Clinical Practice Guidelines in French and Spanish: an Analysis of their Superstructure

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Abstract

The purpose of this paper is to provide elements that will help to further understand the clinical practice guideline genre in French and in Spanish, thereby facilitating the work of authors and translators. The study thus focuses on the analysis of the superstructure, with a view to offering guidelines for the construction of a sample prototype. First, we describe and define the genre in question. In the second section, we refer to the materials and methodological framework employed, describing the sub-domain chosen for analysis (rare diseases), the compilation and processing of the corpus and, finally, the research methodology implemented. The final section presents and discusses the results of the corpus analysis, which indicate the importance of advocating a single unique superstructure for the genre in question.

Resumen

Guías de práctica clínica en francés y español: análisis de la superestructura

El objetivo de este trabajo es proporcionar elementos que permitan un mejor conocimiento del género textual "guía de práctica clínica" en francés y en español que facilite su redacción y su traducción. Para ello, nos centramos en el estudio de la superestructura con la finalidad de ofrecer pautas para el establecimiento de un modelo prototípico. En primer lugar, se lleva a cabo una descripción y delimitación del género objeto de estudio. En segundo lugar, se recogen los datos relativos a los materiales y el marco metodológico, describiéndose el subdominio seleccionado (enfermedades raras), la compilación y el tratamiento del corpus, así como la metodología de investigación adoptada. En el apartado final, se presentan los datos obtenidos tras el análisis del corpus y se discuten los resultados, los cuales ponen de manifiesto la importancia de abogar por una estandarización superestructural del género.

1. Introduction

As early as 1991, Nord raised the need to undertake studies of textual analysis that would serve as a first step before translation. In this regard, we can say that 'competence' is a key factor to be developed by translation students. Training in translation competence skills enables learners to know and to understand how to translate. In short, training in translation competences is training in knowledge. We can say that the study of competences has been one of the cornerstones on which methodological studies in translation are based (Hurtado 2007: 169), and the concept of 'translation competence' (TC) has been used by many authors (Kiraly 1995; Hurtado 1996; PACTE 2000; Kelly 2002; EMT 2009, etc.), who have explored this notion as a skill that empowers the translator during the translation process.

On the other hand, translation competence presupposes another set of sub-competences present in translation as an expert activity, as is the case of textual competence, which is responsible for developing the capacity to understand, analyse and produce texts of diverse natures and fields of knowledge. Text typology focuses on a number of different aspects that restrict linguistic and stylistic options according to the field, the activity or the skill that is being developed. Therefore, translators should be able to understand and reproduce appropriate texts according to the context in which they are registered. In this regard, total comprehension of a text and its optimal equivalence in translation can only be achieved if the translator has full command of the structural aspects of the text. We can therefore consider textual competence as the ability that allows the translator to use different genres in a variety of communicative situations, attending to aspects such as the participants and the purposes intended. Consequently, the text constitutes a fundamental integrative element in the translation process.

In this paper, we analyse the way in which information is structured and organised in clinical practice guidelines, a novel and extremely interesting medical text genre that has acquired an increasingly important role in the field of medical procedures in recent years, because it is one of the best methodological tools for improving patient care and security. We focus on a corpus of clinical practice guidelines in the field of rare diseases (a medical area that plays a very important role in our research)[1] and our aim is to prove that the study, knowledge, analysis and handling of text genres, and hence of their superstructure, help to improve the quality of their translations into other languages.

2. The clinical practice guideline genre: main features and defining aspects

Given the variety of different care and therapeutic options available, clinicians have to make daily decisions based on their ability to identify and adopt the most appropriate alternatives for each case (Jovell 1999: 29-31). The inherent difficulty of such a process is currently growing thanks to the countless possibilities and alterna-

tives that continually appear as a result of scientific progress, compounded by the impossibility of assimilating all the clinical information available (Casas Valdés et al. 2008). Furthermore, clinicians' knowledge of the medical problems they encounter may not always be fully up-to-date, or they may need to be provided with an explanation that enables them to fully and accurately understand the dimensions of a given problem.

In order to deal with such complexity, health services, scientific societies and health policy-makers publish guidelines indicating the recommended course of action in each case (Shekelle 2001). The purpose of these recommendations is to improve health care.

For centuries, clinical practice was essentially based on a physician's personal experience and opinion. However, the enormous strides made by science in general and biomedical innovation in particular, together with the development of computer tools and the continuous expansion of the frontiers of technology and communications, are changing the way in which clinicians deal with the numerous problems they encounter in their daily work (Clancy 2005). Similarly, the obvious need to make available the specific clinical knowledge required has led to the arrival of a variety of new products for storing and accessing such information.

Clinical practice guidelines (CPGs) are designed to help clinicians assimilate, evaluate and apply state-of-the-art evidence and opinion, and facilitate the decision-making process. Their goal is to improve care quality and to rationalize the use of medical resources; they also help to reduce the degree of variability in clinical practice and encourage informed evidence-based decision-making, thereby improving patient health outcomes. For Montalt and González Davies (2007: 79) CPGs are meant to transfer important biomedical research to the clinic, and as a result, they are systematically developed statements to assist practitioner and patient decisions regarding appropriate health care for particular clinical situations.

CPGs are thus an extremely useful text genre because in addition to helping healthcare professionals, as indicated above, they also support healthcare managers and planners in making decisions. Furthermore, they are an essential tool for standardizing clinical practice in certain areas. Significant improvements to the effectiveness of medical intervention and healthcare quality can therefore be delivered through the development and implementation of CPGs (Field 1990).

According to Montalt and González Davies (2007: 31-59), CPGs are: a professional genre, that is a kind of text used by health professionals (doctors, nurses, technicians, etc.) in the course of their work in clinics and in the health industry; an instructional genre, because the rhetorical purpose of the writer is to give instructions to readers so that they carry out certain actions and, also, a genre used to bridge communication gaps between physicians and researchers due to the need to apply advances in research in order to improve clinical practice and patients' treatment, *inter alia*.

The most widely-used definition of CPGs is that given in 1990 by the *Institute of Medicine* (IOM): "[…] statements systematically developed for the purpose of help-

ing providers and their clients select appropriate health care for specific clinical conditions" (Field 1990: 15). Their principal aim is to offer clinicians a series of guidelines with which to resolve, on the basis of scientific evidence, the problems they encounter in their daily work with patients. In 2011, however, the IOM itself redefined CPGs in the following terms, a definition which has been approved and adopted by numerous international and domestic institutions:

> Clinical practice guidelines are statements that include recommendations intended to optimize patient care that are informed by systematic review of evidence and an assessment of the benefits and harms of alternative care options. (Graham et al. 2011: 2)

This shift in emphasis not only brings with it a new definition of CPGs, but also defines their essential characteristics. The IOM (1992) maintains that CPGs should be based on the best scientific evidence available and be developed, using an explicit procedure, by panels of experts in which all the groups involved are represented. It also stresses the importance of taking measures to prevent bias, distortion or conflicts of interest and giving a clear explanation of the relation between the evidence, available options, health outcomes and the strength of the recommendations made. It also considers that relevant aspects of sub-groups of patients and their perspective should be taken into account and that mechanisms for updating guidelines should be made available (Grupo de Trabajo sobre GPC 2016).

On the one hand, this new definition clearly differentiates between the term 'CPG' and other tools for improving clinical practice, appropriate use criteria, quality measures, etc. On the other, it includes three aspects that according to Hernández Rodríguez (2008) are essential for characterizing the genre:

- Recommendations: they suggest how to proceed in the face of a specific situation.
- Systematic development: an in-depth study of published medical repertoires in order to extract precise recommendations, free from inconsistency or contradiction.
- Elements to facilitate decision-making: they are aimed at both clinicians and patients in order to simplify the search for a solution to a specific clinical problem.

2.1. The origin of CPGs

This text genre first appeared in the context of the so-called *Médecine d'Observation* movement that arose in the mid-nineteenth century in France. Its first proponents, Louis, Bichot and Magendie, argued that clinicians should not base their clinical practice exclusively on their own personal experience and their view of what action to take in the face of a given illness, and that such practice should be rooted in the quantifiable results of applied research (Hernández Rodríguez 2008).

Louis demonstrated the effectiveness of this methodology with his 'numerical method', which revealed the degree of ineffectiveness of certain treatments for some illnesses. This led to the withdrawal of inappropriate therapies, with significant impact in France, United Kingdom and the United States (IAMBE 1999).

In 1948, following the definition of the 'randomized clinical trial' concept, new scientific research and analysis techniques appeared, based on statistics and clinical epidemiology. Thus, the Anglo-Saxon medical doctors David Sackett (USA), Archibald Cochrane (Scotland), Iain Chalmers (England), Gordon H. Guyatt (Canada) and Peter Tugwell (Canada) reached the conclusion that epidemiology made it possible to improve the quality of diagnosis, prognosis and therapy (Boucourt Rivera 2003: 3-4).

In the early 1960s, other institutions, amongst them McMaster University (Canada), adopted this new approach and used it as the educational cornerstone of biomedical studies. The driving force behind this movement, however, was the Scottish epidemiologist Archie Cochrane, who in the 1970s advocated a critical review of all clinical trials (Romero et al. 2001: 27-31).

At the same time, development and innovation on the technological front favored the implementation of this approach, encouraging the new adoption of new healthcare archetypes. The first clinical practice guidelines appeared in 1989, constituting a new text genre arising from the need to boost clinical effectiveness (Lomas et al. 1989: 1306-1311): epidemiology had paved the way for evidence-based medicine (Hinojosa Álvarez 2001).

The CPG genre thus arose as a way of reducing variability in clinical practice through the systematic review of scientific evidence and professional clinical judgment, but also as a result of the need to attend to a wide variety of aspects of a clinical nature.

3. The formal aspect of genres and text superstructure

Formal analysis makes it possible to deliver the conventional elements linked to users' expectations that come into operation when characterizing a genre. As mentioned above, our goal is to analyse one of the basic elements of a text's formal aspect: its superstructure. This is a fundamental aspect that enables text content to be organized and subsequently recognized by the translator, by means of rhetorical sequences that allow its global meaning to be understood (García Izquierdo 2012: 112).

The subject of variations in the ways texts behave in different languages has occupied numerous authors in the field of translation studies, and more specifically text analysis. Examples include Neubert (2000), Hatim and Mason (1997), Baker (1992) and Nord (1991), amongst others, whose proposals have mainly focused on issues concerning text structure, approached from a variety of angles.

Understanding a text involves penetrating its meaning and building a model of its communicative situation. From the point of view of translation, this skill enables

translators to produce texts that are suitable for the communicative situation they are working with.

The hierarchical organization of the information contained in texts is achieved by means of an analysis of their superstructure (Van Dijk 1993). The approach used to analyse the structure of the texts in the ERCOR corpus is thus based on the model of semantic representation put forward by Van Dijk (1993), in which the notion of superstructure refers to a text's form or organization or the framework of formal categories that give a text its structure.

3.1. Text superstructure

According to Van Dijk (1993), the superstructure is the way in which a text's information is organized, in other words, the formal structure or the abstract representation of the global structure that characterizes a text regardless of its subject matter.

The superstructure of any given text is clearly genre-dependent, this being one of the most relevant issues in studies concerning the notion of text genre (Göpferich 1995). This extremely close link between text and superstructure means that the latter is the most cohesive element of a genre.

Many authors (Van Dijk 1993; Bassols and Torrent 1996; Calsamiglia and Tusón 1999) stress the importance of recognizing the structural organization of written texts. Similarly, a number of studies have been carried out in the field of biomedical translation (Díaz Alarcón 2016; Olmo Cazevieille 2015; Muñoz Torres 2011; García Izquierdo 2009; Agulló Benito 2008) that reveal the need for translators to have a proper command of superstructural matters in order to produce high-quality translations.

In this paper we analyse the superstructure of the CPGs in the ERCOR corpus in order to determine to what extent structural homogeneity can be said to exist in Clinical Practice Guidelines, as well as to obtain the data needed to better understand the genre and assist in its translation.

4. Materials and Methods

We will now describe the characteristics of the ERCOR corpus[2] on CPGs in the biomedical sub-domain of rare diseases and the criteria used to select the texts it comprises. We will also deal with the compilation and processing of the corpus itself (annotation, tagging and analytical tools), aspects which underpin the quality of the research undertaken, and explain the analytical methodology we have used.

4.1. ERCOR corpus: text selection criteria

Before selecting text samples for inclusion in the corpus we needed to complete a thorough review of the documents available in the chosen specialist domain, consult-

ing sources such as EURORDIS, ERDF or the NGO Committee for Rare Diseases at the United Nations.

The reason for choosing this particular text genre is the important role played by CPGs in the field of RD, as highlighted in a report published by the Quebec-based INESS (*Institut national d'excellence en santé et en services sociaux*). This report, produced for the purpose of establishing a common international strategy regarding the treatment of rare diseases (RD), includes data on the national programs of several countries and a review of a large number of official European Union documents. Referring to the foremost and most effective instruments currently used in providing services to RD sufferers, the report states: "On trouve peu de guides de pratique clinique dans le domaine des maladies rares" (Elger 2011: 24), followed by an equally important recommendation: "On souligne également l'importance de se doter de guides de pratique clinique" (2011: 30).

In order to select texts for inclusion in the French part of the CPG sub-corpus, after a number of fruitless searches the helpdesk at Orphanet, the portal for drugs used to treat RD and orphan diseases, informed us that in France CPGs dealing with RD are known as PNDS (*Protocoles Nationaux de Diagnostic et de Soins*). Their creation, by experts at centres of reference for RD, was approved by the first National RD Program (2005-2008) and confirmed in the Second National Program (2011-2014). PNDS are drafted according to a method proposed by the Senior Health Authority (*Haute Autorité de Santé* - HAS), the leading independent scientific public authority that regulates the French health system on the basis of two guiding principles: quality and efficacy. Through the HAS website we were able to consult the existing CPGs for RD. As far as compilation of the Spanish CPGs is concerned, this was done by means of the specialist search engines in the Guía Salud portal.

To ensure that the corpus comprised high quality texts, during the compilation phase we used the criteria put forward by Bowker (1996), EAGLES (1996), Meyer and Mackintosh (1996) and Pearson (1998). We also took into consideration the indications set out by Mayoral (1997-1998), who, starting from the above-mentioned proposals, sums up the requirements that sources of information need to fulfil in seven essential criteria: reliability, authority, accessibility, originality, specificity, thoroughness and the end user. We considered these criteria to be both necessary and sufficient to determine the reliability of the sources we used, and thereby to guarantee the quality and cost-effectiveness of our work.

Since one of the most controversial aspects in corpus linguistics concerns compilation criteria, there being no hard and fast rules for their creation, compilers themselves have to adapt the criteria proposed by different researchers to the intended purpose of the corpus. In our case, similar criteria were used to select the CPGs in each sub-corpus, bearing in mind we needed a comparable corpus. In this regard, we would like to highlight that since the French CPGs were all produced by the same agency (the HAS) and were the only ones in existence, we decided that the Spanish CPGs should also have been produced by a single official agency, to avoid any possible imbalance

in the results of their analysis. Thus, after asking the Spanish National Health System (SNS) to recommend an agency that produced high quality guides, we selected the RD CPGs drafted by CENETEC (*Centro Nacional de Excelencia Tecnológica en Salud*), an agency of the Mexican National Health System. This agency has published the highest number of CPGs in Spanish, enabling us to compile a representative sample of texts. A further reason for this selection is that the CENETEC's catalogue of CPGs:

> is significant, both in terms of the number of CPGs it contains, making it one of the most wide-ranging catalogues in the world, and of its quality and coverage of public health problems that represent the main causes of morbidity and mortality in the general population (Organización Panamericana de la Salud 2015).

Furthermore, in contrast to this situation, "In Spain […], there are still only a small number of clinical practice guidelines created using a systematic methodology based on the best possible evidence" (Alonso Coello et al. 2007: 9).

4.2. Compiling, processing and exploiting ERCOR

ERCOR consists of texts originally written in French and Spanish which, without being translations from one language into the other, were selected using the same criteria to ensure their comparability. Two sub-corpora were created, one in French and the other in Spanish, using the compilation criteria developed by EAGLES (1996): quantity, quality, simplicity and documentation.

In order to ensure an equitable balance between the two sub-corpora, the same number of CPGs were incorporated for each language, and each sub-corpora included almost the same number of tokens. Furthermore, for reasons of representativeness, the text samples chosen were all of similar length.

The table below shows the most significant statistical information for each of the two sub-corpora: size, number of tokens and types, type/token ratio and number of sentences:

Table 1. The ERCOR corpus: statistical data

	FRENCH SUB-CORPUS	SPANISH SUB-CORPUS
Size (bytes)	811,221	587,119
Tokens	216,776	215,206
Types	8528	7678
Type/token ratio	6.71	9.08
Standardized type/token ratio	41.17	36.64
Sentences	3886	3460

ERCOR consists of 30 texts containing a total of 431,982 words, divided almost equally between the two sub-corpora. Halverson (1998) states that although one of the main criteria for defining a corpus is the number of words it contains, length alone does not always guarantee effectiveness and representativeness, making it necessary to take other aspects into account. In this sense, and in accordance with Walsh (2013), ERCOR's size is representative of both the biomedical domain and the chosen genre. In addition, authors like Kennedy (1998) affirm that a very large corpus does not have to be necessarily more useful than one of smaller size, since the utility will depend on the purpose of the compilation and, above all, the representativeness of the texts in a specific area.

The texts in ERCOR are structured in accordance with the guidelines suggested by the *Text Encoding Initiative Consortium* (TEI). Each text carries a heading with its external data (author, title, date of creation, size, etc.) and also internal data such as its genre. This heading makes it possible to perform partial semi-automatic queries, so that any text, for example, can be excluded from the analysis process at any given moment.

The corpus was morphologically tagged with *TreeTagger,* using decision trees, thereby adding a linguistic structure to facilitate analysis. Additionally, *WordSmith Tools* was used to exploit the corpus by means of word-in-context and statistical searches.

TreeTagger is a morphosyntactic annotation tool that in addition to giving part-of-speech information also provides the lemmas for the words it processes. It uses a probabilistic method based on the use of trigrams to determine the part of speech of words in a corpus, estimating transition probabilities with a binary decision tree, which automatically determines the appropriate size of the context which is used to do so. Our reason for using this tagger is based on our decision to follow the EAGLES standard with regard to word categories and morphosyntactic features, thereby assigning each word to a major word category, an attribute that according to Leech and Wilson (1996) is obligatory.

WordSmith Tools, on the other hand, is a corpus analysis tool that makes it possible to exploit large sets of texts through the use of contextual and/or statistical searches. The software package has three core modules: one that lists all the words or word forms either in alphabetical order or in order of frequency (*WordList*); another that lists words in their context (*Concord*); and a third that creates a list of key words (*KeyWords*).

4.3. Methods

The methodology used to analyse the superstructure began with an initial analysis of each sub-corpus and the subsequent comparison of their prototypical superstructures. Using the above-mentioned tools to exploit ERCOR enabled us –after converting the documents into plain text and ridding them of irrelevant data such as website

and postal addresses or telephone/ fax numbers, etc.–to obtain not only the key forms for identifying superstructural elements but also statistical data. Additionally, following Göpferich (1995: 389-390), we also analysed formal elements of CPGs (typographical features) by working with the original texts in graphic format.

Exploitation of the corpus was based on the recommendations made by the Spanish National Health System regarding the essential sections that any CPG should include. A prior selection was made of those forms that could potentially be CPG superstructural markers in both languages, checking for their presence in the corpus by analysing the *WordList* generated with *WordSmith Tools*. Using this program to determine the frequency of their appearance produced the following results:

Table 2. ERCOR Frequency Analysis

FRENCH SUB-CORPUS	Frequency (%)	SPANISH SUB-CORPUS	Frequency (%)
Objectifs	24 (0.02%)	Objetivos	34 (0.04%)
Évidences	-	Evidencias	35 (0.04%)
Recommendations	-	Recomendaciones	71 (0.08%)
Annexes	38 (0.02%)	Anexos	37 (0.02%)
Références bibliographiques	26 (0.01%)	Bibliografía	28 (0.01)

By combining these initial findings with the word list analysis provided by *WordSmith Tools* and morphosyntactic tagging, more accurate searches could be carried out, producing more data. For example, the *Concord* program in *WordSmith Tools* was used to describe collocation context. Thus, in the French sub-corpus we placed the key word *objectifs* in the centre and added 3 words to the right and none to the left (L0 + Centre + R1 + R2 + R3). This produced a wholly new occurrence: *Objectifs du PNDS*. The *Clusters* option then showed us that it was a phraseological structure that appeared in all the texts of the French sub-corpus, as indicated by its frequency of appearance. The screenshot below shows the real results obtained with *WordSmith Tools*:

Figure 1. Concordance results of *Objectifs du PNDS*

A similar procedure was followed for the Spanish sub-corpus. Using the same configuration as for the French sub-corpus (L0 + Centre + R1 + R2 + R3), we placed the key word *objetivos* in the central position and added 3 words to the right and none to the left. Once again a wholly new occurrence appeared: *Objetivos de esta guía*. The *Clusters* option confirmed that this was a phraseological structure found in all the texts in the Spanish sub-corpus (15), as shown below:

Figure 2. Concordance results of *Objetivos de esta guía*

In order to confirm whether the sections identified in the initial selection not only appeared in the corpus, but also constituted a major superstructural component of CPGs, a variety of analytical tasks were carried out. For example, and in relation to the bibliography section of the French sub-corpus, we used *WordSmith Tools* and the tags given by *TreeTagger* to search for the following sequence: "références + ADJEC-TIVE" (références NC * ADJ). The search results revealed that the phrase *Références bibliographiques* appeared in all the texts within this sub-corpus. In the case of the equivalent section in the Spanish sub-corpus we used the concordance analyser in *WordSmith Tools* instead. Although a previous analysis using *WordList* had reflected a high frequency of the word *bibliografía* in the Spanish sub-corpus, even so, we checked whether the phraseological structures in the French sub-corpus, namely *referencias bibliográficas,* also appeared in the Spanish sub-corpus. To do so we used the morphosyntactic tags given by *TreeTagger* and performed a search for the sequence: "referencias + ADJECTIVE (referencias NC * ADJ). The results revealed that the phrase *referencias bibliográficas* did not appear in any of the texts in the Spanish sub-corpus. Then, in order to check whether *bibliografía* was a superstructural element within the Spanish sub-corpus we carried out a concordance analysis using *Word-Smith Tools*. We therefore defined the context of the collocation by placing the word *bibliografía* in central position and omitting all other positions to both left and right (L0 + bibliografía + R0). The corresponding result gave a frequency of 15 to the word *bibliografía*, which appeared in all 15 texts that constitute the Spanish sub-corpus.

The same procedure, namely using the sequence (L0 + Centre + R0) was also carried out in both sub-corpora for the words *annexes/anexos*, giving exactly the same result of a frequency of 15 appearances in each sub-corpus.

We also needed to see whether certain sections, initially taken to be different, could in fact constitute a single section. In the case of the Spanish sub-corpus, these were *evidencias* and *recomendaciones*. Thus, using *WordSmith Tools* in combination with the morphosyntactic tags given by *TreeTagger*, we performed a search for the sequence "evidencias + CONJUNCTION + COMMON NOUN" (evidencias CN * CC * CN). The result of this search gave *Evidencias y recomendaciones*, an occurrence that appeared in all the texts in the Spanish sub-corpus. This was then checked with the *Clusters* option in *WordSmith Tools*.

Figure 3. Concordance results of *Evidencias y Recomendaciones*

Additionally, using the morphosyntactic tags provided by *TreeTagger,* we analyzed the most frequent patterns to help us find candidates that could be considered as superstructural elements. Thus, we first performed a search (using the corresponding tags) for common syntactic patterns in section headings: common noun (CN) + conjunction (CC) + common noun (NC) / common noun (CN) + adjective (ADJ) / common noun (CN) + preposition (PREP) + common noun (CN). This analysis revealed certain superstructural elements, such as:

• Pattern CN + CC + CN: *diagnostic et évaluation* (with a frequency of 15 in the French sub-corpus) and *autores y colaboradores* (with a frequency of 15 in the Spanish sub-corpus).

Figure 4. Concordance results of *Autores y Colaboradores*

- Pattern CN + ADJ: *objectifs principaux* and *professionnels impliqués* (both with a frequency of 15 in the French sub-corpus) and *aspectos generales* and *comité académico* (both with a frequency of 15 in the Spanish sub-corpus).

Figure 5. Concordance results of *Professionnels impliqués*

- Pattern CN + PREP + CN: *liste d'abréviations* and *prise en charge* (both both with a frequency of 15 in the French sub-corpus) and *glosario de términos* (with a frequency of 15 in the Spanish sub-corpus).

Figure 6. Concordance results of *Glosario de términos*

To complete the results of the various kinds of analysis performed, of which some have been described above, we also consulted the CPGs in their original format, analysing their characteristic typographical features. This enabled us to define additional superstructural elements to those found in our initial selection (e.g. FAQs, data on the disease they cover, acknowledgements, etc.), for which we then performed specific searches.

The data obtained with this methodology enabled us to define the superstructure of each sub-corpus, which is described in greater detail below.

5. Results of the analysis

As previously mentioned, CPGs –and consequently their recommendations–help healthcare professionals to make clinical decisions in their daily practice. Although their structural layout is easy to interpret, there is no unique template or indeed legislation to determine CPG design standards or to provide a strict prototype of their superstructure: "[…] the writing of CPG (*Clinical Guidelines*) is not regulated by strict norms" (Montalt and González Davies 2007: 79). In response to our query on this matter the SNS has corroborated this statement and confirmed the current lack of a mandatory international standard for the development of a CPG superstructure.

That said, we will now present the results of our analysis, carried out according to the parameters and proposals on text genres stated above.

5.1. Results for the French sub-corpus

The CPGs of the French sub-corpus include the following elements, listed in order of appearance:

- list of abbreviations: CPGs start with a list of abbreviations used throughout the document, a common feature of many technical or scientific publications (Martínez de Sousa 2008: 448) that serve as a guide for the reader. The abbreviations are ordered alphabetically for ease of consultation, and appear before the introduction:

> En vue de faciliter la lecture du texte, les abréviations et acronymes utilisés sont explicités ci-dessous.

- abstract (1 or 2 pages) intended for the clinician treating the patient, giving a summary of the disease and its diagnostic and therapeutic treatment; clinical signs for establishing the diagnosis; the clinician's role in treating the disease (what he should and should not do); and a list of useful contacts (Internet addresses of centres of reference, patient associations, Orphanet, etc.):

> Synthèse à destination du médecin traitant: la dysplasie fibreuse des os est une maladie osseuse bénigne, congénitale mais non transmissible à la descendance, due à une mutation du gène gnas, codant pour la protéine Gsɑ. Sa prévalence est inférieure à 1/2000. Elle touche les deux sexes de manière égale. La maladie est caractérisée par une prolifération bénigne, localisée de tissu d'allure fibreuse dans la moelle osseuse : il ne s'agit pas d'une tumeur, mais une évolution sarcomateuse, bien que possible, est très exceptionnelle. Les lésions osseuses sont soit uniques (forme monostotique, deux tiers des cas), soit multiples (forme polyostotique, un tiers des cas). Elles sont fréquemment asymptomatiques, mais peuvent se manifester par des symptômes ou complications diverses : douleurs, déformations, hypertrophie, fragilisation (fissures, fractures) ou compression de structures de voisinage généralement peu après la puberté. […]

- introduction (maximum 1 page) including general information about the disease (e.g. definition, etiology, incidence data, prevalence, etc.):

> La cardiomyopathie hypertrophique (CMH) est une maladie myocardique primitive pouvant revêtir plusieurs aspects cliniques et anatomiques. Sa prévalence a été estimée entre 0,02 et 0,2 % de la population générale. Elle est rencontrée dans environ 0,5 % des patients adressés à un centre d'échocardiographie, en l'absence de toute sélection préalable. Son incidence est mal évaluée. La CMH est la principale cause de mort subite chez le sportif de moins de 35 ans. L'incidence annuelle de la mort subite dépasse 4 % chez les sujets classés à haut risque. Il n'y a pas de lien avec la mort subite du nourrisson (la mort subite liée à la CMH survient en règle après l'âge de 8 à 10 ans). […]

- description of the different stages of treatment, stating the goals, the healthcare professionals involved, the coordination mechanisms between the former and the content of the treatment for each stage:

  o the diagnosis and initial assessment stage: elements that raise suspicion of the diagnosis, confirmation of the diagnosis, assessment of the degree of severity of the disease, search for co-morbidities, assessment of the prognosis, search for contraindications with regard to treatment, announcing the diagnosis and informing the patient, giving genetic advice, etc.

> Évaluation diagnostique. Les objectifs sont les suivants : confirmer le diagnostic ; rechercher les atteints associées et évaluer leur retentissement ; annoncer et expliquer la maladie au patient et à l'entourage ; informer sur l'existence d'une association de patients ; définir la stratégie de prise en charge. Les professionnels impliqués sont les suivants : pédiatre ; médecin généraliste ; interniste ; généticien ; rhumatologue ; dermatologue ; endocrinologue ; gynécologue et obstétricien ; stomatologue et dentiste ; orthopédiste ; radiologue ; anatomo-pathologiste ; médecin du travail et médecin scolaire. La confirmation du diagnostic et l'évaluation des atteints associées sont réalisées dans un centre de référence ou de compétences. […].

  o the medical and paramedical therapeutic treatment stage

> La prise en charge médico-chirurgicale est avant tout symptomatique. L'objectif principal est de contrôler l'activité de la maladie, de réduire la douleur, de prévenir les risques liés aux différentes complications, de prévenir la perte de fonction dans les activités quotidiennes et au travail et d'optimiser la qualité de vie. Pour ce faire, une prise en charge globale est nécessaire. […]

  o the follow-up stage

> Les objectifs du suivi sont : dépister et prendre en charge les complications de la maladie ; évaluer l'efficacité et la tolérance des traitements ; assurer la cohérence de la prise en charge pluridisciplinaire ; améliorer la qualité de vie des patients et s'assurer de leur bonne intégration sociale, scolaire, professionnelle ; s'assurer de la bonne compréhension des informations sur la maladie et sa prise en charge. […]

- annexes: these include a list of the persons who participated in developing the guide and a list of the postal addresses of expert and reference centres and patients' associations. They may also include other useful elements for implementing the guidelines (e.g. tables, classifications, sample letters to clinicians, etc.):

> Annexe 1 : algorithmes. Annexe 2 : lettre d'information aux parents. Annexe 3 : lettre d'information au médecin traitant Annexe 4 : liste des participants. (…) Annexe 5 Coordonnées du(des) centre(s) de référence, de compétences et de l'association de patients. […]

- bibliographical references: catalogues or lists of books and/or journal articles for further reading.

5.2. Results of the Spanish sub-corpus

As far as the Spanish sub-corpus is concerned, the CPGs it contains display the following structural elements:

- authors and collaborators: a detailed list of the authors and collaborators who developed the guidelines, specifying their scientific discipline and place of work:

> Autores: Antonio Barrera Cruz – Médico internista y reumatólogo – Instituto Mexicano del Seguro Social; Alejandra González Martínez – Médico internista – Instituto Mexicano del Seguro Social; Lorenzo Hernández Ordaz – Neurólogo – Instituto Mexicano del Seguro Social; Roberto Peralta Juárez – Médico internista – Instituto Mexicano del Seguro Social.

- classification: a table including data about the target healthcare professionals, classification of the disease, level of care, CPG category, users, target population, the interventions and actions contemplated, expected impact on health, methodology, assessment and suitability method, conflicts of interest, registry details and updates;

- FAQs to be answered by the CPG. These are a full list of clinical questions that cover all aspects of the topic: the patient (age groups, stage of the disease, comorbidity, etc.), the clinical intervention (intervention, prognosis, etiological agent, diagnostic tests, etc.), a comparison of alternatives and outcomes (clinically significant variable outcomes, e.g. effectiveness, prognosis, etiology, etc.):

> ¿Cuál es el tratamiento de primera línea que debe emplearse en el paciente con diagnóstico establecido de miastenia *gravis* generalizada leve o con miastenia ocular? ¿En qué situaciones se debe comenzar a administrar los corticoides, en qué dosis y cuál es su eficacia y seguridad en el manejo del paciente adulto con miastenia *gravis*? ¿Cuál es la eficacia y seguridad de los inmunosupresores, solos o en combinación, para inducir mejoría y remisión de la enfermedad?

- general aspects: a description of the state of the art, the reasons for developing the guideline, its purpose as a tool for standardizing RD diagnosis and treatment and a definition of the disease in question:

> Justificación: la miastenia *gravis* constituye una enfermedad neuromuscular autoinmune y crónica que afecta a individuos de todas las edades y produce un deterioro importante en la calidad de vida de los pacientes. […] El tratamiento más efectivo del paciente adulto con miastenia *gravis* autoinmune es aún motivo de discusión. Hasta el momento, ningún tratamiento ha demostrado ser eficaz en estudios clínicos rigurosos, de manera que el tratamiento debe ser individualizado.
>
> Propósito: el presente documento describe las estrategias terapéuticas más eficaces y seguras, actualmente disponibles, para el manejo de la miastenia *gravis*. La implementación de las recomendaciones descritas pretende contribuir a disminuir la variabilidad de la práctica clínica en la atención integral de este grupo de pacientes.
>
> Definición: la miastenia *gravis* es una enfermedad neuromuscular autoinmune y crónica, mediada por anticuerpos contra el receptor nicotínico de acetilcolina, que se caracteriza por debilidad fluctuante de los músculos esqueléticos (voluntarios del cuerpo) y fatiga.

- evidence and recommendations: includes the available information organized according to criteria relating to the quantitative, qualitative, design and results features of the studies on which the former are based:

> Evidencia: los inhibidores de acetilcolina son fármacos de primera línea en el manejo de todas las formas de miastenia *gravis*.
>
> Recomendación: se recomienda el uso de inhibidores de acetilcolina en el tratamiento sintomático del paciente con diagnóstico reciente de miastenia *gravis* y a largo plazo en el paciente con miastenia leve, especialmente en el paciente con enfermedad ocular.

- annexes: these include the systems used to classify the quality of the evidence and the strength of the recommendations, as well as additional information (diagrams, figures, images, etc.) helping to enrich the guideline:

> Anexo 1: protocolo de búsqueda.
>
> Anexo 2: sistemas de clasificación de la evidencia y fuerza de la recomendación
>
> Anexo 3: clasificación o escalas de la enfermedad
>
> Anexo 4: medicamentos
>
> Anexo 5: algoritmos
>
> Anexo 6: diagramas de flujo

- glossary: a catalogue of terms, acronyms and abbreviations with their definitions or explanations;
- references: a list of the scientific publications consulted on which the evidence and recommendations are based;

- acknowledgements: where the authors express their gratitude to those whose work has made the guideline possible:

> El grupo de trabajo manifiesta su sincero agradecimiento a quienes hicieron posible la elaboración de esta guía por contribuir en la planeación, la movilización de los profesionales de la salud, la organización de las reuniones y talleres, la integración del grupo de trabajo, la realización del protocolo de búsqueda y la concepción del documento, así como su solidaridad institucional.

- academic committee: a list of the members of the consultative body responsible for ensuring the guideline's quality;
- directory: a list of the people and/or institutions involved in developing the guideline;
- national clinical practice guidelines committee: a list of the people who make up the National Clinical Guidelines Committee, organized according to the post they hold.

5.3. Comparing and analysing the results

A comparison between the two sub-corpora reveals numerous obvious differences in the way CPG superstructure varies from one language to the other, which are reflected in the ordering of their different sections. Furthermore, the CPGs in the French sub-corpus have fewer sections (maximum 8) than those in the Spanish sub-corpus, where they can have up to 12 different sections.

Table 3 summarizes the findings of the analysis of CPG superstructure for each language, with the heading(s) of each section and/or chapter as they appear in the samples included in the two sub-corpora.

Regardless of the differences in superstructure, which become evident at first sight, the texts in both sub-corpora fulfil a basic criterion regarding scope and purpose that all CPGs should observe, since they all have a section in which they present the context in which they occur, the medical specialty they deal with and their end purpose. In both sub-corpora this section provides a detailed description of the CPG's main objectives and an in-depth definition of the disease for which they have been written. This is of utmost importance since it will have a direct effect on the guideline's impact on the health of the target population.

The two sub-corpora also share certain other common elements in their superstructure, shown in Table 4.

Table 3. General superstructure of the French and Spanish sub-corpora

Superstructure: French sub-corpus[3]	Superstructure: Spanish sub-corpus[4]
1. Liste d'abréviations	1. Autores y colaboradores
2. Synthèse pour le médecin traitant	2. Clasificación
3. Introduction a) Objectifs du PNDS b) Définition de la maladie	3. Preguntas a responder por esta guía
4. Diagnostic et évaluation a) Objectifs principaux b) Professionnels impliqués	4. Aspectos generales a) Antecedentes b) Justificación c) Objetivos de esta guía d) Definición
5. Prise en charge a) Objectifs principaux b) Professionnels impliqués c) Prise en charge	5. Evidencias y recomendaciones
6. Suivi a) Objectifs principaux b) Professionnels impliqués c) Suivi / Rythme et contenu des consultations	6. Anexos
7. Annexes	7. Glosario de términos
8. Références bibliographiques	8. Bibliografía
	9. Agradecimientos
	10. Comité académico
	11. Directorio / Directorio sectorial y del centro desarrollador
	12. Comité nacional de guías de práctica clínica

Table 4. Elements common to the superstructure of both the French and the Spanish sub-corpora

Superstructure: French sub-corpus[5]	Superstructure: Spanish sub-corpus[6]
3. Introduction a) Objectifs du PNDS b) Définition de la maladie	4. Aspectos generales a) Antecedentes b) Justificación c) Objetivos de esta guía d) Definición
7. Annexes	6. Anexos
1. Liste d'abréviations	7. Glosario de términos
8. Références bibliographiques	8. Bibliografía

These sections are also fundamental, since they provide a guarantee of a guideline's quality by including certain aspects that the IOM considers essential for all CPGs, such as clinical applicability (matters relating to guidelines' objectives and the definitions of the diseases they deal with), documentation (the bibliography consulted) and linguistic clarity (glossaries to clarify terminological aspects). Taken together, the above reveals the need for a unified CPG superstructure in the form of a standard template for different languages (such French and Spanish) and clinical areas, as is the case of other text genres in the biomedical field such as drug package leaflets, for which national, European and international regulations have been introduced (Council Directive 92/27/EEC of 31 March 1992 on the labelling of medicinal products for human use and on package leaflets). Whilst we are aware of the difficulties involved, given the diversity of cultures and topics, we consider that the superstructure of all CPGs should include a series of common elements that we put forward in Table 5.

When developing the proposed prototype for a CPG superstructure we worked from the results of our comparative study and the methodological recommendations made by a variety of agencies and institutions such as MAGIC, DECIDE, GIN-McMaster and the Spanish National Health System.[7]

Table 5. Proposed prototype for a CPG superstructure

Proposed prototype for a CPG superstructure
1. Table of Contents
2. Authors
3. FAQs
4. Introduction
5. Purpose
6. Methodology
7. Evidence and recommendations
8. Annexes
9. References

The intended purpose of the model proposed is to standardize CPG superstructure, it being our belief that a clearer layout will facilitate their implementation. In our opinion, CPGs should contain the following sections, in the order in which they are listed:

1. Table of Contents: to include the relevant information, presented in a structured and user-friendly format, to facilitate the use of the CPG.

2. Authors: to include a detailed list of all those who contributed to the CPG's development, together with their respective discipline. A declaration of interest is also recommended for inclusion.

3. FAQs: to include the most relevant clinical questions based on a review of the literature, formulated in accordance with the PICO (Patient – Intervention – Comparison – Outcome) method.

4. Introduction: to include a clear rationale for producing the CPG, a brief description of its main objective and a list of patient groups and healthcare professionals for whom it is intended.

5. Purpose: to include a precise definition of the CPG's scope and end users, together with the representative capacity of all those involved in its production (healthcare professionals and patients), either as members of the developing group, collaborating experts or external reviewers.

6. Methodology: to show that a detailed review of the literature has been undertaken, using an explicit search strategy, and to define the criteria used to include or exclude published articles.

7. Evidence and recommendations: to show that evidence has been gathered on the basis of a thorough review and assessment of the scientific literature (systematic review, scientific rigour of published articles, bias-free results, etc.) in order to testify to the relevance and magnitude of the results obtained, which can in turn be extrapolated to future patients. Recommendations should be scaled according to strength, i.e. they should show that their effects are more beneficial than harmful, or vice-versa.

8. Annexes: to include the main diagnostic and therapeutic algorithms.

9. References: to include a list of sources consulted, reflecting the use of a specific search strategy.

In short, since CPGs need to make high quality recommendations for clinical practice, the prototype superstructure we have put forward implies the adoption of a rigorous methodology for their development, without which they would not be fit for their intended purpose. The model also includes sections that show that CPGs are the result of an exhaustive review of the literature combined with a thorough revision and detailed analysis. It also includes other crucial sections such as those that clearly define the questions that will be answered in the guideline, a detailed description of its purpose and a definition of the disease in question, which set out the explicit systematic criteria used to evaluate the scientific evidence and the resulting recommendations.

From our point of view, this proposal includes aspects that, according to the IOM, are essential attributes of all CPGs: validity, reliability, reproducibility, clinical applicability, flexibility, clarity, multidisciplinarity, review and documentation (Menárguez Puche et al. 2007: 135). According to recent reports (ibid: 334-336) that have evaluated a large number of CPGs produced by various societies and published in leading medical journals (*Annals of Internal Medicine*, *British Medical Journal*, *JAMA*, *New England Journal Medicine*, *Lancet*, *Pediatric*, to name but a few), the majority of

them are found to be lacking in this respect. This study revealed, for example, that 82 % of CPGs presented the evidence and recommendations in an unclear manner, with no separate section dedicated specifically to them; 87 % did not specify whether a systematic review of the literature had been performed; 67 % did not include a list of the professionals who had participated in their creation; and only a very low percentage (19 %) included a specific references section.

Furthermore, through the organizational structure we propose, we are contributing to the initiatives put forward by the many international organizations that are in favor of establishing a minimum number of sections that every CPG should contain. In this regard, during the Conference on Guideline Standardization held in Connecticut in April 2002 for the purpose of establishing a common design framework, the committee of experts reached the conclusion that a number of essential components should necessarily feature in the production of CPGs (ibid: 337).

Finally, and from the translation standpoint, the use of a superstructural prototype will make it easier for translators to understand and faithfully reproduce the original discourse. Thus, we believe that the use of universal structures for understanding and producing texts will, in short, make it possible to determine cognitive and metacognitive strategies in the development of translation skills.

6. Conclusions

As this article has shown, the challenges that a translator has to face are not only of a linguistic nature, and it is therefore necessary to establish a closer relationship between translation studies and applied linguistics in order to carry out linguistic and textual studies that can help reach a better understanding of the translation process.

For this reason, we consider it essential to carry out studies into the concept of textual genre in order to encourage competence in the training of translators. Accordingly, the goal of our line of research is to progressively expand the study of medical textual genres, which will serve as a guide for developing translation skills in this specific field of specialized translation.

Moreover, the analysis of the formal aspect of the CPG genre presented in this paper focuses on the highest-level internal feature of a text: its superstructure. First, we analysed the structural organization of the texts in our comparable corpus in French and in Spanish in order to better understand the order of their discourse and determine their sequential structure in each of the two languages. This descriptive analysis produced a prototypical profile of the genre in French and Spanish socio-cultural contexts that can be used as a tool for consultation during the translation process. Similarly, the analysis of this conventional profile for each language enabled us to determine the different hierarchical structures of the CPG genre in French and in Spanish, as well as to obtain data for each convention according to their frequency of appearance.

The initial analysis of the superstructure provided the foundations on which to carry out a second analysis, this time of a comparative kind, of the texts in each of the

two sub-corpora, in French and in Spanish. This second analysis served to identify the various communicative sections that constitute the genre in question and to determine the different aspects to be taken into account when translating CPGs from one language to the other. Our findings reveal that there is no single model for developing and producing CPGs, at least in the field of RDs. A further outcome of this second analysis was both to highlight the conventional elements that meet reader expectations, generated in each case by the different social and communicative context and to guide the dual processes of creating and understanding the text, based on our study of the discourse strategy used to organize the information, namely the superstructure. As a result, our study confirms the need expressed by numerous institutions such as the Spanish National Health System to create methodology guides in order to ensure a uniform model for a CPG's superstructure. Hence, and building on the results of our study, we propose a prototypical model, characterized by a suitably coherent methodological framework, that can be used as a guide when developing and/or translating texts of this genre.

The superstructure describes the way in which the complete text is organized, distributing the function and order of the main ideas according to their relevance, and this unique formal structure is precisely what differentiates CPGs from other text genres. Our work confirms the important role played by descriptive and comparative analysis in helping to reach a better understanding of text genres and furthering the systematization of all their significant elements from a professional perspective, whether it be that of the author or the translator. It also demonstrates that genre study serves as a means of learning in the translation process to achieve the best communication possible between the sender and the receiver.

The novelty of the genre studied in this paper–to the best of our knowledge there is very little published work on CPGs in the literature–combined with the current attention given to RDs within the biomedical field and the languages involved, French and Spanish (in contrast with the enormous prevalence of studies of biomedical genres in or relating to English), add further interest to our research. The goal of our future work in this field would therefore be to extend this research to CPGs in other areas of biomedicine in order to enrich our understanding of the superstructural reality of the genre.

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Notes

1. Some examples of these works are: Sánchez Trigo (2016), Sánchez Trigo and Varela Vila (2015) and Varela Vila and Sánchez Trigo (2012).

2. This work was partially supported by the Spanish Ministry of Economy and Competitiveness through project FFI2014-51978-C2-1-R and project H719 University of Vigo.

3. In English: 1) List of abbreviations; 2) Summary for the patient's doctor; 3) Introduction: a) Objectives b) Definition of the disease; 4) Diagnosis and assessment: a) Main objectives, b) Healthcare professionals involved; 5) Patient care: a) Main objectives, b) Healthcare professionals involved, c) Patient care; 6) Follow-up: a) Main objectives, b) Healthcare professionals involved c) Follow-up/ Consultation frequency and content; 7) Annexes; 8) Bibliography.

4. In English: 1) Authors and collaborators; 2) Classification; 3) FAQs; 4) General aspects: a) Antecedents, b) Justification, c) Purpose of this guideline, d) Definition; 5) Evidence and recommendations; 6) Annexes; 7) Glossary of terms; 8) Bibliography; 9) Acknowledgements; 10) Academic committee; 11) Directory/ Directory of the sector and the developing centre; 12) National clinical practice guideline committee.

5. In English: 3) Introduction: a) Objectives, b) Definition of the disease; 7) Annexes; 1) List of abbreviations; 8) Bibliography.

6. In English: 4) General aspects: a) Antecedents, b) Justification, c) Purpose of this guideline, d) Definition; 6) Annexes; 7) Glossary of terms; 8) Bibliography.

7. For further information, visit http://magicproject.org/; http://www.decide-collaboration.eu/; http://cebgrade.mcmaster.ca/guidecheck and http://portal.guiasalud.es/web/guest/home.