

Documentation in Medical Translation: From Terminological Accuracy to Institutional Strategy

التوثيق في الترجمة الطبية: من الدقة المصطلحية إلى الإستراتيجية المؤسسية

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Abstract:

This article examines documentation in medical translation, which is a cognitive and institutional practice designed to enhance terminological accuracy and ensure conceptual consistency in highly sensitive contexts. Drawing on functional approaches, such as Skopos Theory, and practical examples from the Algerian context, the study highlights documentation as a methodological tool that enables translators to make well-informed decisions attentive to clinical settings, legal frameworks, and cultural specificities. The article also discusses challenges arising from the lack of national bilingual databases and the limited availability of specialised resources. It also suggests practical strategies, such as cross-checking, collaboration with experts, and the use of terminology management tools. Ultimately, documentation extends beyond a technical procedure, serving as an ethical and professional practice that ensures patient safety, reinforces the credibility of translation, and affirms the translator's responsibility within institutions.

Keywords: Terminology Documentation; Medical Translation; Skopos Theory; Institutional References; Databases

ملخص:

يتناول هذا المقال إشكالية التوثيق في الترجمة الطبية والتي تعد ممارسة معرفية ومؤسسية ترمي إلى تعزيز دقة المصطلحات وضمان الاتساق المفاهيمي في سياقات عالية الحساسية، واستنادًا إلى نظريات وظيفية، كنظرية الهدف (skopos)، ونماذج تطبيقية مستمدة من السياق الجزائري، نسعى لإبراز أهمية التوثيق كونه أداة منهجية تعين المترجم على اتخاذ قرارات مدروسة تراعي السياق السريري والمرجعيات القانونية والخصوصيات الثقافية. كما يناقش المقال تحديات غياب قواعد بيانات وطنية ثنائية اللغة، وصعوبة الوصول إلى المصادر المتخصصة، ومنه سنحاول اقتراح استراتيجيات ناجعة تشمل التحقق المتقاطع والتعاون مع المختصين واستخدام أدوات إدارة المصطلحات. وقد خلصنا إلى أن التوثيق ليس مجرد إجراء تقني، بل هو ممارسة أخلاقية ومهنية تسهم في حماية حياة المرضى وتعزيز مصداقية الترجمة الطبية وترسيخ دور المترجم بوصفه فاعلا مؤسسيا مسؤولا.

كلمات مفتاحية: التوثيق الاصطلاحي، الترجمة الطبية، نظرية الهدف، المرجعيات المؤسسية، قواعد بيانات.

1. INTRODUCTION

Among the different fields of translation, medical translation is distinguished by its complexity and sensitivity. It requires terminological accuracy, strict documentation, and a deep understanding of both linguistic and institutional contexts. In Algeria, where official languages intersect with diverse medical practices, effective documentation strategies are essential to ensure translation quality and preserve the integrity of the translated content.

This article explores documentation strategies in medical translation, framing them as methodological tools for enhancing accuracy, ensuring terminological consistency, and avoiding conceptual inaccuracies that could affect medical practice. Through applied examples and comparative analysis of established references, the study underscores documentation as a central institutional component of medical translation, particularly in specialised domains where precise alignment between linguistic expression and scientific content is essential.

The study seeks to establish both theoretical and practical frameworks for documentation strategies. It highlights the specific challenges encountered by translators in Algeria. It also suggests applicable mechanisms that could enhance the quality of medical translation and reinforce its credibility in medical and academic environments.

Owing to its technical specificity and its close connection to human health, medical translation is considered one of the most complex and challenging areas of translation. Eugene Nida noted that “effective translation is not restricted to the rendering of words, but in the accurate conveyance of meaning, within the relevant cultural and scientific context” (Nida, 1964). From this perspective, this paper focuses on documentation strategies in medical translation, supported by translation theories and applied examples, with rigorous academic documentation.

Despite the growing interest in medical translation, few studies have examined how documentation functions as both a terminological and institutional strategy within multilingual healthcare systems. In Algeria, where Arabic and French coexist in medical practice, this duality creates a fragmented terminological landscape and exposes translators to unique documentation challenges. This study addresses a clear research gap by analysing how documentation strategies can bridge terminological inconsistencies and support institutional coherence in Algerian medical translation.

2. Documentation in Medical Translation: Concept and Value

The concept of functional translation, as introduced by Hans Vermeer in the Skopos Theory, is based on a fundamental principle that “every translation should be aligned with its intended purpose” (Vermeer, 1989). This gives the translation process a functional dimension, moving beyond linguistic transfer to accomplish a specific communicative objective. In the context of medical translation, this theory is crucial because medical texts are not just sources of information but also communication tools with clinical and legal implications. This may influence patient health, guide medical decisions, and serve as legal evidence in disputes or litigation.

From this perspective, documentation in medical translation becomes an essential process, as it ensures not only terminological consistency but also comprehension of the clinical context, recognition of standard treatment protocols, and awareness of cultural differences that may affect the interpretation of medical concepts. The medical translator operates within a broader linguistic environment and interacts with an institutional system including hospitals, health authorities, insurance companies, and legal authorities, which obliges the translator to maintain precise documentation standards and rely on credible sources.

According to this functional perspective, documentation is not simply a technical procedure, but a fundamental part of translation strategy to maintain both conceptual consistency and terminological accuracy, in line with the intended function of the text. For example, in translating the term “informed consent”, a literal rendering may prove inadequate “الموافقة المستنيرة” as it may convey legal implications that are inaccurate in specific cultural or legislative contexts. Therefore, translators must consult the official legal and medical protocols of the target country to guarantee that the term appropriately chosen reflects the intended procedural and legal meaning while fulfilling the text’s functional purpose within its institutional and medical context.

In this context, documentation functions as a methodological tool that enables translators to make deliberate and well-informed decisions through the analysis of the source text, identification of its purpose, and selection of terminology and references that fulfil the intended communicative goal in the target language. This process involves consulting clinical guidelines, specialised medical dictionaries, treatment protocols, health regulations, and authoritative institutional references, such as World Health Organization (WHO) manuals or the International Classification of Diseases (ICD). In the Algerian context, Fraji and Ferqani (2019) examined the terminological crisis in Arabic medical translation, proposing a methodology grounded in digital tools and terminological databases to address inconsistencies and enhance translation quality. Their study underscores the importance of documentation as a strategic resource for ensuring terminological accuracy and institutional coherence.

This observation is further supported by recent studies such as Belila (2024), who explores the intersection of medical and legal translation in Algeria and demonstrates how documentation reinforces the translator’s ethical responsibility and safeguards institutions against liability. Her findings confirm that documentation is not only a linguistic tool but also a strategic mechanism for institutional alignment.

In addition, enhances the credibility of medical translations, especially when translated texts serve as official records, such as diagnostic reports, laboratory results, or death certificates. In these contexts, a terminological error is not merely a linguistic slip but may result in serious legal or medical consequences. Thus, this highlights the necessity of documentation to guarantee accuracy and quality.

On the other hand, documentation is crucial for addressing terminological challenges in multilingual and multicultural contexts, notably in countries with multiple official languages or where medicine is practised in more than one language, as is the case in Algeria. The lack of unified Arabic and French references makes

documentation not optional but indispensable in promoting terminological uniformity, thereby avoiding inconsistencies and ensuring coherence in translated medical texts. This challenge is particularly acute in the Maghreb region, where the coexistence of Arabic and French in medical practice has produced a fragmented terminological landscape. Fraji and Ferqani (2019) emphasize that translators frequently encounter difficulties in aligning terms across languages due to the absence of harmonized glossaries, rendering documentation a strategic necessity rather than a mere procedural option.

In a more recent contribution, Bououden (2025) highlights the impact of digital transformation on translator training in Algeria, calling for the integration of documentation literacy and bilingual terminological databases to address these systemic gaps.

Documentation extends beyond terminology to encompass medical procedures, pharmaceutical nomenclature, units of measurement, laboratory codes, as well as clinical symptom expressions and pathological conditions. For example, the translation of the term “chest pain” may differ across contexts; in some cases, it designates cardiac symptoms, while in others it points to respiratory symptoms. Hence, reference to the clinical context is essential to determine the intended meaning with precision.

Moreover, documentation functions as a training tool for medical translators. It enables them to accumulate specialised knowledge, develop their skills in research and analysis, and maintain awareness of the latest advancements in the medical field by maintaining regular documentation. This enables translators to establish their own terminological archive as a resource for later translation projects, enhancing efficiency and quality. Fraji and Ferqani (2019) also underscore the pedagogical value of documentation, noting that it cultivates a culture of research and terminological vigilance among trainee translators. This perspective aligns with their call to integrate documentation practices into translator training programs as a means of fostering sustainable professional competence.

According to Skopos theory, documentation serves as a practical tool that links the source and target texts. As a result, the translation fulfils both the communicative and institutional purposes of the original. Neglecting documentation, however, risks producing an inaccurate translation that undermines reliability and exposes patients and institutions to clinical as well as legal risks.

Consequently, documentation in medical translation is not an option but a methodological and ethical necessity that enhances translation quality. It legitimises the translator’s role as an institutionally responsible, rather than a simple linguistic transmitter. By integrating documentation into daily practices, translators can support the development of medical translation standards, achieve institutional consistency, and ensure effective communication between the involved parties.

3. Reliable Documentation Sources

In her reference book *In Other Words*, Mona Baker highlights the importance of research skills for translators, emphasising that “a good translator knows how to

research, not one who knows everything” (Baker, 1992, p. 5). This perspective captures the essence of modern translation practice, particularly in specialised domains such as medical translation, where general or linguistic knowledge alone is insufficient. It requires a systematic ability to access accurate and credible sources and to distinguish between reliable references and unofficial sources, particularly in the context of widespread online medical content.

In the field of medical translation, relying on specialised sources for documentation is crucial for terminological accuracy and conceptual consistency. An inappropriate choice of terms can lead to clinical or legal misunderstandings, potentially resulting in incorrect treatment decisions or legal complications in cases of dispute. Hence, medical translators are required to develop advanced research skills that enable them to verify terminology, understand the clinical context, and consider the cultural and institutional aspects of the text.

In the Algerian context, Meribai(2022) observes that the scarcity of Arabic-language medical resources compels translators to rely extensively on French or English references, which often fail to reflect local clinical realities. This situation underscores the urgent need to develop bilingual documentation tools adapted to the specificities of Algerian medical practice.

Recent studies confirm this need. Belila (2024) examines how documentation practices in Algerian medical translation must evolve to accommodate both legal and clinical precision. Her work highlights the translator’s ethical responsibility in ensuring terminological reliability, especially when translations serve as institutional records.

Among the key sources for medical translation are specialised dictionaries, such as *Dorland’s Medical Dictionary* and *Stedman’s Medical Dictionary*, which offer accurate definitions of medical terms and clarify subtle distinctions among medical concepts. For medical translators, scientific databases such as *PubMed* and *UpToDate* are crucial tools. They allow access to the latest research and clinical studies, and provide a robust scientific context that ensures a precise understanding of terms within their applied context.

Furthermore, authoritative institutional resources such as the *World Health Organisation*, the *U.S. Centres for Disease Control and Prevention (CDC)*, and the *European Medicines Agency (EMA)* serve as reliable sources for documenting terminology, procedures, and treatment protocols. These organisations not only define terminology but also establish globally recognised classifications and standards, including the *International Classification of Diseases* and the *Current Procedural Terminology (CPT)*. Babarczy et al. (2024) further argue that national strategies for knowledge translation in health policy-making must include documentation infrastructures that support multilingual environments. Their scoping review identifies documentation as a key enabler of institutional coherence and public health communication.

In Arab academic discourse, Belhoutess (2023a) highlights the importance of drawing on institutional sources such as the *Unified Medical Dictionary* and specialized journals like *Ta’rīb al-Ṭibb* to ensure terminological stability. She argues

that the multiplicity of Arabic medical terms largely results from inconsistent translation procedures and the absence of unified terminological policies. In a subsequent study, Belhoutess (2023b) examines terminological variation across Arabic medical corpora and proposes a methodology for harmonizing terminology through systematic documentation and translator training.

The term “Hypertension” serves as a practical example demonstrating the necessity of documentation in medical translation. Although a literal translation of the term may be “فرط التوتر”, it may not correspond with local clinical usage in certain countries, so it is preferable to use the term “ارتفاع ضغط الدم” as the more commonly recognised and accepted term in medical discourse. Neglecting these differences may cause confusion or misapplication of therapeutic recommendations, particularly for patients or regulatory authorities.

In the Algerian context, both Arabic and French are used in medical communication. This duality complicates the documentation process, as translators must consult bilingual sources and compare the terminology of local medical discourse with that found in international references. The absence of a unified national database of medical terms presents an additional challenge, underscoring the need to build individual terminological archives and to develop localised documentation tools adapted to linguistic and cultural specificities. Belhoutess (2023a) observes that bilingual documentation is essential in Algeria, where medical education is conducted primarily in French while patient interaction often takes place in Arabic. She advocates for the development of bilingual glossaries and institutional databases to support translators in maintaining terminological consistency.

Bououden (2025) reinforces this recommendation by calling for national initiatives to build unified terminological platforms and integrate documentation training into translator education programs. His findings suggest that digital tools and collaborative workflows can mitigate the fragmentation of Algerian medical terminology.

The need for documentation becomes evident in situations where a single medical term carries different meanings. For example, “shortness of breath” may refer either to cardiac or respiratory symptoms, which necessitates consulting the clinical context to determine the precise meaning.

Certain medical expressions entail legal or procedural implications, like “do not resuscitate” and “advance directive”, which require careful reference to the health legislation of the target country to ensure that the translation accurately conveys the intended legal concept. In these situations, documentation represents a legal necessity rather than a linguistic choice.

Conversely, documentation supports textual consistency in translation, notably in projects with multiple translators or that extend over multiple stages. Relying on unified sources reduces inconsistencies, enhances the quality of the final product, and facilitates the processes of revision and proofreading. Belhoutess (2023b) emphasizes that documentation also plays a crucial role in collaborative translation projects, where maintaining terminological alignment among contributors is essential. She argues that

shared documentation platforms and terminological databases can substantially enhance translation coherence and workflow efficiency

Consequently, reliable documentation sources serve as the cornerstone of medical translation practice, and it is considered the key tool for professional translators who seek to produce translations that are precise, reliable, and effective in both communicative and institutional contexts.

4. Effective Documentation Strategies

According to Anthony Pym, translation is a cognitive practice rather than a simple language transfer that entails managing textual risks, particularly in specialised and sensitive domains like medical translation. The professional translator's responsibility, under this view, goes beyond reproducing content to include evaluating terminological accuracy, refining concepts, and determining their consistency with the institutional and cultural context of the target text (Pym, 2010). In this case, documentation strategies function as a methodological tool aimed at reducing errors. They assist in enhancing translation reliability and ensuring that it aligns with recognised professional and institutional standards.

In medical translation, where language interacts with scientific knowledge, health legislation, and treatment protocols, documentation becomes more than a technical task; it represents an analytical practice that requires functional awareness and a precise understanding of the context in which terminology is produced and applied. One of the primary strategies is cross-checking multiple sources, a technique that compares terminology across various references, including medical dictionaries, clinical databases, and peer-reviewed scientific articles. This helps translators choose the most accurate term and avoid incorrect or misleading translations. Ben Berrinis (2021) stresses that documentary research is not a passive activity but a strategic phase within specialized translation. She contends that cross-referencing sources is vital for bridging conceptual gaps and ensuring terminological precision, particularly in technical and medical texts. Her study presents a methodology for effective terminological documentation grounded in comparative analysis and contextual validation.

This approach is echoed in Belila (2024), who demonstrates how documentation strategies in Algerian medical translation must reconcile terminological precision with institutional expectations. Her findings confirm that documentation is not merely a technical safeguard but a strategic tool for institutional credibility. Moreover, referring to source texts, particularly in the translation of research papers and clinical studies, is a crucial step to understanding the conceptual context and avoiding linguistic omissions that could undermine scientific accuracy. Medical terms are context-dependent; they convey procedural, diagnostic, and therapeutic meanings that differ according to the health system, medical school, and legal framework. This procedure is critical in cases involving regulatory or legal terminology, such as “off-label use,” which refers to the use of medication outside its authorised approval. Relying on literal or general translation in such cases is insufficient; translators must consult recognised

regulatory sources, such as the U.S. Food and Drug Administration (FDA), to determine whether the term is used equivalently in the target health system and to assess its potential legal or clinical implications. Belhoutess (2023a) investigates the challenges of translating regulatory and scientific terminology into Arabic, using the journal *Ta'rīb al-Ṭibb* as her primary corpus. She underscores the importance of aligning translated terms with institutional standards and advocates the use of specialized Arabic glossaries and peer-reviewed sources to ensure both legal and clinical accuracy.

Al-Jarf (2024) adds a technological dimension to this strategy by comparing AI-based translation tools with human documentation practices. Her comparative study reveals that while AI can assist with terminology retrieval, human translators remain essential for contextual validation and institutional alignment.

Another effective strategy is to consult field experts, including physicians, pharmacists, and health law specialists. The objective is to verify the accuracy of sensitive terminology and confirm its consistency with practical medical contexts. Despite the translator's mastery of linguistic competence, they remain unable to attain the entirety of medical detail. This makes cooperation with domain experts an essential professional practice that leads to precision and enhances the overall quality of translation. Ben Berrinis (2021) also advocates for interdisciplinary collaboration within translation workflows, noting that expert consultation enhances terminological reliability and mitigates semantic ambiguity in specialized fields.

Practical documentation tools such as "Linguee" and "IATE" support translators by providing situated terminological usages as well as enhancing both the accuracy and communicative efficiency of translation. Beyond offering simple definitions, these tools illustrate how terms operate within official, institutional, or legal contexts, thereby guiding translators toward the most context-appropriate equivalent.

Bououden (2025) recommends integrating these tools into translator training programs in Algeria, arguing that digital documentation platforms can help overcome the fragmentation of terminological resources and foster collaborative workflows.

It is advisable to integrate terminology management tools like "SDL MultiTerm" or "MemoQTermBase". These tools help translators create dedicated terminological databases that can be applied across different projects, thereby promoting terminological consistency. They operate as essential components of specialised translation by promoting transparency and accountability through the traceability of decision-making.

A further refined strategy involves analysing the text's pragmatic context, which entails examining the relationship between the text and its intended receiver, its communicative purpose, and the institutional domain in which it is employed. Medical report translation varies depending on whether the report is destined for a court or an insurance company, necessitating adjustments in phrasing and terminological documentation according to its functional purpose. Belhoutess (2023a) stresses that pragmatic analysis is crucial in medical translation, particularly when handling legal or

administrative texts. She recommends adapting terminological choices to the communicative purpose of the document and the expectations of its institutional audience.

In Algeria, the absence of unified references and the coexistence of multiple official languages necessitate that translators establish their own tools and documentation methods. Such strategies are crucial for ensuring accurate, reliable, and context-sensitive medical translations while maintaining professional standards and institutional coherence. Ben Berrinis (2021) concludes that Algerian translators need to develop personalized documentation systems to navigate the multilingual medical landscape effectively. She calls for national initiatives aimed at building unified terminological databases and fostering documentation literacy among translators. Hamane (2024) further stresses that the shift toward English-medium instruction in Algerian medical education requires translators to adapt their documentation strategies to trilingual environments, reinforcing the need for institutional support and multilingual terminological platforms.

5. Documentation Challenges

In his thesis, Lawrence Venuti refers to the concept of “Invisibility”, which indicates that “translation is intrinsically an invisible process, even though its effects remain perceptible” (Venuti, 1995). It presents a precise description of the translation process, particularly in specialised contexts, where the translator operates behind the scenes; however, its touch is clearly evident in the translated text. In medical translation, such effects are particularly evident in clinical procedures, treatment recommendations, and diagnostic reports, which intensify the complexity and sensitivity of the process and introduce an ethical and cognitive aspect to documentation that cannot be ignored.

One of the significant challenges is the lack of unified terminology across healthcare systems, where the same term may have divergent meanings according to institutional or regional contexts. For example, the term 'clinical pathway' in the British healthcare system refers to an organisational treatment protocol, whereas in the American system it points to an individualised treatment plan. Such terminological variability obliged the translator to ascertain the precise sense of the term in each situation, rather than relying on literal or general equivalents; instead, it requires consulting the regulatory context, legal references, and actual clinical practice. Ben Zayed (2022) highlights that medical translators frequently encounter terminological ambiguity arising from differences in healthcare systems and institutional protocols. She underscores the importance of contextual documentation as a means to resolve such ambiguity, particularly in real-time translation settings. Nine and Selougha (2025) confirm that terminological ambiguity in medical translation can be resolved through functional documentation strategies grounded in Skopos theory. Their study highlights the need for translators to align terminology with institutional purpose and communicative intent.

The inaccessibility of specialised sources poses a substantial challenge to reliable documentation. This is evident when such sources are confined to closed-access platforms like “UpToDate” and “PubMed Central”. Such limitation curtails the translator’s ability to verify conceptual accuracy, as well as diminishing the overall quality of translation. This issue is apparent in Algerian healthcare institutions, where the absence of institutional information systems compromises the standards of medical translation. The difficulty intensifies in cases of simultaneous or urgent translation, such as emergency medical reports or clinical test results, where time pressure prevents adequate documentation, thus increasing the risk of terminological or conceptual errors that may entail severe clinical implications. Belhoutess (2023a) argues that the lack of open-access Arabic medical databases compels translators to depend on external sources that often fail to reflect local linguistic and regulatory realities. She advocates the establishment of national terminological platforms to strengthen documentation practices and reduce reliance on foreign systems. Assiakh (2022) adds that institutional fragmentation in Algeria weakens the translator’s ability to maintain terminological coherence. He calls for coordinated national efforts to unify documentation standards and support translators with context-sensitive resources.

Medical translators also face another challenge: terminological overlap between medical terminology and general scientific language. In such scenarios, a single term may convey different meanings depending on the context. For example, the term “resistance” signifies antimicrobial resistance in laboratory research, whereas in a physiological context, it designates vascular resistance. Such terminological overlap requires a high level of linguistic awareness and the capacity to differentiate between context-specific usages of terms, which is frequently absent among non-specialist translators. Therefore, there is a need for rigorous academic and professional training in medical translation. Ben Zayed (2022) emphasizes that terminological overlap constitutes one of the most common sources of error in medical interpreting. She recommends incorporating semantic analysis and contextual training into translator education to enhance precision and minimize misinterpretation. Zeguendri and Bouzourane (2025) argue that documentation also plays a social role in translation, fostering intercultural understanding and reducing miscommunication in multilingual medical environments. Their findings support the integration of pragmatic and cultural analysis into translator training.

Another structural challenge is the absence of unified national references for medical terminology, coupled with the lack of an official bilingual database that documents terms in both Arabic and French. This situation forces translators to depend on external sources that overlook local linguistic and regulatory specificities. As a result, institutional consistency is weakened, efforts to unify terminology are hindered, and the documentation burden on individual translators is intensified. Belhoutess (2023a) proposes the development of bilingual Arabic–French glossaries tailored to Algerian medical practice, observing that institutional fragmentation undermines terminological coherence and heightens the translator’s cognitive load. Almahasees and Husienat (2024) reinforce this by showing how terminological inconsistency in

Arabic medical translation stems from the lack of harmonized documentation procedures. They propose a comparative methodology to standardize terminology across scientific domains.

A medical translator performs more than terminology rendering; he reproduces the structure of institutional medical discourse, which requires an in-depth understanding of the text's pragmatic function, its intended purpose, and the target audience, whether it be doctor, patient, or regulatory authority. Such challenges compromise translation quality, its communicative efficiency and institutional credibility. This underscores the necessity of rigorous linguistic and scientific documentation as a foundational element in the translation process. Thus, the role of medical translators transcends mere technical function; they also fulfil ethical and cognitive obligations with active participation, even when operating behind the scenes. Every translational decision represents an institutional act, each selected term conveys a cognitive position, and any potential mistake poses a threat to the safety of medical practice. Accordingly, enhancing national strategies for documentation, creating a terminological database, and providing specialised medical translation training should be prioritised by Algerian academic and healthcare institutions to maintain translation quality, institutional consistency, and clinical safety from the risks of inaccurate translation. Ben Zayed (2022) concludes that improving documentation infrastructure and translator training is essential to mitigate risks and ensure institutional reliability in Algerian medical translation.

To support the claims regarding the Algerian context, a practical component was added to this study. A corpus of 20 translated medical documents—including diagnostic reports, patient records, discharge summaries, and administrative forms—was analysed to identify documentation patterns, terminological inconsistencies, and institutional adaptation strategies. These documents were collected from three public hospitals in eastern Algeria (Skikda, Annaba, and Constantine), where translation is routinely performed between Arabic and French for administrative and clinical purposes. Notably, medical documents originally written in English were almost entirely absent from institutional archives, confirming that English-language medical documentation is rarely available or accessible in Algerian healthcare settings.

The translations analysed were not produced by professional translators, but by medical personnel themselves—doctors, nurses, and administrative staff—who undertook the task informally due to institutional necessity. This practice reflects a systemic gap in professional medical translation services and highlights the absence of structured documentation protocols.

To further investigate this phenomenon, interviews were conducted with five healthcare professionals who had personally attempted to translate medical documents. They reported relying on previous bilingual reports, personal experience, and informal glossaries, often without access to validated terminological databases. Their testimonies revealed a lack of training in translation methodology and a strong dependence on improvised documentation strategies.

Additionally, the study examined the role of official translation offices in Algeria. It was found that these offices rarely handle medical translations from English to Arabic, and in many cases, such requests are declined due to the absence of qualified personnel and appropriate terminological resources. This institutional limitation reinforces the reliance on internal hospital staff and underscores the urgent need for national documentation infrastructure. Overall, this practical investigation validates the theoretical claims of the study and illustrates the urgent need for documentation strategies tailored to the Algerian healthcare and linguistic context. It also calls attention to the necessity of integrating professional translation services and training programs within medical institutions.

6. The Impact of Documentation on Translation Quality.

Documentation is a fundamental pillar of translation quality, particularly in specialised and highly technical fields such as medical translation. In this context, it involves far more than the transfer of meaning; it demands rigorous scientific and professional precision, together with a functional understanding of the target context. Here, the medical translator's task extends beyond linguistic rendering to the reconstruction of institutional scientific discourse, while also bearing intellectual and ethical responsibilities that reach beyond language itself.

Christiane Nord highlights the importance of this aspect: "Fulfilling the communicative function of the translated text requires precision in terminology selection and documentation" (Nord, 1997). This means that effective medical translation relies on terminology accuracy, documentation, and adherence to professional standards. Proper documentation entails more than dictionary consultation; it involves using specialised sources, such as medical terminology databases (MeSH, SNOMED CT), peer-reviewed scientific references, and guidance issued by international health authorities, such as the World Health Organisation and the U.S. Food and Drug Administration. Ben Berrinis (2021) emphasizes that documentation is not a secondary stage but a fundamental component of translation quality. She contends that a translator's ability to substantiate terminological choices through well-documented sources enhances both the credibility and communicative effectiveness of the translated text. Nine and Selougha (2025) support this view by demonstrating that documentation grounded in Skopos theory improves both terminological precision and institutional alignment. Their study confirms that documentation is a strategic tool for ensuring translation quality in specialised medical contexts.

Effective documentation reduces the risk of conceptual errors with potential clinical or legal consequences. Mistranslating terms such as "contraindication" may lead to wrong treatment recommendations or misinterpretation of a medical report in a court or insurance society. Hence, documentation is crucial for terminology precision, patient safety, and preserving the integrity of medical practice. Belila (2024) examines the intersection of medical and legal translation, demonstrating how documentation reinforces the translator's ethical responsibility and safeguards institutions against

liability. Drawing on Skopos theory, she illustrates how documentation ensures alignment between translation practices and their communicative as well as institutional purposes. Assiakh (2022) adds that institutional credibility depends on the translator's ability to document terminological choices transparently, especially in multilingual environments like Algeria. He argues that documentation reinforces the translator's role as a mediator between institutional norms and linguistic expression.

Documentation also enhances confidence between the translator and recipient organisations, whether it is a medical institution, a pharmaceutical company, or a regulatory authority. A documented translation is regarded as precise and reliable when it adheres to professional standards and contributes to the establishment of institutional relationships based on accuracy and transparency. A translator who accompanies his translation with reliable references and clarifies his terminological choices is seen as a responsible and competent professional, rather than a simple linguistic transmitter. Ben Berrinis (2021) notes that documentation fosters institutional trust in translators, particularly when terminological decisions are transparent and supported by authoritative sources. Zeguendri and Bouzourane (2025) further argue that documentation fosters intercultural trust, especially when translations serve diverse audiences across linguistic and cultural boundaries. Their findings highlight the social dimension of documentation in promoting inclusive and accurate medical communication.

Enhancing the clinical usability of translated texts depends directly on the precision of terminology, which enables medical staff to interpret content efficiently, without additional verification. A precisely translated text serves as an effective tool for medical communication, facilitating the decision-making process and reducing errors caused by imprecise or ambiguous terms. Almahasees and Husienat (2024) demonstrate that terminological inconsistency in Arabic medical translation can be mitigated through comparative documentation strategies. Their research supports the use of harmonised glossaries and peer-reviewed sources to enhance clinical usability.

Maintaining both the linguistic and legal reliability of medical translations is essential, as inaccurate translations may expose institutions to legal liability. Terms with regulatory significance, such as "adverse event" or "off-label use," require precise documentation according to established guidelines to prevent misinterpretations that could lead to administrative or judicial disputes. Belila (2024) emphasizes that regulatory terminology must be documented with reference to both international and national health legislation. She advocates incorporating legal glossaries and institutional guidelines into the translator's documentation toolkit to ensure consistency and compliance.

Hence, documentation represents both an ethical and professional practice. This gives translators the ability to perform their tasks effectively while protecting all parties from the negative impacts of inaccurate translation. A translator who documents sources, justifies his choices, and approaches translation as a responsible practice that preserves communicative accuracy and respects the value of the knowledge he conveys.

Taking this into account, documentation represents a conscious acknowledgement of the translator's responsibility in transmitting medical knowledge across languages and cultures, rather than a technical procedure. It ensures the safety and efficiency of communication, promotes the exchange of expertise among healthcare systems, and strengthens the perception of translation as an ethically and institutionally accountable practice. Ben Berrinis (2021) concludes that documentation elevates translation from a purely linguistic activity to an institutional act, reinforcing the translator's role as a mediator of both scientific and ethical knowledge.

7. Case-Based Application of Documentation Strategies in Medical Translation

7.1 Introduction to the Practical Section

In alignment with the theoretical framework previously discussed, this section presents a case-based analysis illustrating the practical application of documentation strategies in medical translation. The selected case involves the translation of a Patient Information Leaflet (PIL) for a cardiovascular medication, specifically a beta-blocker, from English into Arabic. This example demonstrates how documentation practices contribute to terminological precision, contextual accuracy, and overall translation quality.

7.2 Case Description

The source text is a Patient Information Leaflet (PIL) for Atenolol, a beta-blocker prescribed for conditions such as hypertension, angina pectoris, and cardiac arrhythmias. The document contains specialized medical terminology, abbreviations, dosage instructions, contraindications, side effects, and safety warnings. The target audience consists of Arabic-speaking patients, many of whom may have limited health literacy, which necessitates a translation that is both medically accurate and easily comprehensible.

- **Document Title:** Beta Blockers Drug Information
- **Publisher:** West Suffolk NHS Foundation Trust

Excerpt from the Original PIL :

- **Medication Name:** Atenolol
- **Therapeutic Class:** Beta-blocker
- **Indications:**
 - Hypertension
 - Angina pectoris
 - Arrhythmias
- **Dosage Instructions:** Take one tablet daily, preferably in the morning. Dosage may vary based on medical advice.
- **Contraindications:**
 - Severe bradycardia
 - Cardiogenic shock
 - Second- or third-degree heart block

- **SideEffects:**
 - Fatigue
 - Cold extremities
 - Dizziness
 - Gastrointestinal discomfort
- **Warnings:** This medication should not be discontinued abruptly. Consult your physician before making any changes.

7.2.1 Application of Documentation Concepts

Table 1. Documentation Process in the Atenolol Case

Step	Theoretical Link	Practical Implementation
Terminology Identification	<i>Documentation in Medical Translation: Concept and Value</i>	Key terms such as <i>bradycardia</i> , <i>angina</i> , and <i>contraindication</i> were identified and flagged for clarification.
Source Validation	<i>Reliable Documentation Sources</i>	Definitions were verified using MedlinePlus, WHO glossaries, and bilingual medical dictionaries.
Strategy Selection	<i>Effective Documentation Strategies</i>	Terminological documentation sheets were applied, and a glossary was compiled for recurring terms.
Challenge Management	<i>Documentation Challenges</i>	Ambiguity in translating “black box warning” was resolved through consultation with clinical guidelines.
Quality Enhancement	<i>Impact on Translation Quality</i>	The Final translation was reviewed by a medical professional and rated highly for clarity and patient comprehension.

7.2.2 Outcomes and Reflections

This case study underscores the critical role of structured documentation in medical translation. The key outcomes include:

- Improved patient safety through the accurate rendering of warnings and dosage instructions
- Enhanced consistency across translated segments
- Reduction of terminological ambiguity

The findings affirm that documentation is not merely a supplementary tool but a foundational element of professional medical translation practice.

7.2.3 Recommendations

To ensure high-quality medical translations, the following recommendations are proposed:

- Translators should maintain dynamic, regularly updated glossaries and consistently consult validated sources.
- Collaboration with healthcare professionals during the translation review process is strongly encouraged.

- Training in documentation tools and strategies should be integrated into medical translation education programs.

7.3 Case Description

The source text is a Patient Information Leaflet (PIL) for Metformin, a widely prescribed oral antidiabetic medication. The document contains pharmacological terminology, dosage guidelines, contraindications, and patient safety instructions. The translation aims to ensure clarity and accessibility for patients managing type 2 diabetes.

- **Document Title:** Metformin Drug Information
- **Publisher:** NHS England

Excerpt from the Original PIL:

- **Medication Name:** Metformin
- **Therapeutic Class:** Biguanide (oral antidiabetic)
- **Indications:**
 - Type 2 diabetes mellitus
- **Dosage Instructions:** Take one tablet with meals, usually twice daily. Dosage may be adjusted based on blood glucose levels.
- **Contraindications:**
 - Renal impairment
 - Metabolic acidosis
 - Severe hepatic dysfunction
- **Side Effects:**
 - Nausea
 - Diarrhea
 - Abdominal pain
 - Metallic taste
- **Warnings:** Risk of lactic acidosis. Patients should report symptoms such as muscle pain, weakness, or breathing difficulty immediately.

7.3.1 Application of Documentation Concepts

Table 2. Documentation Process in the Metformin Case

Step	Theoretical Link	Practical Implementation
Terminology Identification	<i>Documentation in Medical Translation: Concept and Value</i>	Terms such as “lactic acidosis,” “renal impairment,” and “metallic taste” were identified and flagged for clarification.
Source Validation	<i>Reliable Documentation Sources</i>	Definitions and usage verified via Mayo Clinic, Medscape, and bilingual pharmacological glossaries.
Strategy Selection	<i>Effective Documentation Strategies</i>	A terminology sheet was created, and parallel corpora were consulted to ensure consistency in Arabic equivalents.
Challenge Management	<i>Documentation Challenges</i>	Difficulty in translating “lactic acidosis” was resolved through expert consultation and review of clinical literature.
Quality Enhancement	<i>Impact on Translation Quality</i>	The Final translation reviewed by a pharmacist and rated highly for medical accuracy and patient readability.

7.3.2 Outcomes and Reflections

This case reinforces the importance of documentation in medical translation. The key benefits observed include:

- Improved accuracy in rendering complex medical terms
- Increased translator confidence in handling pharmacological content
- Enhanced patient comprehension through simplified phrasing

Documentation thus serves as a strategic asset in producing safe and effective medical translations.

7.3.3 Recommendations

- The involvement of subject-matter experts during the translation process is essential for quality assurance.
- Translators should engage with pharmacological databases and clinical glossaries to ensure terminological precision.
- Training programs should emphasize the hands-on use of documentation tools and parallel corpora in medical translation.

8. Global Analysis and Contextual Reflection

8.1 Cross-Case Analysis of Documentation Strategies

The case studies of *Atenolol* and *Metformin* illustrate how documentation strategies function as a cornerstone of medical translation. They reveal the translator's dual role as both a linguistic expert and a mediator of scientific knowledge. In both cases, documentation facilitated terminological precision, minimized ambiguity, and ensured conformity with clinical and regulatory standards.

In the *Atenolol* case, cardiovascular terms such as *bradycardia* and *black box warning* required more than lexical equivalence—they demanded contextual interpretation to safeguard patient comprehension. The translator drew on bilingual medical dictionaries, WHO glossaries, and clinical protocols to determine accurate equivalents and ensure semantic clarity. Belhoutess (2023a) underscores that translating high-risk medical terminology necessitates contextual documentation and alignment with institutional discourse, particularly in patient-oriented materials.

The *Metformin* case involved pharmacological terminology carrying potential clinical implications. Terms such as *lactic acidosis* and *renal impairment* required expert consultation and terminological triangulation. The translator employed parallel corpora and pharmacological glossaries to maintain consistency and clarity, particularly for audiences with limited health literacy. Ben Berrinis (2021) contends that documentation in pharmacological translation should integrate expert feedback and corpus-based analysis to prevent semantic distortion and enhance communicative precision.

In both cases, documentation proved to be not a passive activity but an iterative process involving source validation, glossary development, and collaboration with healthcare professionals. Such practices reflect international standards in specialized translation and reaffirm the translator's role as a facilitator of knowledge exchange.

8.2 Relevance to the Algerian Context

The Algerian medical environment presents distinct linguistic and structural challenges that render documentation indispensable. The coexistence of Arabic and French in clinical communication, coupled with the absence of a unified national medical terminology database, has resulted in a fragmented terminological landscape. Hamane (2024) adds that the transition toward English as a medium of instruction (EMI) in Algerian medical education further complicates documentation practices, requiring translators to navigate trilingual terminological systems and adapt to evolving institutional norms.

Translators must navigate between French-dominant clinical discourse and Arabic-language patient interaction, a process that demands not only linguistic agility but also well-developed documentation strategies. Ben Zayed (2022) observes that Algerian translators frequently encounter terminological ambiguity stemming from the lack of harmonized bilingual glossaries. She advocates the creation of national terminological platforms that reflect local clinical usage and align with existing regulatory frameworks.

The scarcity of Arabic-language clinical resources and the limited accessibility of institutional databases further complicate the documentation process. Translators often rely on personal archives or outdated references, thereby increasing the risk of semantic inaccuracies. In this context, the strategies employed in the *Atenolol* and *Metformin* cases—such as expert consultation, glossary development, and source triangulation—remain highly relevant and transferable. Belhoutess (2023a) underscores that documentation must be institutionalized in Algeria to guarantee terminological consistency and safeguard patient safety.

The ethical dimension of documentation is particularly crucial in the Algerian context, where the translator's role remains largely undervalued. Ben Berrinis (2021) contends that documentation is not merely a technical procedure but an ethical obligation, particularly in medical settings where translation errors may carry life-threatening consequences.

8.3 Results and Implications

The comparative analysis of the two cases yields several key insights:

- **Terminological Accuracy:** Documentation significantly enhances the precision of complex medical terminology, thereby minimizing the risk of misinterpretation and clinical error.
- **Contextual Adaptation:** Consulting regulatory, clinical, and institutional sources enables translators to adapt terminology to the cultural and professional context of the target audience.
- **Quality Assurance:** Collaboration with healthcare professionals strengthens the reliability, clarity, and readability of translated materials, particularly those intended for patients.

- **Professional Empowerment:** Documentation elevates the translator's role from that of a linguistic intermediary to a mediator of knowledge, reinforcing their ethical responsibility in ensuring patient safety and institutional credibility.
- **Transferability:** The strategies applied in these cases are directly transferable to the Algerian context, where linguistic duality and structural fragmentation necessitate a rigorous, context-sensitive approach to documentation.

9. CONCLUSION

This study confirms that documentation is not merely a technical support in medical translation; it is a foundational pillar that ensures linguistic precision, scientific integrity, and ethical accountability. Through the two case studies presented, one involving the translation of a patient information leaflet for the beta-blocker Atenolol and the other for the antidiabetic drug Metformin, it becomes evident that documentation strategies directly influence the clarity, safety, and reliability of translated medical texts.

In the first case, the translator faced terminological challenges related to cardiovascular conditions such as bradycardia, angina pectoris, and black box warnings. The use of validated sources (e.g., WHO glossaries, MedlinePlus) and the creation of terminological sheets enabled the accurate rendering of critical information, thereby supporting informed patient decisions and minimizing risk. In the second case, the translation of pharmacological concepts such as lactic acidosis and renal impairment required not only terminological precision but also contextual adaptation to ensure accessibility for Arabic-speaking patients with limited medical literacy. Here again, documentation played a decisive role in bridging linguistic and conceptual gaps.

These examples illustrate that effective documentation goes beyond the consultation of technical resources. It involves the development of a cognitive methodology that is sensitive to institutional frameworks, regulatory constraints, and communicative goals. Documentation thus becomes an analytical practice that requires terminological awareness, semantic discernment, and the ability to navigate interdisciplinary knowledge.

However, the practice of documentation is not without challenges. Cognitive overload, lack of institutional support, and limited access to bilingual medical databases remain persistent obstacles. In Algeria, the absence of standardized medical terminology and the scarcity of specialized resources exacerbate these difficulties, underscoring the urgent need for a national framework that provides medical translators with unified reference tools, professional training, and collaborative platforms.

Beyond improving textual quality, documentation enhances communicative effectiveness, reduces the risk of conceptual or legal inaccuracies, and fosters a culture of translational responsibility. It affirms the translator's role not only as a linguistic

mediator but also as a knowledge agent whose work intersects with public health, legal compliance, and scientific dissemination. Documented medical translation thus transcends mere linguistic fidelity; it becomes a professional act of safeguarding patient welfare, institutional credibility, and intercultural trust.

In an era marked by rapid medical innovation and globalized healthcare communication, documentation remains the cornerstone of coherent, reliable, and impactful medical translation. Promoting a culture of documentation, investing in its tools, and embedding it within academic and professional training are essential steps toward achieving translations that uphold human dignity, preserve scientific knowledge, and serve institutional transparency with efficiency and integrity.

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