



THE ROLE OF GRAMMATICAL MEANS IN MEDICAL ENGLISH: A COMPREHENSIVE ANALYSIS OF STRUCTURAL, PRAGMATIC, AND FUNCTIONAL PERSPECTIVES

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ABSTRACT

This article explores the significance of grammatical features in medical English, drawing on key studies to highlight their role in enhancing clarity, precision, and functionality in specialized discourse. Based on analyses of English-language medical research articles, it examines nominalization, passive voice, and complex sentence structures as prevalent tools for conveying scientific objectivity and cognitive complexity. Contributions from researchers like Yi Shi emphasize these elements in teaching English for Specific Purposes (ESP) to non-native speakers, while Salvager's work underscores compounding, affixation, and synonymic doublets as core characteristics of medical terminology. M.Jbankov's study reveals that over 50% of medical terms consist of adjective+noun or noun+noun compounds, which promote morphological integration and syntactic efficiency. The article further discusses sentence types—simple for concise clinical communication and complex for detailed research—along with affixation using Latin/Greek roots for systematic term formation. Passive voice prioritizes processes over agents, modal verbs express obligations and possibilities ethically, and tense systems accurately timeline medical events. Deictic elements add pragmatic depth, reinforcing the need for grammatical accuracy in high-stakes medical interactions. Overall, these grammatical means ensure effective, globally intelligible communication in medicine, with implications for education and practice.

KEYWORDS: Medical English, grammatical features, nominalization, passive voice, compound terms, affixation, sentence structures, modal verbs, deixis, English for Specific Purposes (ESP).

INTRODUCTION

Medical English, as a specialized subset of English for Specific Purposes (ESP), demands precision, clarity, and universality to facilitate accurate information exchange among professionals, researchers, and patients worldwide. While vocabulary and terminology often take center stage in discussions of medical language, grammatical means play an equally crucial role in shaping discourse structure, conveying nuance, and avoiding ambiguity—particularly in contexts where miscommunication can have ethical, legal, or life-altering consequences. This article delves into the grammatical underpinnings of medical English, synthesizing insights from key studies to illustrate how elements such as nominalization, passive constructions, sentence complexity, affixation, and deictic markers contribute to effective communication. Drawing on research by Yi Shi, Salvager, and M.Jbankov among others, it examines how these features adapt to different medical genres, from clinical notes to research articles. By highlighting the interplay between grammar and pragmatics, the article aims to underscore the importance of grammatical proficiency in medical education and practice, especially for non-



native speakers, and to advocate for a balanced approach that integrates lexical and syntactic training

Dwelling on the role of grammatical means in medical language, it would be appropriate to study the results of the research of Yi Shi, a scientist engaged in teaching English medical language to Chinese people, who works as an instructor in English for special purposes (ESP). In total, during the analysis of about 15 English-language medical research articles, in addition to the use of special medical terminology, mainly in the medical language, his work also put an emphasis on the grammatical aspects of the issue. Cases of nominalization (conversion of verbs to noun forms), multiple use of passive voice forms, and multiple use of complex sentence structures in such speech have been researched with examples. Also, Salvager's work highlighted the process of making compound words from the main characteristics of medical language as, the process of affixation, and the phenomenon of doublet (synonymous pairs or equivalent words).

A cornerstone of medical writing is the strategic use of grammatical transformations to achieve objectivity and conciseness. Nominalization, the process of converting verbs or adjectives into nouns, is prevalent in medical discourse as it allows for denser information packing and abstract conceptualization. For example, transforming "the drug treats the infection" into "treatment of the infection by the drug" shifts focus from action to entity, facilitating integration into complex nominal groups.

In M.Jbankov's study which was conducted on the issue of structural and grammatical features of the terms used in medical language, it was shown that the largest part of medical terminology (50.01 %) consists of terms composed of the compounding of two words whose composition is adjective+noun or noun+noun. For example: attributable risk, biased sample, casualty assessment, relative risk, dichotomous data, risk ratio, prevention trial, test accuracy. Making compound words like this leads not only to morphologically changing, but also to syntactically decreasing independence and grammatical integration. (side effect, drug interaction, patient-centered care, liver function test, clinical center visit log). It seems that in the speech of medical personnel, mainly adjectives, nouns or noun phrases are relatively more common.

In medical English, the choice of sentence structure depends on the functional direction of context, audience, and speech, and in scientific documents, clinical notes, prescriptions, and constructions, simple sentences are often used with the aim of conveying clear, concise, and error-free information, avoiding legal and ethical ambiguity. Complex and compound statements, on the other hand, have been used productively in medical articles, reports, research results, and theoretical analysis, which, in combination with reflecting cognitive complexity, also show project processes, statistical annotations, multi-step cause-and-effect relationships. Complex sentence structures further accommodate multifaceted relationships, such as cause-effect chains in research findings. In theoretical analyses, subordinate clauses enable detailed statistical annotations, reflecting cognitive intricacy. Corpus data indicate that medical abstracts feature an average sentence length of 25-30 words, with hypotaxis (subordination) prevailing over parataxis (coordination) to mirror logical hierarchies.

The fact that the affixation process is relevant for short and precise expression of the patient's condition, extent or course of the disease can be studied through the use of specific medical affixes in diagnostic, etiological, symptomatic and pharmacological terms: hypo-, hyper-, anti-, pre-, intra-, sub-, post-, Inter-, brady-(relatively rare), prefixes such as tachy-(relatively rare), -

oma, -logy, -ectomy, -emia, -pathy, -scopy, -gram, suffixes such as -genic are often constructed on the basis of Latin or Greek root words (prefix+stem+suffix) to form terms that are both clear, systematic, and globally intelligible.

Since Medical Communication is from areas that require high levels of accuracy, care, and information delivery, special attention is also required in the selection and appropriate use of grammatical tools. The purpose of the use of the passive voice lies not in who did the work, but in the sense that what happened and what result was observed by emphasizing the process and the result, and in the case of showing the style of the language, it is considered as the protocol in official documents. However, it is worth noting that the passive voice emphasizes results over agents, aligning with scientific impersonality. Historically dominant in medical journals, passive constructions like "the patient was administered antibiotics" prioritize procedural outcomes, mitigating authorial bias. A study of 30 medical articles found passive usage in 20-26% of sentences, though recent trends show a shift toward active voice for clarity, with passive rates dropping from 30% in the 1990s to about 20% in contemporary abstracts. Despite criticisms for potential vagueness, passive voice remains valuable in protocols and reports, as it avoids personal pronouns and focuses on replicable methods. In nursing notes, it qualifies second-hand information, acting as an evidential marker.

Modal verbs infuse Medical English with ethical and probabilistic layers, avoiding imperatives while respecting patient autonomy. Forms like "must" (obligation), "should" (recommendation), "may/might" (possibility), and "can/could" (ability) are ubiquitous, with "may" appearing in 40% of hedging instances in abstracts. In consultations, they soften advice: "You should consider quitting smoking." Tense usage precisely timelines events—past for history ("The patient reported symptoms"), present for symptoms ("The rash persists"), and future for plans ("Treatment will commence tomorrow")—ensuring chronological accuracy. Deictic elements, including personal ("I," "we"), temporal ("today," "tomorrow"), spatial ("here," "there"), and social ("Dr.," "Prof.") pronouns, carry pragmatic weight by anchoring utterances to context. In consultations, person deixis fosters rapport, as in "This pain here," while in dementia care, it aids orientation. Studies show deictic shifts in aphasia, highlighting their role in accessible communication.

In conclusion, grammatical means are indispensable to the efficacy of medical English, serving as the structural backbone that ensures precision, objectivity, and adaptability across diverse contexts. From the nominalization and passive voice emphasized in Yi Shi's analyses to the compounding and affixation processes detailed by Salvager and M.Jbankov, these elements facilitate concise yet comprehensive expression, particularly through Latin/Greek-derived terms that promote global intelligibility. Sentence structures vary purposefully—simple for error-free clinical directives and complex for intricate research narratives—while modal verbs and tenses enable ethical nuance and temporal accuracy. Deictic forms further embed pragmatic meaning, highlighting grammar's role in linguopragmatics. Ultimately, mastering these grammatical tools is essential for medical professionals and educators, as they mitigate risks in high-stakes communication and enhance cross-cultural understanding. Future research could expand on their application in digital medical tools or multilingual settings to further refine ESP pedagogy.

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