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Dentistry — Portable dental equipment for use in non-permanent healthcare environments —

Part 1: General requirements

Médecine bucco-dentaire — Matériel dentaire portatif utilisable dans des environnements de soins de santé non permanents —

Partie 1: Exigences générales

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Foreword

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This document was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 6, *Dental equipment*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 55, *Dentistry,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 23402-1:2020), which has been technically revised.

The main changes are as follows:

— 5.2.6, 5.2.7 and 5.2.8 have been updated to specify requirements for impact, drop and vibration according to the classification for exposure during transport;

— 5.4.4 has been added;

— 8.3, list item e), 8.3, list item f) and 8.3, list item g) have been added to include classification level for drop height and classification level for rough road transport distance;

— general editorial updates have been made.

A list of all parts in the ISO 23402 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Transportable dental equipment is used by dental professionals to provide care to patients in a variety of settings. Because the intended use applications and intended means for transporting such equipment vary considerably, a wide variety of transportable dental equipment is commercially available. For example, certain transportable equipment is designed and constructed to be carried or rolled on its own wheels between rooms within a healthcare facility, while other transportable dental equipment is made to be folded and packed to carry over terrain which can be rugged and used in transient dental care settings which can have only limited shelter and utility services.

Transportable equipment that can be moved from one location to another while being carried by one or more persons is referred to as portable equipment. The term "portable equipment" applies to equipment that can be carried from room to room in a given facility or to remote parts of the world. This document focuses on portable dental equipment which is specifically designed and constructed to be transported between non-clinical environments and used by dental professionals to provide dental care in such settings, including temporary field clinics.

Such portable dental equipment for use in non-permanent healthcare environments enables dental professionals to provide a high standard of care to patients who do not have access to, or are not able to, travel to traditional health care facilities. Settings in which this equipment is commonly used include military field environments, humanitarian aid field clinics, public health outreach clinics, patient residences, long-term care facilities, prisons, schools and workplaces.

A number of trends in health care have driven increased utilization of portable dental equipment in non-permanent healthcare environments. Military forces use portable dental equipment in support of mobilized forces or for humanitarian outreach. A variety of government and non-government organizations are increasingly providing humanitarian dental care to underserved populations and populations affected by disasters. Civilian health care workers are also increasingly providing dental services to a growing population who are simply unable to visit traditional dental clinics due to age, disability or income. Academic and research bodies regularly conduct dental education programmes (e.g. dentistry, dental hygiene and dental assisting), particularly at external/off-site locations.

The transport and end-use conditions for portable dental equipment used in non-permanent healthcare environments drive certain unique requirements which generally do not apply to portable, mobile or stationary dental equipment used in traditional dental clinics or hospitals. Because portable equipment used in non-permanent healthcare environments is intended to be moved between venues, and in some cases carried over rugged terrain or in inclement conditions, it needs to be designed and constructed to be safely transported by humans without damage, be efficiently assembled and disassembled, and deliver reliable service at the point of use. Special consideration is given to the austerity of the environment in which the equipment can be used and the availability and quality of utility supplies (e.g. electrical power, water, compressed air). In order for the equipment to be sufficiently portable and capable of operating in extreme conditions, certain requirements for dental equipment intended for use in traditional clinical settings can be impractical and should be reconsidered for portable dental equipment for use in non-permanent healthcare environments. There can also be unique safety and infection control concerns to consider.

The ISO 23402 series aims to standardize requirements for portable dental equipment for use in non-permanent healthcare environments.