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Session: Conducting research or supporting the research of other members of a research team

NLM Italian MeSH Translation: Revision and Expansion. A Changing Future

Alessandra Ceccarini ¹, [Maria Alessandra Falcone](#) ², Paola Ferrari ²

¹ Italian National Institute of Health, SIDBAE, Documentation Service, Rome, Italy

² Italian National Institute of Health, SIDBAE, Library, Rome, Italy
alessandra.falcone@iss.it

Background

The Istituto Superiore di Sanità (ISS) - Italian National Institute of Health - is a technical scientific organism of the Italian National Health Service. The ISS has been collaborating with the National Library of Medicine (NLM) of Bethesda (USA) since 1978. The Documentation Service is the NLM MEDLARS (MEDICAL Literature Analysis Retrieval System) Centre for Italy.

MeSH is the National Library of Medicine's thesaurus. It consists of sets of terms (*descriptors*) organized in a hierarchical structure allowing research at various levels of specificity. MeSH language is a relevant search instrument for users of biomedical and scientific subjects, and is considered a standard for special libraries like the ISS Library (www.iss.it/site/SebinaOpac/).

The ISS Library is specialized in scientific documentation in the field of biomedicine, it supports many important activities of the Institute and mainly deals with Italian laboratory researchers and university students.

The Italian MeSH translation

The Italian MeSH translation, originated from a collaboration between the NLM and the ISS Documentation Service, started in our Institute in 1998 and has been available since November 2004 on the ISS website (www.iss.it/site/mesh/index.aspx), thanks to its Data Management Service. It has been conceived to make the vocabulary easier for non-English users. They consider translated terms very helpful as all biomedical subjects, stored in our automated catalogue, are taken from the Italian MeSH translation. Almost 80% of the ISS Library subject headings derive from MeSH sources. The remaining 20% consists of specific terms belonging to different disciplines not included in the MeSH thesaurus.

The Italian MeSH translation was conceived in order to join NLM's Unified Medical Language System (UMLS); the project aimed to facilitate the development of computer systems able to understand the meaning of the language of biomedicine and health promotion.

The standardization of scientific language is also useful for Italian librarians in the field of semantic indexing and cataloguing as regards scientific documents and not a mere way of investigating the knowledge of medical terms. ISS semantic cataloguers, with a few exceptions, apply the same basic principles as those used by NLM indexers in assigning MeSH terms for the subject analysis of bibliographic materials, aiming at the construction of the traditional subject headings.

MeSH Italian translators have encountered various difficulties: different linguistic problems have been overcome, others came about during the revision of MeSH translated Italian terminology: new strategies are needed.

New working strategies

A new challenge was to translate the English synonyms, in order to permit multi-entry and easier access to information stored in the MeSH database, thanks to the effective collaboration, recently started, with the ISS Library semantic cataloguers.

The translation of synonyms (*non-preferred terms*) is a really demanding task, because some scientific English terms are becoming part of the Italian scientific language and cannot be properly translated, others have no exact Italian equivalent and terminology needs to be updated.

Furthermore, many English MeSH terms, among synonyms, have more meanings in Italian or haven't any correspondence whatsoever.

The MeSH thesaurus is concept-structured, each record consists of one or more concepts, and each concept of one or more synonymous terms (tab. I).

National Library of Medicine - Medical Subject Headings

2007 MeSH

MeSH Descriptor Data

[Return to Entry Page](#)

Concept View. [Go to Standard View](#)

Expanded Concept View. [Go to Standard Concept View](#)

MeSH Heading	Keratotomy, Laser		
Tree Number	E04.416.237		
Concept 1 (Preferred)	Keratotomy, Laser		
	Concept UI	M0463128	
	Scope Note	Application of laser techniques (LASERS) to reduce or reshape the CORNEA to correct REFRACTIVE ERRORS of the EYE , such as MYOPIA and ASTIGMATISM .	
	Semantic Type	T061 (Therapeutic or Preventive Procedure)	
	Term (Preferred)	Keratotomy, Laser	
		Term UI	T579367
		Date	26-MAR-2004
		Lexical Tag	NON
		Thesaurus	NLM (2005)
	Term	Laser Keratotomy	
		Term UI	T579368
		Date	26-MAR-2004
		Lexical Tag	NON
		Thesaurus	NLM (2005)
	Term	Photokeratotomy	
		Term UI	T056342
Date		05-JAN-1995	
Lexical Tag		NON	
Thesaurus		NLM (1996)	
Term	Photorefractive Keratotomy		

		Term UI	T579616
		Date	29-MAR-2004
		Lexical Tag	NON
		Thesaurus	NLM (2005)
Allowable Qualifiers	<u>AE CL CT EC ED ES HI IS LJ MO MT NU PX RH SN ST TD UT VE</u>		
Previous Indexing	<u>Cornea/surgery</u> (1987-2004)		
Previous Indexing	<u>Laser Surgery</u> (1987-2004)		
History Note	2005; for PHOTOKERATECTOMY use KERATECTOMY, PHOTOREFRACTIVE, EXCIMER LIASER 1996-2004		
Date of Entry	20040707		
Unique ID	D048988		

Tab. I
MeSH Descriptor Data

Preferred terms and their synonyms listed under Concept 1 are translated first. However, any other Italian term is added within a record, as well, in view of a possible future consideration as MeSH term by the NLM.

Since the search for a term translation is sometimes demanding, it is important to store in the database as many information as possible. At the moment, however, only terms listed under Concept 1 will be considered as entry terms.

Conclusions

Our efforts were directed towards discussing in a working group all possible translation alternatives – also obtained thanks to the advice of experts consulted for more technical terms – with the aim of constructing a more comprehensive terminology.

The addition of the Italian translation of MeSH synonyms into the database will amplify both the searching strategies and the information retrieved; it will also lead to the expansion of the Italian biomedical thesaurus, with an eye to a completely-translated automated release of NLM MeSH, including all concepts.