

# Formation of Medical Terminology Through Lexical-Semantic Processes

*Tairova M. Kh*<sup>1</sup>, *Toshpulatova Shaxinabonu*<sup>2</sup>

**Annotation:** This article is about demonstrating the lexical-semantic word-formation processes of the formation of medical terminology and secondary nomination through borrowing and terminology. Semantic methods of term formation prevail in the process of forming a terminological medical apparatus due to the borrowing of lexemes not only from language to language, but also from system to system.

## Introduction

Modern medical terminology is represented by a complex system, a set of medical and paramedical terms that have developed as a result of centuries of development of world healing and medical science, which is still developing dynamically. In the last decades of the 20th and early 21st centuries, the medical field has experienced a simultaneous process of combining disciplines that existed separately, and dividing and differentiating specialties into highly specialized ones. Second-generation disciplines have emerged as independent areas of medicine: space biology and medicine, telemedicine, medical informatics, medical radiology, medical genetics, nanomedicine (including nano-oncology, nanopharmacology, nano-dentistry). The issues of the formation of the lexical-semantic system, the replenishment and study of its layers are among the significant areas of modern linguistics, which is facilitated by the need to form a systematized, unified terminology system for the medical field of activity. Each term is based on a lexical unit of a certain language (V.M. Leychik calls it the term's substrate), which acquires specific features in terminology. At the same time, a term has common lexical features, in particular, it retains the ability to exist in a set of variants (just like an ordinary word). Terms are not special words, but words with a special function - to be a sign of a concept in a terminology system. Researchers recognize the fact that a term, like any other lexeme, has phonetic, word-formation, morphological, word-combination and other features of natural language units.

## Main part

A medical term is a linguistic unit that preserves common lexical features of natural language units in a medical terminology database (macrosystem), which is a collection of collective knowledge of conventional and complementary (non-conventional) medicine (microsystems). In most countries, complementary medicine is considered partly as folk medicine, partly as modern traditional medicine, but lacking proper scientific confirmation, but not being an antagonist of science. Under the condition of an integrative medical approach, doctors combine conventional, i.e., ordinary, medical practice with methods and means of complementary and alternative medicine. Thus, modern medical terminology is a complex system of expression, storage and transmission of special medical and paramedical terms, which has a certain classification hierarchy that functions over a long period and is simultaneously dynamic in terms of expression and content, allowing changes in the classification of names in connection with new discoveries in the field under study.

At the terminological level, the stratification of medical terminology is multi-level. S.V. Grinev-Grinevich presents a consolidated classification scheme of concepts on the topic of "Term Formation", which is used by linguists-terminologists for the purposes of research and subsequent analysis of

<sup>1</sup> Teacher at BukhSU

<sup>2</sup> Student



special terms in many areas according to the methods of their appearance. Medical terminology can also be classified according to this scheme, suggesting a division into:

1. semantic methods of term formation, including intersystem borrowing of lexemes and borrowing of foreign lexemes and term elements, terminologization of the commonly used meaning of a word, metaphorization, metonymic transfer;
2. morphological methods of term formation;
3. syntactic method of term formation;
4. Morphological-syntactic methods of term formation.

Microterminological systems serving separate medical fields and representing highly specialized classifications of terms constitute a single network of medical language. The microterminological system of the sublanguage of dentistry, being a part of general medical terminology, simultaneously represents both a complete complex system of terms reflecting the system of concepts of an independent medical discipline and an emerging narrowly focused specialized microsystem caused by changes in the surrounding picture of the world, technical progress and the emergence of modern approaches and methods of cognition. It is a dynamically developing discipline, which is a system of knowledge about oral diseases and their treatment, methods of diagnostic research and disease prevention. At the same time, each dental specialization generates its own highly specialized vocabulary and forms its own terminological apparatus. Semantic methods of term formation prevail in the process of forming the medical terminological apparatus due to borrowing lexemes not only from language to language, but also from system to system (or from system to subsystem).

After conducting a random selection and subsequent study of terms, the author identified a large number of terms borrowed from other languages used in dentistry: luting (from English luting - "putty") - fixation of restoration both with cements and with the help of adhesive technique; microbrush (from English microbrush - "small brush") - an applicator designed for applying etching dental gels, bonding systems, flowable materials, etc.; polisher (from German Polieren - "to polish, grind" < Latin Polio - "make smooth") - an instrument for polishing dental fillings, having a spherical head, driven into rotation by a drill; grills (from English grills - "grids") - a decorative grill or onlays, an unusual decoration on one or more front teeth; pinlay (from English pinlay: pin "pin" + inlay - "to make an insert") - a microprosthesis fixed in a tooth with the help of pins located in the hard tissues of the tooth; scraper (from German Schaber - "scraper") - a dental instrument in the form of a small file with an extended working part, used for manual processing of removable dentures, etc.

The microterm system of dental nanotechnology clearly demonstrates intersystem borrowing of units through the integration of knowledge and borrowing of terms from many fields of science, such as: colloid chemistry, cell physiology, surface chemistry and biophysics, materials science, molecular biology, computer science, etc.

Let us demonstrate this statement with the following examples:

1. mineralogy: nanohydroxyapatite, nanodiamond;
2. pharmacy: nanocapsule, nanoanesthesia, nanopharmaceuticals;
3. Robotics and electronic devices, microelectromechanics: dental nanorobots, lab-on-a-chip, nanocomputer; 4) chemistry: nanozone, polymer, etc.

Thus, as a result of the interaction of the two sciences, dental terms, under the influence of nanoscience, in both English and Russian languages acquire new meanings or shades of meaning, i.e. a rethinking of the semantics of the word occurs.

It should be noted that many terms borrowed from other sciences have undergone terminologization, which is the main process regulating the transition of a pre-term into a term, i.e. the acquisition of a new terminological meaning by a commonly used word in a specific subject area, in a specific sublanguage. For example, the word "mirror" in the Explanatory Dictionary of the Russian Language



by S. I. Ozhegov has the following meanings: "1. an object with a glass or metal polished surface, intended to display what is in front of it. 2. Figurative. A calm smooth surface of water. 3. Surface, area (of a river, reservoir, groundwater) (specialist)." In medicine, the commonly used word "mirror" is terminologized, acquiring a professional meaning: "A general name for a number of instruments intended for expanding cavity wounds and natural canals or for examining surfaces hidden from direct observation; "They are straight or curved plates with polished surfaces or glass mirrors in a suitable frame." In the field of dentistry, this term has undergone transterminologization, as a result of which a new narrow professional meaning has been recorded: "dental mirror" - a small flat glass mirror, fixed to the end of a metal rod, intended for examining teeth and the oral cavity [ibid.]. Transterminologization, according to A.V. Superanskaya, is a phenomenon of the transition of a term from one terminology system to another, during which a change in meaning occurs, and is one of the types of secondary terminological nomination.

Let us demonstrate another example of transterminologization. The term "probe" originally had the following meanings: "1. the name of various instruments and devices for studying the soil, boreholes during drilling, the insides of the body. 2. A balloon with a special device for meteorological observations." In medicine, the term "probe" acquired the meaning of a medical instrument in the form of a rod, an elastic tube for insertion into hollow organs or wounds for diagnostic or therapeutic purposes; root needles. The medical encyclopedia provides approximately 30 terms with the meaning of probe. In the field of dentistry, this term is represented by the following options:

1. dental probe - a multifunctional instrument used during each surgical procedure to determine the condition of the gums, periodontium, etc.;
2. Periodontal probe - an instrument used to determine and examine periodontal pockets.

Thus, terms that have undergone terminologization often undergo significant transformations, leading to the fixation of narrowly specialized meanings.

## Conclusion

Terminology as a set of vocabulary that has the greatest information load is an open and heterogeneous system. In addition, the boundaries between a commonly used word and a term are to a certain extent conditional, as are those between a term, professionalism, and jargon. All this predetermines a continuous process of transition of units from one group to another with a complete or partial loss of meaning, acquisition of a new meaning. Analyzing the terms of medical encyclopedic dictionaries, publications, and textbooks, the author comes to the conclusion that a huge information base of medical terms is presented in combination with terms of individual sciences and fields of knowledge. Consequently, they are useful from the point of view of studying terminology systems and replenishing medical knowledge, since they are a source of generally accepted medical, newly appearing terms, and terms of complementary medicine. They contain information about the etymology of terms, their definitions, where they subsequently undergo the process of ordering. The examples given indicate that lexical-semantic formation and secondary nomination as its variety remain productive ways of forming terms.

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