



Guidance on regulations  
for the

**transport of  
infectious  
substances 2019–  
2020**

Applicable from 1 January 2019



Country Health Emergency  
Preparedness & IHR

## WHO/WHE/CPI/2019.20

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## ABBREVIATIONS AND ACRONYMS

ADR	European agreement concerning the international carriage of dangerous goods by road
CAO	cargo aircraft only
DGD	dangerous goods declaration
DGR	dangerous goods regulations
DGTD	dangerous goods transport document
EDI	electronic data interchange
EDP	electronic data processing
GMO	genetically modified organism
GMMO	genetically modified microorganism
IAEA	International Atomic Energy Agency
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
RID	International carriage of dangerous goods by rail
SOLAS	Safety of Life at Sea
UN	United Nations
UNCETDG	United Nations Committee of Experts on the Transport of Dangerous Goods
UPU	Universal Postal Union
WHO	World Health Organization

## SECTION 1: TRANSPORT REGULATIONS

### 1.1 INTERNATIONAL REGULATIONS

Work with biological agents plays a key role in the detection and prevention of outbreaks of emerging and highly infectious disease, and in the reduction of other risks to international health security. Such work includes diagnostic activities, biomedical research and pharmaceutical manufacturing. Facilities handling biological agents have a responsibility to ensure that biological agents are identified, and safely stored and controlled in adequately equipped facilities, according to best practices.

While materials containing biological agents are being transported, there is the possibility of exposure for the people and the environment through which the material passes. To appropriately control and reduce this risk, various international groups have developed recommendations or regulations (or both) that outline the way in which infectious substances should be packaged, marked, labelled and documented, to ensure safety and containment throughout the transport process.

One of the most widely known and referenced set of recommendations is the “Recommendations on the transport of dangerous goods – model regulations (20th revised edition)” (referred to here as the “UN model regulations”). These recommendations are made by the United Nations (UN) Committee of Experts on the Transport of Dangerous Goods (UNCETDG), a committee of the United Nations Economic and Social Council that comprises expert advisors from various countries, nongovernmental organizations and specialized agencies, including World Health Organization (WHO) representatives. The recommendations are continuously reviewed, in 2-yearly cycles, and are updated by the committee in light of technical progress, the introduction of new substances or materials, modern pressures on transport systems, and emerging safety requirements for people, property and the environment.

The UN model regulations provide a minimum set of provisions to follow, to safely transport any dangerous goods, including infectious substances. The aim of using this set of provisions as a basis across various national and international regulations is to provide conformity and harmonization across them all. However, the UN model regulations provide a certain degree of flexibility, so that the basic regulations may be adapted to fit local needs and special requirements for overcoming barriers in transport. Adapted versions may then be adopted by governments or international organizations as mandatory or legally binding regulations for the transport of dangerous goods. The subsequent implementation of, and compliance with, adopted regulations may be overseen by independent bodies or national authorities, as designated by the relevant governing body.

### 1.2 MODAL AGREEMENTS

Although the UN model regulations are general enough to cover all modes of transport, they are most commonly reflected in international law through international modal agreements, which adapt and publish guidelines or regulations specialized for a specific mode of transport. Some of the most common modal agreements for the transport of dangerous goods are described in Table 1.1. References and online links to these agreements can also be found in [Annex 1](#) of this document.

**Table 1.1. A summary of the modal agreements containing relevant dangerous goods regulations.**

Mode of transport	International modal agreements
Air	<p>The <i>Technical instructions for the safe transport of dangerous goods by air</i> (referred to here as the “ICAO technical instructions” – ICAO being the International Civil Aviation Organization) are a detailed set of instructions deemed necessary for the safe international transport of dangerous goods by air. Published by ICAO, these legally binding international regulations apply on all international flights. They are regularly reviewed and updated based on comments received from states and interested international organizations, including WHO, or based on recommendations of the UNCETDG or the International Atomic Energy Agency (IAEA).</p> <p>The International Air Transport Association (IATA) also publishes dangerous goods regulations (DGR) that incorporate the ICAO provisions, and may add further restrictions stemming from operational considerations. DGR also present state and operator variations. The IATA DGR are applicable to its members and some other airlines, as well as all shippers and agents that offer consignments of dangerous goods to these operators.</p> <p>For national flights (i.e. those within one country), national civil aviation authorities may apply national legislation. This is normally based on the ICAO provisions, but may incorporate variations. State and operator variations are published in both the ICAO technical instructions and in the IATA DGR.</p>
Rail	<p><i>International carriage of dangerous goods by rail</i> (RID) is a set of regulations created by the Intergovernmental Organisation for International Carriage by Rail (OTIF). These regulations apply to countries in Europe, the Middle East and North Africa, and to domestic transport in the European Union through Council Directive 2008/68/EC.</p>
Road	<p>The <i>European agreement concerning the international carriage of dangerous goods by road</i> (ADR) applies to 49 countries. In addition, modified versions of the convention are being used by countries in South America and South-East Asia. ADR also applies to domestic transport in the European Union through Council Directive 2008/68/EC.</p>
Sea	<p>The <i>International maritime dangerous goods code</i> is published by the International Maritime Organization (IMO). It is of mandatory application for all contracting parties to the International Convention for the Safety of Life at Sea (SOLAS).</p>

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