TRANSLATING ENGLISH MEDICAL TERMINOLOGY INTO UZBEK: EQUIVALENCE GAPS AND PRACTICAL STRATEGIES

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Abstract. The growing circulation of English-language medical information has made accurate English-Uzbek terminology transfer an urgent linguistic and professional task. This article examines recurrent equivalence gaps in the translation of medical terms and evaluates practical strategies for resolving them. A qualitative comparative analysis was conducted on a purposive sample of representative terms drawn from medical dictionaries, instructional materials, and contextual examples. The analysis focused on lexical compression, semantic range, internationalisms, abbreviations, multiword units, and audience-dependent variation. The findings show that direct equivalence is effective when a standardized Uzbek form is established, whereas broad English terms such as disorder, screening, failure, and lesion require contextual specification. Descriptive translation improves clarity but may reduce terminological economy; transliteration preserves international recognizability but can remain opaque for non-specialist readers. The most reliable solutions therefore combine conceptual accuracy, contextual fit, consistency, and controlled explanation. The study argues that medical terminology should be translated through a tiered decision process that begins with the concept, checks accepted usage, identifies the target audience, and ends with specialist verification. These principles can support clearer clinical communication, translator training, and the gradual standardization of Uzbek medical vocabulary.

Keywords: medical terminology, English-Uzbek translation, equivalence, descriptive translation, transliteration, standardization, clinical communication.

1. INTRODUCTION

Medical translation is a field in which linguistic accuracy and practical responsibility are closely connected. A mistranslated literary expression may weaken style, but a mistranslated diagnosis, procedure, dosage instruction, or clinical warning can distort professional action. The rapid expansion of English as the principal language of international medical research has increased the amount of terminology entering Uzbek through journal articles, clinical guidelines, educational resources, pharmaceutical information, and digital platforms. Consequently, translators and medical educators must deal not only with familiar Greco-Latin internationalisms but also with abbreviations, technology-driven neologisms, compressed compounds, and terms whose meaning changes across specialties.

The central difficulty is that formal resemblance does not always guarantee conceptual equivalence. Some terms have stable and economical Uzbek counterparts, for example hypertension - gipertoniya and catheter - kateter. Others encode a wide semantic range in English but require a narrower choice in Uzbek. Disorder may refer to a disease, dysfunction, disturbance, or syndrome; screening can denote population-level examination, preliminary testing, or targeted detection; and failure changes meaning according to the affected organ or physiological system. Translation therefore involves selecting a medically appropriate concept rather than mechanically replacing one lexical form with another.

Terminology scholars describe specialized translation as concept-oriented work. Sager (1990) emphasizes the relationship among concepts, terms, and communicative settings, while Cabré (1999) treats terminology as both a knowledge system and a communicative resource. Translation theorists likewise distinguish formal correspondence from communicative adequacy (Newmark, 1988; Baker, 1992). These approaches are especially relevant to English-Uzbek medical communication, where differences in word formation, professional convention, and audience knowledge frequently require structural and semantic adjustment.

The purpose of this article is to identify the main equivalence problems encountered in translating English medical terms into Uzbek, compare the strengths

and limitations of commonly used strategies, and propose a practical decision framework. The study addresses three questions: (1) Which linguistic features most often prevent direct equivalence? (2) Which translation strategies produce the clearest and most consistent Uzbek forms? (3) How should the translator balance international recognizability with accessibility for specialists and patients?

2. LITERATURE REVIEW

Modern terminology studies moved from viewing terms as isolated labels toward analyzing them within conceptual systems and professional discourse. Sager (1990) linked terminology processing with documentation and communication, whereas Cabré (1999) showed that a term may behave differently depending on domain, user, and context. This communicative perspective explains why one English unit can require several Uzbek renderings without implying careless variation: the decisive issue is whether each rendering represents the intended medical concept in a given situation.

General translation theory also provides useful tools. Newmark (1988) distinguishes semantic and communicative priorities and recommends descriptive equivalents when a concise target-language term is absent. Baker (1992) discusses non-equivalence at word level and demonstrates that differences in lexicalization often lead to paraphrase or greater specification. Nida's concept of dynamic equivalence draws attention to the receiver's comprehension, which is crucial when a medical text is intended for patients rather than specialists. However, reader-friendly explanation cannot replace technical accuracy; it must be added without changing the underlying concept.

Research on English and Uzbek medical terminology has highlighted etymological composition, synonymy, antonymy, and semantic correspondence. Turaqulova (2020, 2022a, 2022b) notes that Uzbek medical vocabulary combines native explanatory forms with internationally recognizable borrowings and that translation choices are influenced by both structure and function. This coexistence creates useful flexibility, yet it can also produce parallel variants such as an

international term alongside a longer Uzbek explanation. The unresolved problem is not the existence of variants itself, but their inconsistent use within the same document, institution, or educational setting.

3. MATERIALS AND METHODS

The study used a qualitative comparative design. A purposive sample of thirty representative English medical terms was assembled from the terminology tables and contextual examples in the source research, supplemented by established medical and translation reference works. The sample included names of diseases and conditions, diagnostic procedures, care models, organ-related compounds, abbreviations, and common clinical nouns. Items were selected because they illustrate recurrent translation decisions rather than because they represent the statistical frequency of the entire medical lexicon.

Each item was analyzed at four levels: (1) morphological structure, including roots, affixes, and compounds; (2) semantic scope in English and the degree of overlap with the Uzbek candidate; (3) communicative function in specialist and public-facing texts; and (4) the translation operation used. The operations were categorized as direct equivalent, calque, transliteration, descriptive translation, contextual specification, abbreviation expansion, or a combined strategy. Back-checking against the English concept was used to identify additions, omissions, or shifts in meaning.

The method is interpretive and terminological rather than experimental. It does not claim population-level frequencies. Its value lies in explaining why a particular solution is appropriate and in identifying patterns that can guide future corpus-based research. Priority was given to conceptual precision, consistency, economy, transparency, and suitability for the intended reader.

4. RESULTS

The comparison revealed four recurring groups of translation problems. First, lexical compression occurs when a one-word English term requires a multiword Uzbek expression. Second, semantic breadth forces the translator to select a context-

specific Uzbek equivalent. Third, abbreviations and internationalisms create tension between professional familiarity and public comprehension. Fourth, apparently transparent compounds can still require structural adaptation to match Uzbek medical usage.

English term	Preferred Uzbek rendering	Main strategy	Translation note
Hypertension	gipertoniya	Direct equivalent	Established professional term; explanation may be added for patients.
Heart failure	yurak yetishmovchiligi	Calque	The organ specifies the type of physiological insufficiency.
Screening	skrining / ommaviy tibbiy tekshiruv	Combined	Choice depends on specialist versus public-facing context.
Disorder	buzilish / kasallik / sindrom	Specification	No single option covers every diagnostic context.
Stroke	insult / miya qon aylanishining o'tkir buzilishi	Combined	Short established term and explanatory form serve different audiences.
Lesion	zararlanish / shikastlanish o'chog'i	Contextual	Rendering depends on tissue, imaging, and pathological context.
Relapse	kasallikning qaytalanishi	Descriptive	The Uzbek phrase makes recurrence explicit.

Table 1. Representative equivalence problems and recommended strategies

Direct equivalents were the most economical solutions, but only where accepted professional usage was clear. International forms such as gipertoniya, biopsiya, kateter, and kardiologiya allow specialists to communicate efficiently and

preserve links with global terminology. Their apparent simplicity, however, should not be generalized to all borrowed vocabulary. A form may be familiar to clinicians yet unclear to patients, so the surrounding text may need a brief explanation.

Descriptive translation was most useful when English compressed a concept that Uzbek normally expresses analytically. Relapse becomes kasallikning qaytalanishi, and remission may be represented as kasallik belgilarining vaqtincha kamayishi when the context requires explanation. The advantage is semantic transparency; the disadvantage is length. Excessive paraphrase can make clinical documentation heavy and may introduce interpretation beyond the source. For this reason, descriptive equivalents should be concise and concept-bound.

Contextual specification was essential for semantically broad words. Failure cannot be translated in isolation: heart failure is yurak yetishmovchiligi, renal failure is buyrak yetishmovchiligi, while treatment failure refers to davolashning samara bermasligi. Similarly, disorder should be interpreted through the diagnostic category and collocation. Mechanical reliance on the most common dictionary equivalent can therefore create false uniformity.

Abbreviations required a controlled first-mention policy. English abbreviations such as MRI, ECG, and COPD circulate widely, but their Uzbek professional counterparts may follow different initials or coexist with the English form. The clearest pattern is to provide the full Uzbek designation at first mention, add the accepted abbreviation in parentheses, and then use that form consistently. Retaining an unexplained English abbreviation is appropriate only when it functions as an internationally fixed label for the intended specialist audience.

5. DISCUSSION

The findings confirm that medical equivalence is relational rather than purely lexical. A good equivalent must correspond to the same concept, fit the grammatical structure of Uzbek, and perform the required communicative function. These dimensions sometimes point to different solutions. Transliteration maximizes terminological continuity; description maximizes transparency; calque can preserve

structure; and contextual specification maximizes semantic precision. No single strategy is universally superior.

Audience is therefore a central variable. In a specialist article, palliativ yordam or remissiya may be sufficient. In patient information, the same terms may need a short explanation in accessible Uzbek. This is not simplification at the expense of science. It is a controlled two-layer model: the standardized term identifies the concept, while the explanation supports comprehension. Such a model also reduces the temptation to replace a precise technical term with an approximate everyday expression.

Consistency must be managed at document and institutional levels. If screening is rendered as skrining in one section and ommaviy tekshiruv in another, the variation should reflect a real contextual distinction. Otherwise, readers may assume that two different procedures are meant. Translators should maintain a project glossary containing the English source term, preferred Uzbek term, allowed variant, definition, domain, audience note, and source of validation. Even a small glossary can prevent terminological drift in long reports or multi-translator projects.

Based on the analysis, a five-step decision sequence is recommended. First, identify the medical concept and specialty rather than translating the isolated word. Second, check whether an accepted Uzbek equivalent exists in authoritative or professionally recognized usage. Third, evaluate whether the term is appropriate for the target audience. Fourth, select the least complex strategy that preserves the full concept: direct equivalent, calque, transliteration, explanation, or a controlled combination. Fifth, verify the result through contextual back-translation and, for high-risk content, consultation with a medical specialist.

Digital tools and AI-assisted translation can accelerate term retrieval, compare variants, and support glossary consistency, but they do not remove the need for human judgment. Broad words, ambiguous abbreviations, and newly coined compounds are especially vulnerable to context-insensitive output. An AI suggestion should therefore

be treated as a candidate, not as clinical authority. The translator remains responsible for checking conceptual accuracy, register, and accepted Uzbek usage.

The study has limitations. The sample is purposive and relatively small, and it does not measure frequency across a large bilingual medical corpus. Uzbek medical usage also varies across textbooks, clinical institutions, translated materials, and speech communities. Future studies should build parallel corpora, record competing variants, and test term comprehension among clinicians, students, translators, and patients. Such evidence would support national standardization without ignoring actual language use.

6. CONCLUSION

Translating English medical terminology into Uzbek is not a simple process of lexical substitution. The main obstacles arise from differences in semantic range, lexical compression, abbreviation systems, borrowing conventions, and audience expectations. Direct equivalence works well for standardized international terms, while descriptive translation, contextual specification, calque, and abbreviation expansion are necessary when formal correspondence is incomplete.

The most effective practice combines conceptual accuracy with communicative clarity. Translators should begin with the medical concept, select an established Uzbek form where possible, explain it when the audience requires support, and use the chosen equivalent consistently. A shared glossary and specialist review are particularly important for clinical or educational materials. Through this balanced approach, Uzbek medical terminology can remain internationally connected while becoming clearer, more stable, and more accessible to its users.

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