



**International  
Standard**

**ISO 21564**

**Health informatics — Terminology  
resource map quality measures and  
requirements (MapQual)**

**First edition  
2025-05**

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Published in Switzerland

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 215, *Health informatics*.

This first edition of ISO 21564 cancels and replaces ISO/TS 21564:2019, which has been technically revised.

The main changes are as follows:

- revision of verbal forms and update of the title to reflect the inclusion of requirements.

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](http://www.iso.org/members.html).

## Introduction

### 0.1 General

Healthcare organizations and software vendors are increasingly using maps to convert data from one code system to another. In the past, data in health information systems were largely used for organizations' administrative planning and decision making. Data captured in electronic health record (EHR) systems for patient care have a significant impact on patient safety. The use of these data as source of data for other purposes and for information exchange in clinical care through the use of information technology is an emerging problem. Where those data are translated through maps from one code system to another, the safety and quality issues associated with data use can be significant. The increasing use of maps is costly.

The objective of this work is to provide a method to quantify the quality and requirements for map sets to:

- a) establish standard quality conformance requirements for a map for a purpose;
- b) assess the quality of a map for a purpose;
- c) guide decision makers in map project requirements and processes;
- d) establish pathways to improvement.

Maps are widely used but the quality of these maps cannot be accurately and consistently assessed and compared against their intended use. It is not currently possible for decision makers to assess whether a map will be worth the cost of building and whether the scope and map processes will deliver a map which is able to meet the intended business case.

This document is based on ISO/TR 12300. Some terminological resources are so different in their content and purpose that it is not possible to produce a useful map. Therefore, it is possible that the decision maker needs to consider whether to map at all or to move to a new terminological resource.

Quality measures consider a wide range of requirements and processes relevant to the creation and maintenance of data maps and their use (including manual and tool-based mapping), as well as for the map sets delivered as a result of using that process.

### 0.2 Stakeholders and audience

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This document is focused on the needs of:

- a) implementers and software vendors developing and implementing maps sets;
- b) health information and data managers developing and using maps sets;
- c) data users such as researchers, government, decision makers;
- d) developers of map sets in mapping teams, including terminologists, coders, clinical users, epidemiologists and statisticians, project managers.

Additionally, the target audience for this document can include

- procurement officers who establish requirements of map product capacity and quality, or
- decision makers to determine and assess resources needed in projects and services associated with map creation, maintenance, or use.

### 0.3 Challenges of mapping

Today, maps are being used for a much broader range of use cases and the challenges of their use include the following.

- a) Map purpose — it is possible that a map built for one purpose does not suit use for other purposes. It is important to establish the purpose and use of a map at the beginning of a project to ensure the