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**Health Informatics — Terminology  
resource map quality measures  
(MapQual)**

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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)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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*.

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).

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# Introduction

## 0.1 General

Healthcare organizations and software vendors are increasingly using maps to convert data from one code system to another code system. In the past, data in health information systems was largely used for organizations' administrative planning and decision making. Data captured in Electronic Health Records (EHR) systems for patient care has a significant impact on patient safety. The use of this data as the source of data for other purposes and for information exchange in clinical care through the use of information technology is an emerging problem. Where that data is 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 support the definition of quality 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, and
- 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 upon ISO/TR 12300[1]. Some terminological resources are so different in their content and purpose that they will never map closely to a resource designed and structured differently. Therefore, the decision maker might need 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

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, and
- d) developers of map sets including all in mapping teams including terminologists, coders, clinical users, epidemiologists and statisticians, project managers.

Additionally, the target audience for this document might 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 produce, maintenance or use.

## 0.3 Challenges of mapping

Healthcare organizations and software vendors are increasingly using maps to convert data from one terminological resource to another terminological resource. In the past, data in health information systems was largely used for organizations' administrative planning and decision making.