19 during management of waste materials, such as ITN plastic packaging, during waste management process</p>	Individual ITN packaging, bales, baling material, strapping and other plastic wrapping, and also non-reusable PPE all have the potential to become contaminated through being handled by campaign personnel who are sick with COVID-19 or asymptomatic	2 Likely	3 Moderate		<p>Develop a waste management plan to gather and dispose of all campaign waste.</p> <p>Correctly use and dispose of any COVID-19 prevention materials provided.</p> <p>Follow national government guidance for disposal and ensure that microplanning includes mapping of appropriate waste management facilities.</p>	MoH NMCP	During macroplanning and quantification for the distribution, as well as during microplanning
Social and behaviour change at community level	No interpersonal communication activities are possible or require significant modification	COVID-19 infection prevention measures restrict the ability to address specific populations with barriers to uptake of ITNs or a history of misuse	3 Possible	3 Moderate		Conduct limited community mobilization activities while adhering to national guidelines on COVID-19. As needed, use interpersonal communication in targeted areas identified as being at high risk for refusal or misuse of ITNs received.	MOH (NMCP)	During SBC macroplanning, microplanning and during implementation
Supervision	Inadequate monitoring and supervision	Limitations on movement of personnel from central/regional to implementation level	2 Likely	3 Moderate		Adapt monitoring and supervision of ITN campaign activities to conform to national	MOH (NMCP)	During macroplanning and implementation

Campaign area	Risk	Detail of risk	Likelihood	Impact	Heat map	Mitigation plan	Risk owner	Timing for addressing risk
						and WHO safety measures ⁸		of activities
Payments	Delayed personnel payment	Inadequate verification of account details Payment agency not able to operate at local level	2 Likely	3 Moderate		Plan for early submission and verification of personnel lists and account details. Plan for timely submission of payment justifications. Ensure regular follow up. Include payment related milestones in the campaign timeline.	MOH (NMCP)	During macroplanning, microplanning and implementation of activities

Key

Likelihood	Impact
1 Unlikely	1 Negligible
2 Likely	2 Insignificant
3 Possible	3 Moderate
4 Almost certain	4 Significant

Risk	Heat colour
Negligible	Green
Low	Yellow
Moderate	Orange
High	Red

Heat map - Impact

Likelihood	Negligible	Insignificant	Moderate	Significant
1 Unlikely	Green	Green	Yellow	Orange
2 Likely	Green	Yellow	Orange	Red
3 Possible	Yellow	Orange	Red	Red
4 Almost certain	Yellow	Orange	Red	Red

⁸ See AMP guidance:

and <https://allianceformalariaprevention.com/about/amp-guidelines-and-statements/>