**School-based distribution (SBD): Risk assessment and mitigation planning**

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As part of the overall strategy for continuous distribution of insecticide-treated nets (ITNs), a comprehensive risk assessment and mitigation plan is critical. This document outlines steps for ITN school-based distribution (SBD) in the identification of key risks, their potential impact and strategies to mitigate them effectively. An [adaptable tool](https://allianceformalariaprevention.com/uploads/resources/Step4/ITN_SBD_Risk_Assessment_and_Mitigation_Plan_Adaptable_052025_EN.xlsx) (Excel), available for download, accompanies this guidance document.

**1. Risk and ITN distribution through schools**

Risk can be defined in multiple ways. The UNESCO [Risk Management Training Handbook](https://unesdoc.unesco.org/ark:/48223/pf0000190604) (2010) provides the following simple definition:

“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). This can be summarized as:

|  |
| --- |
| **Risk = Likelihood x Impact** |

**Why manage risk?**

The focus of this document is on the negative impacts, or threats, posed by identifiable risks. The purpose of risk identification and analysis is to proactively prepare risk mitigation, with the intention of reducing adverse effects by taking steps to decrease the likelihood of a risk event occurring, and/or reduce impact if it does occur. For example, risk mitigation can help minimize potential negative impacts on the different interlocking aspects of the ITN distribution, such as poor road conditions leading to transport and delivery delays, or the exclusion of secondary schools from the target population. Identifying these early and developing mitigating measures early in SBD planning is crucial for successful implementation.

Table 1 below details some broad categories of risk to consider, along with specific examples:

*Table 1: Categories of risk*

|  |  |
| --- | --- |
| **Category** | **Examples** |
| Strategic factors:  Risks that affect the entire strategy planned for the campaign | * Scaling up SBD with a limited number of competent partners to support the expansion. * Misalignment with the school calendar (e.g. SBD planned during exams). |
| Operational factors:  Risks that affect, in part or wholly, ability to implement the operation as planned | * Insufficient budget coverage for all operational aspects. * Inadequate storage, transport or personnel to execute the plan effectively. * Unrealistic expectations of operational capacity, leading to delays and failures. * Change in context of area being served, e.g. insecurity, natural or man-made disaster. |
| Financial factors:  Risks associated with budget and financing | * Underestimated budgets that do not reflect real costs. * Delays in receipt of funding, leading to delayed procurement. * Exchange rate fluctuations affecting costs. * Delays in customs clearance leading to demurrage charges. * Storage cost increases due to campaign implementation delays. * Inadequate warehouse security, leading to theft or loss of ITNs. * Poor record-keeping, resulting in accountability issues. * Mismanagement and waste of available resources. |
| Compliance risk:  Risks associated with legal penalties when there are actions not in accordance with laws, regulations or internal policies | * Improper financial disbursement and justification processes. * Use of incorrect contract templates or procurement procedures. * Failure to follow legal procurement procedures for local or international sourcing. |

**Note**: Some risks may fall into multiple categories. Countries may also add other categories based on context. For example, the risk of theft or misappropriation of ITNs before distribution may be classified as “reputational” where the risk might lead to reputational damage to particular partners, in addition to the operational outcome of fewer ITNs for distribution (assuming lost ITNs are not recovered).

**Components of risk: likelihood and impact**

For each identified risk, two key elements should be assessed:

1. Likelihood: the probability of the risk occurring
2. Impact: the severity of the consequences if the risk occurs

The accepted way to categorize or scale likelihood and impact is to use a “heat map”, as follows:

***Heat map***

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

While the risk identification and mitigation measures should be developed early in the planning process, it should be noted that the resulting risk and mitigation plan is a living document and should be revisited and updated regularly during the run-up to the SBD distribution period. Early on, it may not be possible to identify and assess every potential risk, so the early plans should prioritize the most critical risks. Table 2 below presents priority risks identified from past SBD campaigns, using the example of Zambia’s 2021 SBD activity implemented by the National Malaria Elimination Programme (NMEP).

*Table 2: Priority risks*

|  |  |  |  |
| --- | --- | --- | --- |
| **SBD strategy area** | **Risk** | **Risk category** | **Risk to whom** |
| ITN quantification | Shortfalls in ITN supplies result from inaccuracies in enrolment data used for quantification, leading to a mismatch between the number of nets required and the number received. | Operational | NMEP/Ministry of Education (MoE) |
| Supply chain | Limited commodity availability restricts participating districts, schools and grades. | Operational | NMEP/Implementing partners |
| Monitoring and evaluation | Lack of clarity regarding data management responsibilities between the MoH and MoE. | Operational | NMEP/MoE |
| Social and behaviour change (SBC) | Limited funding towards SBC for SBD, leading to lack of engagement with critical stakeholders. | Financial | NMEP/MoE |

**2. SBD risk mitigation planning**

A robust risk mitigation plan ensures that identified risks are monitored and addressed throughout the SBD distribution period. The SBD working group (or equivalent) should actively track risks and update mitigation actions in the main SBD Plan of Action ([PoA](https://allianceformalariaprevention.com/uploads/resources/Step4/ITN_SBD_PoA_Adaptable_062025_EN.docx)). Ideally, one member of the SBD working group should be designated as the owner of the risk assessment and mitigation plan to ensure accountability. Risk identification should consider broad, systemic risks in addition to specific risks at the sub-national, school and community levels. Risk owners should develop tailored mitigation strategies to address each identified risk, ensuring timely and effective implementation.

**The risk assessment and mitigation plan is a key component of the SBD PoA and should be continuously updated.**

A risk assessment and mitigation plan [adaptable tool](https://allianceformalariaprevention.com/uploads/resources/Step4/ITN_SBD_Risk_Assessment_and_Mitigation_Plan_Adaptable_052025_EN.xlsx) (Excel) is available in conjunction with this guidance document. The plan includes common risks from country experiences of implementing SBD but should be revised for each country’s context and specific situation.

**Best practices for risk management in SBD**

* Involve stakeholders: consult with MoE personnel, sub-national education authorities, head teachers, community leaders and other relevant stakeholders to identify potential risks and develop appropriate mitigation strategies.
* Learn from past experiences: review any past ITN SBD distributions to identify lessons learned and potential pitfalls.
* Be flexible and adaptable: be prepared to adjust plans as circumstances change.
* Document everything: maintain detailed records of all activities, including risk assessments, mitigation strategies and monitoring data.

**Country resources**

* Example of risk assessment and mitigation plans from Ghana, Zambia and Tanzania