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PHARMACEUTICAL LOGISTICS

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Pharmaceutical logistics is a specialized branch of logistics that involves the management and optimization of the movement of medical preparations, pharmaceuticals, medical equipment, and other pharmaceutical products from the manufacturer to the end consumer or healthcare facility. The main goal of pharmaceutical logistics is to ensure uninterrupted and efficient supply of medicines and medical goods, adherence to quality standards, safety, and compliance with regulatory requirements in this sensitive industry.

The main aspects of pharmaceutical logistics include:

- **Temperature Control:** Monitoring and transportation of pharmaceutical products according to defined temperature standards to ensure their quality and effectiveness.
- **Inventory Management:** Accurate determination of pharmaceutical product needs to avoid overstocking or shortages.
- **Batch Tracking and Quality Control:** Systems for tracking each batch of pharmaceutical products and ensuring high standards of quality and safety.
- **Safety and Compliance:** Adherence to all regulatory requirements and safety standards in the pharmaceutical industry.

- Delivery Efficiency: Fast and efficient delivery of medical preparations to all parts of the supply chain.

This logistics sector has unique requirements as pharmaceutical products often have limited shelf life and require special attention to details at all stages of their movement from the manufacturer to the patient.

In Ukraine, the transportation and storage of medicinal products are regulated by several key legislative acts and regulatory documents. Here are some of the main ones:

1. Law of Ukraine "On Medicinal Products" (dated April 4, 1996, No. 123/96-VR):

- Defines the legal and organizational principles of the circulation of medicinal products, including their transportation and storage.

2. Order of the Ministry of Health of Ukraine "On Approval of the Procedure for Conducting Tracing of Medicinal Products" (dated November 30, 2018, No. 2553):

- Establishes requirements for tracing medicinal products, including aspects related to their transportation and storage.

3. Resolution of the Cabinet of Ministers of Ukraine "On Approval of the Procedure for Quality Control of Medicinal Products, Conducting Hardware Tracing of the Circulation of Medicinal Products" (dated August 31, 2016, No. 595):

- Defines the procedure for quality control of medicinal products and hardware tracing of their circulation, which may include aspects of transportation and storage.

4. Resolution of the Cabinet of Ministers of Ukraine "On Approval of the Regulations on the State Service of Medicines and Control over Narcotics" (dated March 7, 2018, No. 180):

- Specifies the competencies and duties of the State Service of Medicines, including oversight of the transportation and storage of medicinal products.

5. Resolution of the Cabinet of Ministers of Ukraine "On Approval of the Rules of Good Practice in the Production of Medicinal Products" (dated October 1, 2010, No. 996):

- Contains requirements for the production, quality control, and circulation of medicinal products, including their transportation and storage.

These legislative acts and regulations set the standards and requirements for logistics in the field of medicinal products in Ukraine.

Documentation for cargo, especially when transporting medicinal products, is crucial for ensuring safety and compliance with regulations. Here are key elements that may be included in such documentation:

1. Accompanying Documents:

- Waybill: Contains information about the cargo, its characteristics, quantity, manufacturer, and other essential data.
- Declaration of Conformity: Confirms the compliance of medicinal products with regulatory requirements and quality standards.
- Transportation Permit: Indicates that the transportation of medical products complies with legislative requirements.

2. Carrier's Personal Documents:

- License for the Transportation of Medicinal Products: Confirms the right to transport medical preparations and indicates compliance with legislative requirements.
- Qualification Certificate: Indicates the competence of the carrier in performing their duties.

3. Instructions and Recommendations:

- Temperature Regime Instructions: Guidance on the storage and transportation of medicinal products under specified temperature conditions.
- Quality Control Protocols: Documentation on quality control of the cargo and compliance with standards.

4. Contact Information:

- Manufacturer's Contact Information: Allows contacting the manufacturer in case of questions or issues with the cargo.
- Emergency Contacts: Contact information for emergencies and prompt issue resolution.

This documentation helps ensure a high level of safety and compliance with requirements at all stages of transporting and handling medicinal products.

Vehicles that carry medical supplies need to follow some important rules to keep the supplies safe and deliver them properly. Here are the main rules:

- **Keep the Right Temperature:** Vehicles must be able to keep the medical supplies at the right temperature. This is very important, especially for medicines that need to stay cool or warm.
- **Protect the Supplies:** Vehicles should have systems to protect the medical supplies from getting damaged if the vehicle bumps into something.
- **Keep Things Clean:** Vehicles need to be kept clean so that the medical supplies don't get dirty and stay safe to use.
- **Stay Safe:** Vehicles should have locks and cameras to make sure nobody can steal the medical supplies.
- **Follow the Rules:** Drivers and companies that transport medical supplies must follow all the laws and get the right permissions.

These rules make sure that medical supplies stay safe during transport, which is really important for the people who need them.

Requirements for packaging and containers during the transportation of pharmaceuticals are determined by the need to ensure their integrity, stability, and effectiveness during transit. Key aspects include:

1. **Airtightness and Protection from External Influences:**

- Pharmaceuticals should be packaged in airtight containers or blister packs to prevent contamination or the influence of moisture.
- The use of waterproof and light-resistant materials for packaging.

2. **Temperature Control and Maintaining Optimal Conditions:**

- For products requiring specific temperature conditions, thermally insulated containers and packages are used to maintain optimal conditions.
- The use of special insulating materials to protect against temperature changes during transportation.

3. **Dosing Containers for Convenience:**

- Pharmaceuticals for oral consumption are often supplied in dosing containers or bottles with dispensers for precise dosage.

4. Protection from Shocks and Mechanical Damage:

- The use of shock-absorbing materials, such as polystyrene or air cushions, to protect against shocks and damage during transportation.

5. Instructions and Documentation:

- Clear instructions and accompanying documents with the cargo containing important information on storage conditions, usage, and emergency measures.

6. Licensing and Compliance:

- Compliance of the packaging with all licensing and regulatory requirements for the transportation of pharmaceuticals.

During the transportation of medicinal products, it is important to consider the following aspects of labeling:

1. Identification and Tracking: Unique identifiers, such as barcodes or QR codes, for precise identification and tracking of goods throughout the entire logistics chain.

2. Dosage and Instructions: Clear indication of dosage and detailed instructions for the use of the medicinal product.

3. Temperature Control Labeling: Indication of temperature conditions for storage to ensure the stability of the medicines.

4. Manufacturing Date and Expiry Date: Importance of clear information on the manufacturing date and expiry date to prevent the use of expired drugs.

5. Manufacturer Information: Manufacturer's name and contact information for quick communication if needed.

6. License Data: Information on the manufacturer's license and other regulatory details.

7. Safety Measures and Warnings: Information on possible side effects, warnings, and other important safety aspects.

8. Country of Origin: Specification of the country of origin to comply with regulatory requirements.

These labeling elements help ensure the quality and safety of medicinal products during their transportation, which is especially crucial in the logistics of medical preparations.