

# Managing Health Supply Chains

“ Well-supplied health programs can provide superior service, while poorly supplied programs cannot. Likewise, well-supplied health workers can use their training and expertise fully, directly improving the quality of care for clients. [...] An effective logistics system helps provide adequate, appropriate supplies to health providers, increasing their professional satisfaction, motivation, and morale. Motivated staff are more likely to deliver a higher quality of service”

[\(USAID - Logistics Handbook, A Practical Guide for the Supply Chain Management of Health Commodities\)](#)

## Common Terms in Health Supply Chain

<b>Set Point</b>	The exact temperature refrigerated transport containers or storage containers are set at to accommodate the temperature control needs of the anticipated health commodities.
<b>GXP/GDP</b>	A set of standards for all supply chain actors involved to work with a common objective of ensuring product quality safety and efficacy when delivered to patients.
<b>Excursion</b>	Any variation above or below expected or accepted temperature ranges during the act of transporting, storing, or otherwise handling a healthcare item.
<b>Cold Chain</b>	The act of maintaining a set temperature across storage and transport throughout the entire supply chain, to ensure that temperature.
<b>Temperature Monitoring</b>	The act of continually monitoring the temperature of health items while in storage and transport.
<b>FEFO</b>	“First Expired / First Out” – A method of ensuring that the items closest to expiration are distributed and used first. FEFO is common practice in supply chain management of health items.
<b>Recall</b>	When a manufacturer or central health authority recalls specific health items, usually based on batch or production runs. Recalls impact all aspects of the health supply chain.
<b>Medical Waste</b>	Expired medication, used medical consumables, or any byproduct of medical activity that requires exceptional or specialized management.
<b>Reefer Container / Truck</b>	A truck or a container that has specialized, on board refrigeration capacity, including self-contained energy sources.
<b>Passive System</b>	Any system that maintains a temperature-controlled environment inside an insulated enclosure using a finite amount of preconditioned coolant in the form of chilled or frozen gel packs, dry ice, or others.

<b>Active System</b>	Externally powered or on-board powered systems using electricity or another fuel source to maintain a temperature-controlled environment. Common in cold rooms, refrigerators, temperature-controlled trucks, refrigerated ocean and air containers.
<b>Refrigeration Equipment</b>	Any equipment whose purpose is to lower air and product temperatures and/or to control relative humidity.
<b>Temperature-Controlled</b>	Any environment in which the temperature is actively or passively controlled at a level different from that of the surrounding environment within precise predefined limits.
<b>Datalogger</b>	Any device used to log temperatures of cartons or health items on an ongoing basis.

## Responding to Health-Related Needs in Humanitarian Emergencies

When a humanitarian emergency occurs, the local health system may not easily cope with the increased demand for health services. The prevalence of high morbidity, epidemics, pockets of inaccessible populations, or simply new pockets of high population density, may require increasing the provision of health services.

Additional health services may be translated in different logistics activities; upgrading or extending existing health facilities, building temporary or semipermanent structures, provision of health products, dealing with medical wastes, urgent transfer of patients between different service levels or transport of samples to reference laboratories.

In all these cases, it must be considered that health services fall under the responsibility of local health authorities. Coordination and alignment with existing systems is therefore of paramount importance.

### Regular health services provision and Health Care Supply Chains

Regular health service provision is often divided in different levels of care, referring to the complexity of the medical cases doctors treat and the skills and specialties of the providers. Levels are often divided into three or four categories:

- **Primary Care** - When a patient consults with your primary care provider.
- **Secondary Care** - When patient sees a specialist such as a traumatologist or endocrinologist.
- **Tertiary Care** - Specialized care in a hospital setting such as dialysis or heart surgery.

The health service package offered at a given level, including standardised treatment for specific diseases is usually harmonised across a given country or state. The selection of pharmaceutical products involves reviewing the prevalent health problems, identifying treatments of choice, choosing individually needed medicines and dosage forms, quantifying the medicine requirements, and deciding which medicines will be made available at each level of the health care system. The number and type of health facilities that will offer specific levels of care is normally linked with demographics. This normalisation across geography, demographics, and treatments, helps planning and designing the Health Supply Chains.

Most of public health supply chain networks operate as a centralised system, where a central medical store receives health products from manufacturers, and regularly supplies it downstream to several regional medical stores, while regional medical stores will supply subregional medical stores which will supply to hospitals and health centres in the subregion. The number of distribution levels will also depend on geography, demographics, and political divisions.

In some countries, vertical programs, or disease specific programs such as nutrition, malaria, HIV-AIDS or TB, may have a dedicated supply pipeline and parallel logistics systems. This is because, historically, they often have separate standard operating procedures, different funding sources or distribution channels managed by separate administrative units. Recently many countries have moved toward product integration, combining the management of some or all logistics functions for different commodity categories (- like family planning, HIV, malaria, and TB - into a shared supply chain.

All the considerations above said must be measured by humanitarian agencies when responding to health needs in emergencies.