

# Emergency Response Medical Logistics Operational Toolkit

**Emergency Response Medical Logistics Operational Tool**  
[Medical Logistics Toolkit for use in Emergency Contexts](#)

## I. Introduction and background

Medical Logistics refers to the logistics processes of pharmaceuticals, medical devices and medical equipment. On top of traditional logistics considerations, medical logistics focuses on the additional management requirements and restrictions to ensure a product can be distributed efficiently while ensuring the product quality is maintained to the user. Compared to traditional logistics, In Medical Logistics there are critical differences in:

- Administrative and regulatory requirements to handle and move goods across and within national borders
- Conditions for storage and transport in line with WHO Good Storage and Distribution Practices
- Processes for inventory management aimed at avoiding expiry
- Processes for waste management in line with National and International medical waste management protocols
- Requirements and processes for safeguarding the risk of misuse
- Product Recall tracking and implementation
- Pharmacovigilance oversight

### A. Medical Logistics In Emergencies

An emergency can impact the pre-existing logistics infrastructure in a country, in a number of ways. These potential bottlenecks must be considered, and mitigation measures should be put in place to enable medical supplies to reach the end-user:

- Physical damage to, or disruption of, essential infrastructure
- Closure of essential infrastructure (e.g. ports, roads)
- Decreased national government capacity and disruption to national systems
- Multiple government/non-government controlled actors
- Decreased capacity of the private sector
- Reallocation of assets or restrictions related to military intervention
- Lack of physical assessment, including checkpoints and frontlines
- Increased insecurity for staff and infrastructure
- Reduced fuel availability or increased costs
- Lack of personnel to manage goods
- Increased bureaucratic bottlenecks
- Increased demand for limited assets and services
- Blockades or embargos

The goal of logistics in emergencies is to physically move supplies as close as possible to the people in need, overcoming physical or bureaucratic barriers, while maintaining the quality of items. Logistics is at the heart of any humanitarian operation and requires skilled experts and significant coordination with other humanitarian actors, national government and third party logistics providers.

In-country logistics includes a number of steps inclusive of the distribution of supplies down the supply chain, management of the goods at the last mile and reverse logistics where required. Due to the nature of medical goods, there are additional complexities related to temperature control, fragility, psychotropic and narcotics management, as well as dangerous goods management and legal requirements.

### *B. Quality Risk Management for Medical Supply Distribution in Emergencies*

Quality Risk Management is the process of assessing, identifying, and mitigating potential risks to product quality. It is particularly essential in the medical supply industry, where poor quality products can affect the health and safety of populations.

#### Quality Assurance - The key to do-no-harm and saving lives

One of the six rights of logistics is getting the products in the right quality to the end user. Ensuring sufficient quality risk management measures in logistics, is critical to ensure that the commodities are safe for the recipient and have the desired impact. Maintaining quality of medical commodities is particularly important, as poor quality medicines can pose a direct risk to the life of affected populations, violating the principle of “do no harm” and posing a direct risk to operational effectiveness and reputation of humanitarian actors.

At the same time, maintaining the quality of medical supplies while operating in a complex humanitarian emergency is particularly challenging. While gold standards exist,<sup>1</sup> meeting these standards in emergencies can be challenging or even impossible. It is up to all humanitarian health actors to understand the risks to supply quality, mitigate these risks with practical solutions, and take appropriate decisions, balancing the desire to implement programming against the ability to safely deliver health supplies while maintaining do-no-harm.

As humanitarian actors delivering supplies in an emergency, we are trusted by the populations we serve, and the government where we are responding, to provide high quality supplies which do not pose added risk to affected communities. In emergencies this is even more essential, as the capacity for government oversight and pharmacovigilance is likely impacted by the emergency. Health actors have an obligation to do everything within its power to maintain the quality of supplies which are used to save lives in already devastating circumstances.

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<sup>1</sup> WHO Good Storage and Distribution Practices

## II. Interagency Coordination in Medical Logistics

Whether delivering supplies for nutrition, health, or food the main considerations for logistics needs and bottlenecks in humanitarian settings are universal. By working together across actors, we can better utilize limited resources and the expertise and experience of different partners for the benefit of all. This can improve operational efficiency, increase access to essential assets, reduce costs, and enable interoperability of interventions among partners. It is essential to remember that coordination for the sake of coordination is not the objective. The aim of coordination is to improve an organisation's capacity to deliver, and the overall access of affected population to quality lifesaving services in an emergency.

Clusters or sectors are often divided between “Programme” and “Service”. Programme Clusters/Sectors are focused on the coordination of service delivery based on programmatic response areas (Health, Nutrition, Water-Sanitation and Hygiene including waste management (WASH), CCCM, Shelter, Food Security, Protection, Education, Early Recovery). Service Clusters/Sectors are focused on the coordination of, and support to, operational needs which are preconditions to programme implementation (Logistics, Emergency Telecommunications). The Health Cluster or Sector and the Logistics Cluster/Sector are critical avenues for partners to work together on medical logistics and wider medical supply chain planning, implementation and problem solving, particularly in the early days of emergencies.

### A. Health Cluster/Sector

The work implemented across the programmatic clusters, including the health cluster aims to ensure that partners are delivering in coordination to avoid duplication and gaps, to implement the same standards and work together for wider strategic impact. When looking at SCM this includes “Who” is delivering “What”, “Where” and “How Much”. As many different actors will be bringing in medical supplies to deliver their programming within their mandates, ensuring this coordination is essential to better utilize limited resources and the expertise and experience of different partners for the benefit of all. This can improve the overall impact of the humanitarian response, ensure medical supplies are filling the demonstrated gaps, raise awareness on supply gaps that no one is fulfilling, ensure common standards to ensure quality and consistency of interventions to meet minimum standards, and enable interoperability of interventions among partners.

The health cluster/sector can be an avenue for engagement with other health supply partners on specific technical issues which are impacting multiple partners, or can be better addressed as among a community of partners. In some responses a health supply or health logistics working group may be established to facilitate this engagement.

### B. Logistic Cluster

At its core, the Logistics Cluster is a community of partners. It supports humanitarian entities abiding by the core humanitarian principles to alleviate logistics constraints impeding the delivery of humanitarian assistance. In certain humanitarian crises, depending on the needs and capacity of actors, the logistics cluster may be officially activated by the IASC. Where not activated, or in a refugee context, a logistics sector or national logistics working group may operate to ensure effective coordination. Logistics cluster/sector operations in-country provide a formal place for partners to work together, share critical information and collaborate in optimized common services. Activated Logistics cluster operations usually support partners by facilitating coordination, information management and access to common services as a last resort. In other crises, while official activation may not be recommended for different reasons, a “logistics sector” may be established to facilitate coordination and information sharing.

The general objective of services made available through the Logistics Cluster is to facilitate timely access to logistics assets, storage and other services, in order to ensure an uninterrupted supply chain of life saving relief items to affected populations during an emergency. The services facilitated by the Logistics Cluster are temporary, limited to a specific period of time, with the possibility of further extension should the emergency situation persist.

The logistics cluster/sector can be an avenue for engagement with other logistics actors and medical logistics practitioners on finding concrete solutions to logistics gaps and bottlenecks which may be impacting a multitude of actors, or of which other actors have already identified solutions. It is critical that health actors engage in logistics clusters/sectors to ensure that information and services take into consideration the unique requirements or medical supplies. In some responses a Medical Logistics working group may be established to facilitate this engagement.

### III. Emergency Response Medical Logistics Operational Toolkit: Purpose and Audience

There are a number of published reports and guidelines focusing on the quality assurance and quality risk management of medical supplies, however these are complex, detailed, documents which are not designed to be applied within the operational restrictions of emergency response operations. Additionally, these guides are primarily targeting medical logisticians or health supply chain personnel. In emergencies, agencies may not have sufficient logistics staff with medical logistics-specific expertise, and may not have the financial or operational ability to hire staff and institute gold standard processes, particularly in the early days of emergencies.

This operational toolkit aims to provide practical guidance to support humanitarian actors to understand standards, assess key infrastructure and resolve potential gaps in quality assurance in last mile logistics distribution in emergencies. The toolkit takes the operational distribution models and common challenges experienced in logistics management in emergencies, and proposes key potential solutions to address identified gaps within the framework of a coordinated response.

The solutions proposed in this toolkit range from those requiring significant financial investment, time and access, to those which can be implemented as a last resort when the ability to implement the proper solutions is impeded due to operational or financial constraints.

**It is critical** to note that while the **solutions offered in this toolkit aim to mitigate risks** in different operational environments, **It is essential that humanitarian actors work to ensure full compliance to WHO Good Storage and Distribution Practices**, and national regulatory and oversight standards to avoid harm to populations and ensure lifesaving quality service provision.

This Toolkit, developed in collaboration with humanitarian health partners, compiles relevant documents of good practices and standards in medical logistics in emergency response in a digestible, and easy to use format. The toolkit will consist of a compilation of checklists summarizing key documents and intuitive tools and is intended to be used at the field level by field office staff dedicated to the supply chain and logistics.

### *How to Use the Toolkit*

The tool goes through critical aspects of each step in the logistics process and focuses only on the aspects which specifically impact or are different for medical logistics processes. Standards and Tools Consolidated. The toolkit considers the critical steps in logistics for medical supplies in emergencies:

1. Importation and Customs Clearance
2. Warehousing
3. Transportation
4. Pharmacy Management
5. Waste Management

In each step of the logistics process the toolkit aims to support the identification of risks, provides a brief explanation of risks for non-specialised logistics staff, links practical tools and resources to support, identifies likely bottlenecks or causes of risks and offers practical suggestions for mitigating the impact or address the causes of the risks.

**The toolkit does not reference** specific organizational rules, regulations, or operational modalities; focusing instead on good practices and tools to help solve problems which may be identified for non-specialised or specialized logistics staff operating at the last mile.

Each section of the tool breaks down assessment questions or observations, explanations, links standards or operational tools, indicates the types of possible gaps or bottlenecks and indicates the variety of solutions which may be implemented.

Standards and Guidelines	Link to the document
MSF - Organization and management of a pharmacy	<a href="https://medicalguidelines.msf.org/en/viewport/EssDr/english/organization-and-management-of-a-pharmacy-16688159.html">https://medicalguidelines.msf.org/en/viewport/EssDr/english/organization-and-management-of-a-pharmacy-16688159.html</a>
WHO - <i>Safe management of wastes from health care activities</i> . Second Edition. 2014	<a href="https://www.who.int/publications/i/item/9789241548564">https://www.who.int/publications/i/item/9789241548564</a>
WHO - Guidelines for safe disposal of unwanted pharmaceuticals in and after emergencies	<a href="https://www.who.int/publications/i/item/guidelines-for-safe-disposal-of-unwanted-pharmaceuticals-in-and-after-emergencies">https://www.who.int/publications/i/item/guidelines-for-safe-disposal-of-unwanted-pharmaceuticals-in-and-after-emergencies</a>
UNFPA - Stock cards model	<a href="#">Stock Card.docx</a>
JSI - The Supply Chain Manager's Handbook	<a href="https://supplychainhandbook.jsi.com/">https://supplychainhandbook.jsi.com/</a>
WHO - Model Lists of Essential Medicines	<a href="https://www.who.int/groups/expert-committee-on-selection-and-use-of-essential-medicines/essential-medicines-lists">https://www.who.int/groups/expert-committee-on-selection-and-use-of-essential-medicines/essential-medicines-lists</a>
JSI - Guidelines for the Storage of Essential Medicines and Other Health Commodities	<a href="https://pdf.usaid.gov/pdf_docs/PNACX331.pdf">https://pdf.usaid.gov/pdf_docs/PNACX331.pdf</a>
FIP - Supporting pharmacists and the pharmaceutical workforce in a humanitarian arena	<a href="https://www.fip.org/file/51303">https://www.fip.org/file/51303</a>
Pharmacy Setup and Management in the Humanitarian Context	<a href="https://books.google.ch/books?hl=en&amp;lr=&amp;id=2wY8EAAAQBAJ&amp;oi=fnd&amp;pg=PA267&amp;ots=bU5YphlScU&amp;sig=6v0tqqFlj6Aoe3TxE_hOj6XDh2k&amp;redir_esc=y#v=onepage&amp;q&amp;f=false">https://books.google.ch/books?hl=en&amp;lr=&amp;id=2wY8EAAAQBAJ&amp;oi=fnd&amp;pg=PA267&amp;ots=bU5YphlScU&amp;sig=6v0tqqFlj6Aoe3TxE_hOj6XDh2k&amp;redir_esc=y#v=onepage&amp;q&amp;f=false</a>
MSF - Essential drugs: Practical guide intended for physicians, pharmacists, nurses and medical auxiliaries	<a href="https://medicalguidelines.msf.org/viewport/EssDr/english/essential-drugs-16682376.html">https://medicalguidelines.msf.org/viewport/EssDr/english/essential-drugs-16682376.html</a>
USAID - Quantimed: Pharmaceutical Quantification and Cost Estimation Tool	<a href="https://www.usaid.gov/global-health/health-systems-innovation/health-systems/strengthening-pharmaceutical-systems">https://www.usaid.gov/global-health/health-systems-innovation/health-systems/strengthening-pharmaceutical-systems</a>
Model Guidelines for the International Provision of Controlled Medicines for Emergency Medical Care	<a href="#">Model guidelines for the international provision of controlled medicines for emergency medical care (who.int)</a>
Guidelines for medicine donations	<a href="#">Guidelines for medicine donations, revised 2010 (who.int)</a>
Medical device donations	<a href="#">Medical device donations: considerations for solicitation and provision (who.int)</a>
Medical Logistics Management in Emergencies Repository	<a href="https://docs.google.com/spreadsheets/d/1LVZdY4P5UpTXcaJ9QZbnMnhR6o2OeeyOxapta4bNwhA/edit#gid=0">https://docs.google.com/spreadsheets/d/1LVZdY4P5UpTXcaJ9QZbnMnhR6o2OeeyOxapta4bNwhA/edit#gid=0</a>