

Medical English and Institutional Communication: Linguistic Accessibility to Ethically-sensitive Topics in National Health Systems' Websites – UK vs. USA

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Resumen

Esta comunicación es parte de un proyecto de investigación más amplio desarrollado en la Universidad de Milán (Italia), titulado “Aspectos éticos, ideológicos y emotivos del discurso médico inglés”, con el objetivo de compilar una base de datos de textos ingleses, para investigar la comunicación médica en la asistencia sanitaria y sus implicaciones éticas e ideológicas. El debate actual sobre la ética en medicina ya no se limita a los especialistas: los temas del inicio o fin de la vida, la investigación sobre las células madre y la salud mental sólo constituyen algunos de los muchos temas médicos con los que los medios de comunicación a diario llaman la atención de personas corrientes. Además, el interés del público en la medicina y la ética se observa claramente, por ejemplo, en el hecho de que los principales diarios tengan una sección dedicada a la salud en su sitio web. Todos los individuos necesitamos de asistencia sanitaria durante el curso de la vida, lo cual parece justificar tal interés; sin embargo, también el aumento de la esperanza de vida y la degeneración del medioambiente y del estilo de vida en los países desarrollados han ido incrementando el número de las distintas patologías y de los individuos afectados por éstas. Así, desafortunadamente, se multiplican las posibilidades de que nos afecte una o más de esas enfermedades. El acceso a un sistema de asistencia sanitaria eficiente se hace entonces de suma importancia. Este estudio se centra en el discurso médico inglés y la comunicación institucional en Internet, con especial interés en los sitios web de la asistencia sanitaria nacional de los Estados Unidos y del Reino Unido, como ejemplos de sistemas conceptualmente diferentes de asistencia sanitaria (uno en su mayoría privado y otro en su mayoría público) entre los países anglófonos desarrollados. La investigación se realizará desde el punto de vista del usuario-paciente e intentará establecer:

- el grado de accesibilidad general (facilidad de uso) de cada sitio web (p. ej. elección, calidad y cantidad de la información proporcionada; géneros, medios y lenguaje empleados; etc.);
- el grado de accesibilidad a temas/asuntos específicos, elegidos entre los más connotados éticamente (p. ej. cáncer, SIDA, eutanasia, etc.). El análisis, que se efectuará usando elementos del análisis semántico (Halliday 1985), del análisis del discurso (Fairclough 1995) y de la lingüística computacional (Sinclair 1991), será de naturaleza esencialmente lingüística, aunque será necesario considerar otros aspectos del “multigénero” Internet (Garzone 2007) (p. ej. aspectos gráficos, disposición de la información, recursos multimedia, etc.), siempre y cuando éstos resulten semánticamente relevantes para la comunicación entre instituciones asistenciales y paciente y, en consecuencia, para esta investigación. Se espera que este estudio pueda, en última instancia, ampliarse e incluir también los sitios web de la asistencia sanitaria nacional de otros países, anglófonos y no anglófonos, para contribuir así a la elaboración de unas pautas indicativas para simplificar la comunicación institucional de trámite Internet en el campo médico.

Keywords: *English, medicine, ethics, communication, websites*

1. Background of the study

1.1. Main project

The present study stems from a wider research project currently in progress at the Universities of Milan and Varese (Italy), called “Ideological, ethical and emotional aspects of English medical discourse”. Its aim is to collect and analyse a corpus of spoken and written English texts in order to investigate medical communication in healthcare and its ethical and ideological implications. Participants include researchers from linguistic as well as medical faculties, to underline the close cooperation between the two subject areas of this study and to highlight the practical aspects of both the adopted approach and the expected applications.

1.2. Ethical aspects of medical discourse

The present-day debate over ethics in medicine is no longer restricted to specialist expertise: start/end-of-life issues, stem cell research and mental health are just a few of the many medical topics brought to laypeople daily by the mass media, and the interest shown by the public towards medicine and ethics is easily noticeable, for example, in the presence of a dedicated health section in any major newspaper’s website. Any individual will at some point in life need healthcare: this alone justifies such an interest. Not only, the higher life expectancy and worsening environmental and lifestyle conditions in developed countries have produced an increase in pathologies and in the number of individuals suffering from them (WHO, 2003: 1), thus chances are unfortunately multiplying to be personally affected by one or more of these diseases: access to an efficient healthcare system then becomes of paramount importance.

This paper, in particular, focuses on the degree of accessibility of national health systems’ websites. This is a topical issue, arisen as a result of the incredible popularity gained in recent years by online advertising and selling, and having roots in both the fields of IT and marketing. Evidence of this is that the vast majority of companies, irrespective of their size or business field, now have their own website even if they do not cater for online sales, but simply as an interface with their public. The case considered here is even more specific, as the investigated websites do not belong to private companies, but to public institutions, which share with companies the need for online visibility and accessibility, though providing a public service, therefore being answerable to their patients/users, citizens, government, and – ultimately – their country as a whole. Not only, the current trend towards privatisation of national health services¹ is making public institutions’ needs closer and closer to companies’, even in countries with a tradition for supporting public healthcare, like the United Kingdom and Italy. Thus, the adoption of web marketing techniques and strategies by public institutions is increasingly becoming indispensable: it would be unimaginable, as things are, for a public institution not to have its own website, showing at least some basic information on the institution and ways to contact it. It is therefore evident how this study must take into due account the close interconnection between IT and marketing (for websites), linguistics (for communication) and medicine (for the nature of the public institutions considered here), where limits between these very different disciplines are no longer clear-cut, but get narrower every day.

¹ Including partial measures like outsourcing and *managerialisation* of public healthcare.

2. Theoretical framework of the study

2.1. Aims and scope

The aim of the present paper is to investigate and comment on the accessibility of some public healthcare systems' websites, bearing in mind the sensitivity of health as a topic, with all its ethical, ideological and emotional implications.

The research will be conducted from a linguistic perspective, and it will take the point of view of the user-patient, trying to compare the degree of accessibility to specific medical topics chosen from among the most ethically connotated (e.g. cancer, AIDS, euthanasia, etc.). To this purpose, two are the main questions that this study will try to answer:

What is website accessibility and how is it measured?

Are ethically connotated topics/issues more, less or equally accessible than other non-ethically connotated ones?

It is hoped that this paper will be able to provide possible answers to these questions, and that such answers may be found of interest by operators from any discipline – marketing, IT, linguistics, medicine, etc.– working on institutional healthcare communication.

2.2. Theoretical references

The focus of this study is on linguistic communication and how it affects website accessibility. The hybrid nature of the Internet makes it necessary to rely upon approaches from various branches, even within linguistic studies themselves. Therefore, the analysis will be carried out drawing from established mainstream perspectives in Semantics (Halliday, 1985), Genre Analysis (Swales, 1990) and Discourse Analysis (Fairclough 1995). However, given the specific focus on a professional language, reference should also be made to Languages for Special Purposes (LSP) studies (Gotti, 2003) and, in particular, to studies on Medical English (Sarangi et al., 1999).

Not only, it ought to be remembered that the advent of the Internet has brought along revolutionary changes in Communication Studies, some of the most interesting being innovative views on the concepts of text and genre in the light of multimediality. This leads up to a whole new set of theoretical as well as practical issues, currently being under scrutiny by linguists worldwide. Multimedia elements, initially intended to be considered in this investigation, due to the limited space allowed, shall not be included in the analysis. However, if any aspect of the Internet *multigenre* (e.g. graphics, layout, multimedia resources, etc., as in Garzone, 2007) should prove semantically relevant to institution-patient communication as investigated in the present study, they might be touched upon briefly.

2.3. Terminology

Establishing a few definitions seems to be necessary as well as practical, before proceeding to the actual analysis.

As outlined in §2.1, one of the key questions wanting a possible answer is what website accessibility is and how it is measurable. Attention should be drawn to a terminological issue first: the phrase *website accessibility* is often used to refer to “how users with disabilities access electronic information” (Adobe, 2007), while *usability* “measures the quality of a user's experience when interacting with a product or system”

(Usability.gov, 2007). Accessibility and usability so defined have long been investigated, to the point that international standardised guidelines (ISO, 2007) have been issued, centred on effectiveness, efficiency and satisfaction as descriptors of accessible websites.

For the purposes of the present study, however, the focus shall be on language; from this angle, linguistic *accessibility* is believed to represent a more suitable terminological choice than linguistic *usability*, for a number of etymological as well as pragmatic reasons.

Firstly, the definition of the noun it derives from, *access*, as “the habit or power of getting near or into contact with; entrance, admittance, admission (to the presence or use of)” (OED, 1989), shows that the stress is not so much on «*use*» but on «*admission to use*».

Secondly, the very recent verb *to access*, so popular in today’s Internet vocabulary and again deriving through backformation from the noun *access*, having been first attested in A.M. Angel (1962) and *only* attested in texts about Information Technology (*ibid.*), proves *accessibility* to be a term specifically connected with «admission to IT use». Indeed, when analysing a website’s language, we look for how easy it is for a user to be *admitted* to the information it contains.

Finally, simply verifiable pragmatic evidence is that, on the Internet, *linguistic usability* is not so frequent a collocation as *linguistic accessibility*, with the Google search engine approximately returning a 1:30 ratio².

2.4. Linguistic accessibility checklist

Website accessibility as commonly understood in marketing is thus measured according to a combination of interface and content parameters. Interface accessibility, including access for disabled users, depends on subjective indicators that call for direct user testing, therefore it is beyond the scope of this study, in which multimedia (interface) elements might be touched upon, but which is focussed primarily on linguistic (content) accessibility, analysable according to more objective, longer established indicators (see §2.2). Indeed, based on the previously outlined theoretical perspectives, but also on online practical guidelines from both a US-based (the US Government’s own Usability.gov) and a UK-based consultancy’s website (Webcredible), this is a selection of linguistic parameters for evaluation to be adopted in the present study. This checklist is by no means intended to be analytically exhaustive; it merely includes those parameters that are thought to be relevant for purposes of the present study.

- Lexical features:
 - etymology;
 - jargon, colloquialisms;
 - abbreviations;
 - semantic fields.
- Syntactical features:
 - sentence types;
 - clause types;
 - active/passive voice;
 - modality;

² A Google search for the phrase “linguistic usability” returned 27 hits on 20 October 2007; “linguistic accessibility” 833. As a double-check, “usable language” returned 10,100 hits, “accessible language” 162,000 (approximate ratio: 1:16).

- enumeration.
- Textual features:
 - size;
 - cohesion, concept organization;
 - register;
 - paragraph structure.
- Discourse features:
 - author;
 - purpose, language functions;
 - audience / discourse community;
 - evaluation.
- Genre features:
 - genres employed.

3. Description of the case study

3.1. Selected websites

The websites that are going to be considered are England's National Health Service (NHS)³ and the U.S. Department of Health and Human Services (HHS). The choice fell on these institutions because they are seen as representing different healthcare concepts: respectively, a European, traditionally publicly-funded system on the one side, and a North American, chiefly privately-funded system on the other. Not only, they both also represent developed countries, approximately sharing the same medical issues and enjoying the same degree of IT development and diffusion, which should make these two websites effectively comparable in terms of linguistic accessibility.

It would be impossible to analyse the entire NHS and HHS websites in the course of this study, so a very careful selection has to be made. The most immediate way of exploring a website is to use its search engine, if present. Indeed, the considered websites' search engines show that both include a glossary or encyclopaedia: the perfect context where to find information on health topics, thus the section that is going to be considered for analysis. More specifically, the focus will *only* be on the information present in the *very first* page encountered when looking up either topic – the first real online contact between institutions and users, thought to be especially relevant when evaluating linguistic accessibility.

Websites, by nature, are updated periodically in both interface and content; care has been taken to carry out the analysis on material from the same date and, approximately, time, for better comparability. The analysed texts are shown in Fig. 1-4.

3.2. Sample topics

Linguistic accessibility of the NHS and HHS websites will be investigated by carrying out a parallel analysis of an ethically connotated topic and a supposedly neutral one. Options are many and varied; for the purposes of a limited work like the present one, archetypical topics may as well be selected: since ethics is by definition associated with choice, fractures can be taken as an example of a medical condition that is usually independent on the patient's conduct (especially when occurring as a result of an

³ As well-known, the UK no longer has one national healthcare system, but four different regional ones.

accident), while abortion is definitely linked to personal choice (whatever the reason behind it). Accordingly, a linguistic comparison of how either topic is dealt with is expected to return significantly different results; the following step will be to establish if and how relevant these results are in terms of accessibility.

3.3. BROKEN BONES in NHS online

Assuming a hypothetical patient with a fracture is looking for information on the web, when typing the term FRACTURE into the NHS website's search box (which shall be considered the simplest way of starting an enquiry), 146 hits are returned. Of the first 10 hits, number 1 is a link to the North Hampshire Hospital Fracture Clinic, specialising in musculo-skeletal conditions, while the following 9 hits are links to the website's encyclopaedic section, called "Health A-Z". A similar search for the plural FRACTURES returns exactly the same results, so wildcards are evidently not used. In the event considered here, the patient has a medical problem and is looking for information about it, but is in no need of instant emergency treatment, so being directed to the medical topics section of the website would be a satisfactory solution for our imaginary patient's needs.

In the NHS's encyclopaedia, however, FRACTURES is not found as an entry, but its Anglo-Saxon, more colloquial version BROKEN BONES is. The document is divided into 5 sections, called:

- "What is it?"
- "What happens?"
- "Lifestyle"
- "Useful links"
- "What to ask".

The first 2 subheadings are direct questions and the last one can be considered an indirect question, so they definitely meet the marketing criterion (and rhetorical device) of adopting a question and answer (Q&A) conceptual organization, promoting colloquial register to make users feel at ease. The "Useful links" subheading is a well-known Internet jargon collocation, and Webcredible (2007: 3) underlines that users have grown "accustomed to particular layouts and phrases on the Internet", advising to keep using them to favour memorisation through repetition. "Lifestyle" is a less expected choice of a subheading, although this word, often associated with fashion and social trends, also indicates health behaviours; here it is of course used in the latter sense, i.e. to refer to prevention. As anticipated in §3.1, only the first document ("Introduction") of the first section ("What is it?") shall be examined; nonetheless, even a short linguistic analysis is expected to provide at least some interesting results.

- Lexical features:
 - short terms of Anglo-Saxon origin (more accessible) are generally preferred to long, specialist ones of Greek/Latin descent (less accessible), although the first sentence in the first section immediately explains that "A broken or cracked bone is known as a fracture" and other specialist terms also appear;
 - medical jargon appears in the phrase "greenstick fracture"; however, this is easily understandable even by laypeople, as it belongs to the semantic field of vegetation, from which much traditional figurative language derives;
 - no abbreviations are present to complicate linguistic accessibility;
 - the most significant semantic area is, of course, that of *break* ("cracked", "fractured", "shattered", "pieces", "detaches", "torn").
- Syntactical features:

- sentences are mostly declarative, simple and short, following a basic Subject-Verb-Object order;
- secondary clauses are few, because parataxis is prevalent;
- active voices predominate, although passive verbs, typical of scientific (including medical) language, are almost as many, supposedly conveying objectivity and impartiality;
- possibility (“may”) is the most recurrent instance of modality, used to list possible fracture cases;
- enumeration is only used in the concluding glossary, consisting in a list of three entries (“blood vessels”, “joint”, “spine”).
- Textual features:
 - 366 words, 22 sentences, 14 paragraphs;
 - no specific techniques are employed to ensure cohesion: the information is organised in a simple list of the various types of fracture;
 - the register may at first appear formal, due to the objectivity expressed by the use of passives but, looking closely, the many colloquial terms, the occasionally imperfect syntax⁴ (“An avulsion fracture is when a piece of bone detaches from the main bone”) and spelling mistake (“childrens [sic] bones”) place the text’s register at medium-low;
 - the short paragraphs are divided by a line and the only other subheading is the one introducing the “Glossary”.
- Genre features:
 - two genres are recognisable in this text: the encyclopaedic entry (disseminative, neutral, plainly written, etc.) and the glossary.

3.4. FRACTURES in HHS (Medline Plus) online

Assuming the same hypothetical patient with a fracture is looking for the same type of information but is based in the USA, the institutional website they would be looking at first would be the governmental Department of Health and Human Services’. The same search procedure outlined in §3.3 will be followed. However, it should be pointed out that the HHS website has a peculiar internal organization: unlike the NHS one, it does not hold all the information within, but mostly acts as a hyperlink index, redirecting users to external websites, each linked to each other and dealing with a different topic. The HHS’ medical encyclopaedia is thus hosted by the external website Medline Plus, to which the following analyses refer.

The search box in the HHS homepage is wildcard sensitive, and returns different sets of results for FRACTURE (5,360 hits) and FRACTURES (5,560 hits). A first key difference with the NHS is that the topic is listed under the plural noun, with BROKEN BONES as a caption, so preference is given to the Greek/Latin-derived word: in terms of linguistic accessibility, this may be a less popular choice among non-experts, while specialists may prefer it; it may also be meant to set the register to formal from the very start. To the 3-5 sections in each NHS entry correspond 6 sections in Medline Plus:

- “Basics”;
- “Learn More”;
- “Multimedia & Cool Tools”;
- “Research”;

⁴ Although this may be considered a *definition style*, as it is adopted consistently throughout the Health Encyclopaedia.

- “Reference Shelf”;
- “For You”.

The word choice for the sections’ names is simple and descriptive, as required by marketing standards (Webcredible 2007: 7); the “Cool Tools” may be questionable, though, in its associating the evaluative colloquial adjective *cool* with illnesses and medical topics. In fact, the NHS and Medline Plus division into sections is only formally similar. The distribution of the Medline Plus content reflects the HHS’s eccentric structure: it hosts a very brief, occasionally inexistent textual introduction to the health topic, then it refers users to numerous links to external specialised websites, divided into the above sections. This organizational choice is very effective if users manage to follow the links towards the required information in the correct order, but, if they do not, this may result in inaccessibility. In favour of accessibility, the “Start Here” section can be mentioned, providing orientation in this plethora of links, while the right-hand menu is particularly successful in directly leading users to various aspects of a topic (e.g. FRACTURES links to “Ankle Injuries and Disorders”, “Bone Diseases”, “Elbow Injuries and Disorders”, etc.).

Although very short, only the brief introduction to each topic will be analysed here, to be consistent with the selection criterion adopted for NHS texts.

- Lexical features:
 - short, more accessible, Anglo-Saxon derived terms are definitely favoured; the less accessible choice of FRACTURES over BROKEN BONES has been discussed above, but the hypothesis of this option being preferred to set a formal register is immediately disproved by following lexical and especially syntactical choices (see below);
 - no jargon is present; words are carefully chosen to be as simple and as neutral as possible;
 - no abbreviations are present;
 - as expected, the semantic field of *break* is prevalent (“broken”, “break”, “punctures”, “fracture”, “stress”, “cracks”), and is as rich as in the NHS entry.
- Syntactical features:
 - sentences are declarative, simple, short, following a basic Subject-Verb-Object order, with maximum 2 clauses per sentence;
 - secondary clauses are few and parataxis prevails;
 - voices are all active except for 1 passive verb (“it is called an open or compound fracture”), resulting in increased directness and accessibility, but also in less objectivity;
 - possibility is embodied by the modal verbs “may” and “can”, occurring once each; no other modal verb appears, though “need to” (twice occurring) conveys the mood of obligation/necessity;
 - a list of the 5 main symptoms is the only enumeration in the text.
- Textual features:
 - 133 words, 8 sentences, 3 paragraphs;
 - differently from the NHS’s entry, the information, though scant, is well organised, with definitions first, followed by causes, symptoms and advice;
 - the register can hardly be defined formal, considering lexical and syntactical choices, as well as the use of the second person singular to address the reader/user and the absence of contractions. The overall impression is, if not that of a scientific text, at least one of a neutral ;
 - the short paragraphs are divided by a single line; no other (sub)headings are present.

3.5. ABORTION in NHS online

The analysis of the ethically-connotated topic can follow the same homepage's search-box method adopted in the analysis of the non-ethically connotated one. The first hit (1 of 55) thus obtained is the expected one: the encyclopaedic entry on abortion. This topic is articulated in only 4 sections (as opposed to the 5 in FRACTURES):

- “What is it?”
- “What happens?”
- “Useful links”
- “What to ask”

The “Lifestyle” part is missing, undoubtedly because the issue concerns a medical practice and not a preventable illness. It could also be legitimate to speculate that, when dealing with such a sensitive topic, lifestyle indications might turn out, for some audiences, to sound annoyingly patronising or even unethical, and consequently offensive. This may be the reason why suggestions on how to avoid a pregnancy are confined to a separate entry called CONTRACEPTION.

The same type of document as selected for the analysis of the non-ethically connotated topic, i.e. the “Introduction” of the “What is it?” section, has been investigated here.

- Lexical features:
 - short, Anglo-Saxon words are definitely preferred in the text to long, Greek/Latin words, except in specialist medical lexicon, which includes the entry name and few other terms (e.g. “genito-urinary”). A terminological issue is raised as early as the first paragraph: a definition of abortion is first provided, followed by a synonym, “termination” – another word of Greek/Latin origin – but much less ethically connotated than “abortion”. The early focus on a less connotated term, placed in a rhematic position (it is the last sentence in the opening paragraph), could indicate willingness to strip the topic of its connotations, but the following paragraphs show that abortion's ethical aspects are instead at the centre of this text, so the terminological issue has been raised only for clarity reasons, which of course contributes to linguistic accessibility;
 - no jargon (not even medical jargon) or colloquialisms appears in the text, unlike in BROKEN BONES;
 - 4 initialisms are present: 3 of them (UK, NHS, GP) are so well-established in everyday English that they have almost ceased to be perceived as such; the last one, “GUM”, stands for “genito-urinary medicine”, a specialist phrase made of Greek/Latin terms, suitably substituted by an abbreviation;
 - main semantic fields appearing in the text obviously include *abortion* (“termination”, “miscarriage”, “spontaneous”, “ending”, “pregnancy”, “intervention”), but also, as expected, *ethics*: although neither this word nor any of its derivatives ever occurs, “moral” does, and so do many other terms from the same semantic area (“difficult”, “circumstances”, “chance”, “views”, “opinions”, “for vs. against”, “religious”, “cultural”, “philosophical”, “beliefs”, “legal”, “criteria”, “act”, “law”, “licensed”, “damage”, “referral”, “agree”, “willing”, “agreement”). The words in italics have been especially singled out because they link *moral* to *ethics* through the semantic sub-area of *choice* (see §3.2). Interestingly, the *moral* semantic field includes legal and political terms.
- Syntactical features:

- sentences are only declarative and, although they are not elaborate, they are certainly more complex than those in BROKEN BONES, with a higher use of hypotaxis, including several adjective and adverbial clauses;
- active and passive voices alternate in this text, with a prevalence of active verbs. Passives are notably employed in the discussion of abortion's moral implications, to convey objectivity and impartiality. Actives are instead used in conative sentences, where practical indications are provided about what to do if and when considering abortion;
- modality appears in the form of possibility modals (“may”, “might”) when listing options on abortion, obligation modals (“must”, “have to”) when referring to the current abortion law, prediction modals (“will”) when describing abortion procedures;
- 2 lists appear in the text: the first enumerates the key points in British abortion law, the second the parameters influencing abortion costs.
- Textual features:
 - 569 words, 24 sentences, 18 paragraphs. Compared to BROKEN BONES, ABORTION has only 2 sentences and 4 paragraphs more, but the word count is about 155% higher, so sentences are definitely longer and also, as observed above, more complex.
 - Concept organization starts with definitions, first, then continues with moral aspects, references to relevant legislation, public (NHS) abortion procedures and private ones.
 - The text is divided into three graphically well separated paragraphs, the first one (without heading) dealing with definitions, moral and law, the second and third respectively titled “NHS abortions” and “Private abortions”.
 - The simple but not overtly colloquial language shows a combination of medical, legal and political vocabulary, which might prove confusing to some users. No contractions are present, and the register turns out to be overall neutral, inclining to formal.
- Genre features:
 - this text shows mixed features of the encyclopaedic entry, the report (“the level of NHS provision ranging from more than 90% of local demand, to less than 60%”), and the healthcare information leaflet (“You can contact...”). This is probably due to the combination of specialised topics (medicine, law and politics) and their respective vocabulary, whose presence in turn derives from this being an ethically-connotated issue.

3.6. ABORTION in HHS (Medline Plus) online

The search for ABORTION in the HHS' search-box returns 3,420 hits. However, although the links in the 6 subsections are many (except for the empty “Multimedia & Cool Tools” and “For You” sections) and lead to detailed information, a mere 66 words is all that introduces this complex issue: it is hardly subjective to say that the ABORTION entry is disappointing from a quantitative viewpoint, and that the analysis of this topic in Medline Plus will have to be based on extremely scarce material.

- Lexical features:
 - There is a noticeably high rate, in proportion, of specialist, Greek/Latin-derived terminology compared to Anglo-Saxon words, for example terms such as “embryo”, “fetus”, “placenta” and “uterus”, as well as “abortion”;
 - no jargon, colloquialisms or abbreviations are present;

- identifiable (and overlapping) semantic fields are: *abortion* (“procedure”, “end”, “remove”, “embryo”, “fetus”); the *female reproductive system* (“pregnancy”, “embryo”, “fetus”, “placenta”, “uterus”); *law* (“procedure”, “licensed”, “acting”, “supervision”), and even *ethics/morality/choice* (“decision”, “personal”, “thinking”, “advise”, “counseling”). Unexpectedly, in spite of the first quantitative estimate and the entry’s shortness, this text is very rich in lexical words, so that, surprisingly, it turns out to include all the semantic fields in the NHS entry (with about as many instances), plus an extra one (the *female reproductive system*’s);
- like its British equivalent, in the paragraphs on ethics/moral, this text too employs and blends vocabulary from the specialised languages of medicine, law and politics, making its language very hybrid and semantically rich, if perhaps not perfectly accessible to all inexperienced users.
- Syntactical features:
 - all sentences are declarative, very short, formed by no more than two clauses and paratactically organised;
 - except for 1 (“the procedure is done by”), all voices are active, thus ensuring directness and accessibility;
 - there are no instances of modality expressed through modal verbs;
 - enumeration is absent.
- Textual features:
 - 66 words, 5 sentences, 2 paragraphs: the lowest word count in the examples considered;
 - again surprisingly, this minimalist text includes as many concepts as the NHS text, and as well organised; the order followed is: definition, procedure description, legal aspects, moral issues, referral to counselling;
 - there are only 2 paragraphs: the first includes definition, explanation of procedure and legal aspects of procedure; the second deals with the moral issue and refers to counselling;
 - like in FRACTURES, the language is extremely simple and neutral, expressing no evaluations, but urging, in the last sentence/paragraph, interested users to get advice. The resulting register inclines towards formality.
- Genre features:
 - for its reduced length, this text seems to belong more to the leaflet genre than to the encyclopaedic one.

3.7. NHS vs. HHS: common textual/discourse features

Since the four texts considered belong to the same genre (the online glossary/encyclopaedia), they also have macro textual/discourse features in common, which can be summarised as follows.

- Textual/Discourse features:
 - the author(s) is allegedly a medical expert, though not necessarily – given the basic nature of the information provided – a MD. In fact, it could be anyone between a specialist in medicine and a layperson with basic medical notions, like a legal expert specialised in this subject (e.g. a counsellor), or even, very likely, a pool of different experts each adding their own expertise to the text. Authoritativeness is conveyed through various linguistic features, all connected with specialised expertise:

- the use of Greek/Latin-derived specialist terminology (instead of colloquial Anglo-Saxon lexis);
- a professional attitude, i.e. practical, accessible and to-the-point, in presenting medical information;
- the presence of concepts/vocabulary from other LSPs (e.g. “The Abortion Act 1967”), when discussing a topic’s moral aspects;
- the neutral and impersonal nature of the language, suggesting objectivity;
- the webpage’s own prestige as an official public document;
- dissemination is the main overall purpose, as no specialist would be interested in the basic notions provided by these texts. Several language functions overlap: the main is obviously the referential one (as in Jakobson, 1960), while additional functions are the metalingual function (e.g. in definitions and in the NHS BROKEN BONES glossary), and the conative function (in suggestions/advice);
- the intended audience are users/patients; medical students would not be interested in this basic information, but perhaps elementary to secondary school students may, for study purposes. These text’s discourse community is composed of experts, on the one side, and laypeople on the other, mainly identifiable with doctors/nurses vs. patients/patients’ relatives, with an interest in the topic. In the case of ABORTION, quite naturally, the targeted audience will mostly include women;
- no evaluation seems to be present in the language, which is kept as neutral as possible in terms of the author’s own opinion/position. However, it can be argued that neutrality is a form of connotation nonetheless, which is attributed, instead of either a positive or a negative value, a \emptyset value, i.e. the author *refuses* to express an opinion, which itself *is* a choice. The exception is represented by the text’s suggestions about getting treatment/counselling, which, in the single case of ABORTION in NHS, is almost perceived as a certain urge (“If you are considering an abortion it is *important* to talk to somebody about it *as soon as possible*”, our italics).

4. Final remarks

4.1. Discussion of results

The constraints imposed by the topic’s complexity and the web’s expanding and dispersive nature limit the many conclusions that may be drawn about such a linguistically challenging type of analysis, in turn requiring a longer discussion than the one offered here. However, as a pilot study, this brief investigation is believed to provide at least a few interesting hints for reflection, outlined as follows.

Both websites have proved, on the whole, to be linguistically accessible in terms of lexis, syntax and discourse (which was expected of these major public institutions), though in differing ways. Generally speaking, the NHS’s encyclopaedia publishes longer texts, with a standard, clear-cut organization of information into sections and sub-sections. It tends to adopt simple language, is not afraid of using commonplace abbreviations, modal verbs and the occasional colloquialism, favours Anglo-Saxon derived words and plain paratactical syntax, mixes genres. In short, it seems to focus on its user/patient audience, adopting all the different linguistic techniques it believes

might help getting closer to its audience (hence the typical choice of BROKEN BONE over FRACTURES). Its asset is definitely the quantity of information it provides: although using simple language and various linguistic resources, NHS texts are long enough to provide all the necessary basic information for a *first encounter* with any medical issue *on the very first page* of the respective encyclopaedic entry. Conversely, one criticism could concern the high degree of genre mixing, for example in the ABORTION entry: perhaps eagerness to provide as much or as comprehensive information as possible leads the authors to overdo their part and mix both genres (e.g. encyclopaedia, report, leaflet, glossary) and specialised languages (e.g. medicine, law, politics, ethics). On the other hand, hybridisation has been shown to be a typical feature of subjects with ethical implications, such as abortion; therefore, a degree of LSP and genre overlapping may be expected. To cater for this recurrent feature, it could be hypothesised that the online medical encyclopaedia has become a genre of its own within the new media, by nature embedding other genres.

In its institutional communication, HHS pursues the same objectives of divulgation, simplicity and clarity, but these, apparently, are differently realised. Its distinctive feature, which also represents its biggest difference from the NHS and perhaps its main weakness, is its closer focus on the interface elements of communication. Perhaps for their undoubted reputation as WWW pioneer, the USA have chosen to exploit interface resources as much as possible, favouring them over purely linguistic ones. Thus, text that, united in the same document, would prove a comprehensive basic source of information on any medical issue, is split into *hyperfragments* – bits of text connected by hyperlinks – to be one by one manually retrieved and processed by the user. Evidence of this is the significantly higher results obtained when searching for a topic in the HHS, as opposed to the NHS: 5,560 (HHS) vs. 146 (NHS) hits for FRACTURES/BROKEN BONES and 3,420 (HHS) vs. 55 (NHS) for ABORTION. Furthermore, first-contact pages like the ones studied above are supposed to offer a minimum degree of quantity, as well as of quality, of information, sufficient to provide users with enough background to continue their search independently. Instead, although conciseness is clearly a plus, as both Usability.gov and Webcredible maintain, a 66-word introduction to ABORTION does not seem like an acceptable quantity of information on this subject, even though, surprisingly, the 66 words turned out to be extremely high quality and lexically relevant. Too high a density of lexical words, however, no matter how simple, neutral and well-known the words are, endangers linguistic accessibility, though it is true that more information is available behind the links provided, and that not all entries are as short as ABORTION (see Grego & Vicentini, forthcoming, for a HHS vs. NHS outline of CANCER). In fact, the quantity and variety of specialised information that may be accessed through the HHS, though *outside* of it, is definitely the HHS's website best asset. Nonetheless, while interface accessibility is a *new* type of study, based on subjective parameters and still under investigation, linguistic studies have long developed objective and reliable theoretical evaluative tools. Therefore, supposedly, a quantitative balance between a website's interface and content may increase objectivity (thus reliability) in its evaluation process, and objectivity has been seen to prove a key parameter in the evaluation of accessibility to a healthcare public institution's webpage.

As concerns ethically and non-ethically connotated medical issues, from a linguistic perspective, the main difference between them lies in the presence/absence of lexis from the semantic field of ethics, but the interesting feature is that its presence seems to consistently cause the above-mentioned phenomenon of LSP hybridisation (in which medical, legal and political languages appear to blend into an inseparable entity)

to be present too, so much so that the existence of a hybrid Ethics LSP of its own may even be hypothesised. Practically speaking, the presence of ethical aspects in a health topic has a potentially tremendous impact on the users' perception of a healthcare website, like those considered here, in terms of possible embedded evaluations and subsequent loss/modification of target audience. It has been found that healthcare public institutions' websites in the USA and the UK do not ignore this, and in both cases they do point to the issue. However, they do this with the aim of warning readers/users, but they clearly prefer to avoid expressing judgements that may be then associated to the institution as a whole, probably to safeguard the differing opinions that those who work for them are bound to have, coming as they do from multicultural, multiethnic and multireligious countries. The speed at which societies evolve suggests that this issue will remain central for the next few decades at least; further research on the language of ethics applied to LSPs may help produce reflections on the subject and develop practical as well as theoretical insights into ethics in specialised communication.

4.2. Future developments

Possible developments of the present study include expanding its perspective to cater for diatopic variation, i.e. considering public healthcare systems' websites from other English- and non-English-speaking countries, and diachronic variation, i.e. evaluating linguistic accessibility to institutional medical communication over a given period of time. The ultimate hope is for this study to contribute to the wider project it stemmed from (§1.1), within which it would be interesting, as well as desirable, to keep investigating the close relationship between ethics, LSPs and new media communication. Results proceeding from this area of linguistic research might hopefully find application(s) in further projects by researchers and professionals alike, in any of or across these fields.

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APPENDIX

The screenshot shows the NHS Choices website interface. At the top left is the NHS logo and the word 'choices' in orange. To the right is the tagline 'your health, your choices.' Below this is a navigation bar with buttons for 'Live well', 'Health A-Z', and 'Choose services', along with a search box and an 'About NHS Choices' button. The main heading is 'Broken bones' in a large blue font. To the right of the heading is a 'Choice' box with the text 'Choosing hospitals that provide this care.' and a link 'choose a hospital'. Below the heading is a sub-navigation bar with tabs for 'What is it?', 'What happens?', 'Lifestyle', 'Useful links', and 'What to ask'. The 'Introduction' tab is selected, and the page content begins with the text: 'A broken or cracked bone is known as a fracture. Fractures can affect any bone in the body. Bones can fracture in a number of different ways. A fracture may be a straight break across the bone (transverse fracture), slanting (oblique fracture) or winding (spiral fracture). The break may run along the shaft of the bone (longitudinal fracture), or the bone may be shattered into pieces (comminuted fracture). Young bone is softer and more able to bend than adult bone, so children's bones often fracture on one side but bend on the other - known as a greenstick fracture. An avulsion fracture is when a piece of bone detaches from the main bone, usually because of being torn away by the tendon that attaches a muscle to a bone. A fracture in which the bone collapses is called a compression fracture. Compression fractures usually affect the spongy bone found in the spine.'

Aggiungi Preferiti (ALT+Z) A fracture in which the skin around the bone has not been broken is called a simple or closed fracture. If the ends of the bone break through the skin, or there is a wound that leads to the fractured bone, it is called a compound or open fracture. In a compound fracture the bone is open to infection, so this type of fracture is more serious.

A complicated fracture is one in which there is injury to other nearby structures, such as major blood vessels and nerves. A fracture-dislocation occurs when a joint becomes dislocated and there is also a fracture of one of the bones of the joint.

After a fracture, the broken fragments of bone normally separate from each other. However, sometimes one fragment of bone can be driven into another. This is known as an impacted fracture.

Glossary

Blood vessels
Blood vessels are the tubes in which blood travels to and from parts of the body. The three main types of blood vessels are veins, arteries and capillaries.

Joint
Joints are the connection point between two bones that allow movement.

Spine
The spine supports the skeleton, and surrounds and protects the delicate spinal cord and nerves. It is made up of 33 bones called the vertebrae.


Content provided by NHS Direct 

Figure 1: NHS: BROKEN BONES

Slip navigation **Medline Plus** Trusted Health Information for You A service of the U.S. NATIONAL LIBRARY OF MEDICINE and the NATIONAL INSTITUTES OF HEALTH

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Other Health Topics:
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Fractures Printer-friendly version E-mail to a friend


Also called: Broken bone

A fracture is a break, usually in a bone. If the broken bone punctures the skin, it is called an open or compound fracture. Fractures commonly happen because of car accidents, falls or sports injuries. Another cause is [osteoporosis](#), which causes weakening of the bones. Overuse can cause stress fractures, which are very small cracks in the bone.

Symptoms of a fracture are

- Out-of-place or misshapen limb or joint
- Swelling, bruising or bleeding
- Intense pain
- Numbness and tingling
- Limited mobility or inability to move a limb

You need to get medical care right away for any fracture. You may need to wear a cast or splint. Sometimes you need surgery to put in plates, pins or screws to keep the bone in place.



Related Topics

- Ankle Injuries and Disorders
- Bone Diseases

Figure 2: HHS (Medline Plus): FRACTURES

NHS choices your health, your choices.

Place, hospital or subject search Live well Health A-Z Choose services About NHS Choices

Abortion **Choice**
Choosing hospitals that provide this care
[choose a hospital](#)
Printable version of this complete topic

What is it? What is involved? Useful links What to ask

Introduction Introduction Why is it necessary? When should it be done?

An abortion is the medical process of ending a pregnancy so that it does not result in the birth of a baby. Sometimes, healthcare professionals may refer to an abortion as a termination of pregnancy or as just a termination.

An abortion is different from a miscarriage (see the health encyclopaedia topic about miscarriage) where the pregnancy ends without medical intervention. However, medical treatment may be needed after a miscarriage. Confusingly, healthcare professionals sometimes refer to a miscarriage as a spontaneous abortion.

The decision to have an abortion is a difficult one. There are many reasons why you might decide to have an abortion for example, your personal circumstances, your health may be at risk, or there may be a chance that the baby will have a medical condition.

Many people have strong views and opinions about abortion (both for and against) that are often based on deeply held religious, cultural, or philosophical beliefs. While all of these views should be respected the law in the UK makes it legal to have an abortion during the first 24 weeks of pregnancy, provided that certain criteria are met.

The Abortion Act 1967 covers the UK mainland (England, Scotland, and Wales) but not Northern Ireland. The law states that:

- abortions must be carried out in a hospital or a specialised licensed clinic and that
- two doctors must agree that an abortion would cause less damage to a woman's physical or mental health than continuing with the pregnancy.

NHS abortions

In order to have an abortion on the NHS you need a referral from two doctors who have to agree that the requirements of the Abortion Act 1967 have been met. Usually, the first doctor is your GP and the second is a doctor working at the hospital, or clinic, where the abortion will take place.

If you do not feel happy about approaching your GP, to ask to be referred for an abortion, you can go to your local family planning clinic or genito-urinary medicine (GUM) clinic. Some doctors at these clinics are able to refer women for an NHS abortion but if they cannot they must refer you to another doctor. However, the law states that a doctor can refuse to certify a woman for an abortion if she has a moral objection to abortion. If this is the case, they should recommend another doctor who would be willing to help.

The funding of NHS abortion services differs in various parts of the country, with the level of NHS provision ranging from more than 90% of local demand, to less than 60%. In some areas the NHS will pay for abortions to be provided by private clinics, but in other areas it may be necessary to pay for an abortion in a private clinic.

Private abortions

You can contact a private abortion clinic without being referred by a doctor. However, the NHS will not pay for this and before the abortion can take place, the agreement of two doctors is still required. The clinic will make the arrangements; costs for abortions in private clinics vary, and will depend on:

- which organisation or company carries out the abortion,
- the stage of pregnancy (earlier abortions are usually less expensive),
- whether an overnight stay is needed, and
- the method of abortion that is used.

If you are considering an abortion it is important to talk to somebody about it as soon as possible.

Choice


Choosing hospitals that provide this care

[choose a hospital](#)

Printable version of this complete topic

Live well

Get more out of life.



[Start living well](#)


Health A-Z

Stay in control of your health.

[Read our health A-Z](#)

Choose services

Find local hospitals, doctors and more.




[Find NHS services](#)

NHS Choices: [Home](#) | [About NHS Choices](#) | [Accessibility](#) | [Terms & conditions](#) | [Privacy policy](#)
 The NHS: [About patient choice](#) | [About the NHS](#) | [Authorities and Trusts](#)
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Figure 3: NHS: ABORTION

Skip navigation



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Abortion

An abortion is a procedure to end a pregnancy. It uses medicine or surgery to remove the embryo or fetus and placenta from the uterus. The procedure is done by a licensed physician or someone acting under the supervision of a licensed physician.

The decision to end a pregnancy is very personal. If you are thinking of having an abortion, most healthcare providers advise counseling.

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Figure 4: HHS (Medline Plus): ABORTION