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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 43999-2024

**Technical requirements for transfer equipment for emergency
respiratory infectious disease patients**

应急呼吸道传染病患者转运设备技术要求

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Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting: Please note that some of the contents of this document may involve patents: The issuing organization of this document does not assume the responsibility for identifying patents: This document was proposed and coordinated by the National Technical Committee for Cleanrooms and Related Controlled Environments (SAC/TC319): This document was drafted by: Institute of Medical Support Technology, Institute of Systems Engineering, Academy of Military Sciences, Chinese Center for Disease Control and Prevention, China Standardization Association, Shenzhen Ruili Medical Technology Co., Ltd., Beijing Aerospace Control Instrument Research Institute, Chinese Center for Disease Control and Prevention Institute of Viral Disease Prevention and Control, Tianjin University, PLA Air Force Special Medical Center, Ministry of Transport Water Transport Research Institute, Shanghai Municipal Public Security Bureau Public Health Clinical Center, Beijing Dyna Experimental Technology Co., Ltd., China Electronics Engineering Design Institute Co., Ltd., West China Hospital of Sichuan University, China Electronic System Engineering Second Construction Co., Ltd., Zhejiang Geely New Energy Commercial Vehicle Group Co., Ltd., China Electronic System Engineering Fourth Construction Co., Ltd., Jiangxi Jiangling Motors Group Modified Vehicle Co., Ltd., Tianjin Changte Purification Technology Co., Ltd., CSSC Haishen Medical Technology Co., Ltd: Co., Ltd., Beijing Ditan Hospital Affiliated to Capital Medical University, Fuxing Hospital Affiliated to Capital Medical University, Wuxi Kebiao Sealing Protection Technology Co., Ltd: Shanghai Indoor Environment Purification Industry Association, Beijing Foton Motor Co., Ltd., the Fifth Medical Center of the PLA General Hospital, Jiangsu Dashi Jiuxin Medical Technology Co., Ltd., Hubei Hangyu Jiatai Aircraft Equipment Co., Ltd., Hebei Shouli Technology Co., Ltd., Tianjin Haihe Hospital, Shenzhen Medcaptan Biomedical Technology Co., Ltd., Xiamen Jingshi Environmental Protection Technology Co., Ltd., Jiangsu Shuoshi Biotechnology Co., Ltd: company: The main drafters of this document are: Qi Jiancheng, Cao Jingui, Zhang

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1 Scope

GB/T 43999-2024 sets the technical requirements for equipment used to transfer patients with respiratory infectious diseases in an emergency. The transfer isolator has to do two contradictory things at once: keep a patient alive, ventilated and monitored, and keep the air around them from reaching the crew, over hours and sometimes aboard an aircraft. The negative pressure has to hold while the unit is carried, tilted and loaded, the filters have to be changed without exposing anyone, and the whole assembly has to be decontaminated afterwards. The standard sets the requirements and the inspection methods and the labelling, packaging, transport and storage provisions, with a normative annex giving the aviation adaptability requirements for units to be carried on civil aircraft. It took effect on 1 November 2024.

This document specifies the requirements, inspection methods, marking, packaging, and inspection methods of emergency respiratory infectious disease patient transport equipment (hereinafter referred to as "transport equipment"): Packaging, transportation and storage: This document applies to the design guidance, labeling, acceptance and application of emergency respiratory infectious disease patient transport equipment:

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document: For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document:

GB/T 191 Packaging, storage and transportation signs

GB/T 13554-2020 High efficiency air filter

GB 19489-2008 General requirements for laboratory biosafety

GB/T 35428-2017 Environmental control requirements for negative pressure isolation wards in hospitals

GB 50591-2010 Clean room construction and acceptance specifications RB/T 009-2019

General requirements for evaluation of high-efficiency air filtration devices WS/T 292-2008

Ambulance CCAR-25-2016 China Civil Aviation Regulations Part

25 Airworthiness Standards for Transport Category Aircraft CCAR-121 Civil Aviation Regulations of China Part 121 Large Aircraft Public Air Transport Carrier Operation Certification Rules CTSO-C114 Safety belt CTSO-2C605 Portable Oxygen Cylinder Assembly

3 Terms and definitions

The following terms and definitions apply to this document: 3:

1 Bioaerosol A stable dispersion system formed by solid or liquid particles containing biological components suspended in a gas medium:

Note: Biological components include bacteria, viruses, fungi, spores, toxins, etc: The particle size of bioaerosol is between 0.01 μm and 100 μm : [Source: GB/T 38517-2020, 3:7] 3:

2 Isolation Use biosafety protection methods and measures such as physical sealing and negative pressure control to isolate patients in the infectious period, suspected patients or pathogens Carriers are separated from the rest of the population to prevent the spread of the pathogen: