TITLE

Treating ambiguity in the clinical context: Is what you hear the doctor say what the doctor means?

SHORT TITLE

Treating ambiguity in the clinical context

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## *Introduction*

Linguistic theory helps in understanding how and why language operates in the manner it does. It provides insight into ways we can improve communication strategies to achieve deeply rooted communicative expectations. This is particularly important in the clinical context where patients and their families rely heavily on the information exchange they have with health professionals (HPs). Linguistic theory also makes evident the strong link between communication and basic ethical principles that lie at the core of medicine and which provide justification for the requirement for informed consent and other decision-making models such as shared decision-making.

In their paper "*Treatability Statements in Serious Illness: The Gap Between What is Said and What is Heard"*, Batten and colleagues take seriously the miscommunication that can occur between patients & their families and health professionals (HPs), they attempt to justify this with reference to linguistic theory, and they consider the implications of such miscommunication on shared decision-making and informed consent, both of which are intricately related to and informed by ethical theory. We view Batten and colleagues' paper as a significant contribution to the limited literature in this area because it draws attention to the inherent communication deficiencies in the most serious of contexts: communication with patients and their families about life and death matters. While our interpretations differ from the authors', we welcome the opportunity to advance this important discussion in the hope that we will provide further insight into how and why such miscommunication may come about.

Batten and colleagues focus on what they call "treatability statements" and, more specifically, on miscommunication that may arise from the HPs' use of words such as 'treat', its derivates, or synonymous phrases in discussions with patients suffering life-limiting conditions such as terminal cancer. They contend that some HPs' (specifically oncologists') use of the word 'treat' in treatability statements is "technical" and that, in using it, HPs do not *intend* to convey any information about the curability or amelioration of the patients' condition.

> *Physicians assume that treatability statements are made to communicate that something can be done, and to clarify what that is; treatment is conceived of as a tool to accomplish particular clinical goals, defined in specific, technical terms. Hence, physicians use treatability statements to convey that they can "do something."*
>
> *In treatability statements, technical concepts masquerade in everyday language.*

The authors note that patients and their families sometimes misinterpret the intended meaning of 'treat' and its derivatives or synonymous phrases in treatability statements. They misunderstand such treatability statements to convey "positive information about prognosis" and unfounded hopes for a good outcome. The authors go so far as to state that (patients and) families understand the HP to be making statements about a good "quality of life" that the patient can expect. Their explanation for this mismatched intended and received meaning is "that patients do not "successfully" arrive at what the physician intends to convey." This, we believe, is not accurate and places an unfair burden on the patient and on their family.

In this paper we will show that basic assumptions made by the authors lead to conclusions about intended and received meaning in treatability statements which do not hold. We will also provide additional clarifying information about Grice's 'Cooperative Principle' and will articulate a different interpretation to that provided by the authors which we base on both linguistic theory and empirical research.

## *Assumption 1: The literal meaning of "treat"*

The authors' initial assumption in their analysis of treatability statements is:

> *…treatability statements simply mean that physicians have therapeutic interventions (treatments) they can use.*

They analyse the following treatability statement as follows:

*Sentence: "This is a treatable condition."*

*Literal Sentence Meaning: A physician can use a treatment for this condition.*

Below we show that this initial assumption about the standard meaning of 'treat' ultimately leads to an erroneous conclusion about the mismatch between intended and received meaning. Six of the world's most reliable English language dictionaries were consulted to ascertain whether the dictionary definition of the verb 'treat' entails the meaning of *cure* and/or *restoration*. All dictionaries were British English except two (Merriam-Webster & Oxford Advanced American Dictionary) and one British English dictionary (Cambridge) also provided an American-English definition.

All British English dictionaries, except for the Oxford Advanced Learner's Dictionary, provide a definition of 'treat' that relates to curing or restoring (Table 1). Conversely, all American English definitions, except that in the Cambridge Dictionary, define 'treat' as simply giving medical care, with no reference to outcome or intention (Table 1). We see that the core meaning of 'treat' is generally broader in British English and narrower in American English.

**Table 1. Definitions of 'treat'**

| Dictionary | Definition includes concept of *cure* | Definition does not include concept of *cure* |
|---|---|---|
| Cambridge Dictionary (Online) [1] | **British English**: *give medical care, i.e. to use drugs, exercises, etc. to cure a person of a disease or heal an injury*<br>**American English**: *give medical care, i.e. to do something to improve the condition of an ill or injured person, or to try to cure a disease* (emphasis added) | |
| Collins Cobuild English Language Dictionary [2] | **British English**: *If you **treat** an illness, injury, or disease or **treat** the person who has it, you give the person medical attention and try to make him or her well again* (p.1559) (emphasis added) | |
| Longman Language Activator: The World's First Production Dictionary [3] | **British English**: 'treat' comes under the broader concept of 'cure' and is defined as *to give someone the treatment that cures a particular illness or medical problem, especially when this is the usual way of curing it* (p. 296) (emphasis added) | |
| Merriam-Webster Dictionary (Online) [4] | | **American English**: *to care for or deal with medically or surgically; deal with by medical or surgical means.* |
| Oxford Advanced American Dictionary (Online) [5] | | **American English**: *treat somebody (for something) (with something) to give medical care or attention to a person, an illness, an injury, etc.* |
| Oxford Advanced Learner's Dictionary (Online) [6] | | **British English**: *treat somebody (for something) (with something) to give medical care or attention to a person, an illness, an injury, etc.* |

The meanings of words change over time for a variety of reasons. The above cited divergence is evidence that 'treat' is undergoing what is known as semantic shift and, more specifically, sematic

restriction, i.e. a reduction in the scope of its reference [7], with the (primarily) American English version no longer extending to the intention to cure.

The authors note that there appears to be a mismatch in the meaning assigned to 'treat' between ICU HPs and oncologists. Oncologists, they contend, use it in a neutral manner to simply mean the provision of medical attention (with no reference to outcome or intention) while ICU HPs understand 'treat' to entail reference to a positive medical outcome (or at least the intention to achieve this). The authors then further extend the discordance between the core meanings of 'treat' claiming that, in fact, some PHs use it with an entirely different meaning, not noted in any of the dictionaries:

> *…some physicians use treatability statements to contrast treatability with curability, implying that the disease is certainly incurable…*

There is no linguistic evidence for this third alleged meaning, i.e. that 'treat' and its derivatives actually mean: *to provide medical attention for a disease that is "certainly incurable"*.

However, evidence of the fact that 'treat' and its derivatives are undergoing some change in meaning within the medical profession is the frequent use of numerous adjectives or adjectival phrases preceding the noun 'treatment' (e.g. *active* treatment, *life-prolonging* treatment, *curative* treatment). The use of such clarifying adjectives/adjectival phrases by HPs ensures that the intended purpose for which treatment is/will be provided cannot be misunderstood.

It might be argued that we have interpreted the treatability statements explored by our American colleagues with the broader standard meaning of 'treat', influenced by our own background in British and Australian English. This would surely have coloured the current analysis with <u>our</u> understanding of such words and statements, one might suggest. We will revisit this point below.

### *Assumption 2 – Meaning of treatability statements beyond their literal sentence meaning*

The second assumption made by the authors is predicated on Assumption 1, i.e.

> *…treatability statements convey meaning far beyond the literal sentence meaning. These additional meanings are informed by contextual factors—the identity of the speaker, assumptions about the speaker's intent, knowledge of the clinical situation, etc.*

While it is true that we make sense of much of what we hear in conversation by relying on contextual factors (as well as additional factors such as prior knowledge, and cultural & social facts etc.) to understand the intent of seemingly unrelated conversational contributions, we believe that the authors have inadvertently added layers of interpretation as a result of their initial assumption about the surface meaning of 'treat' and its derivatives.

Based on at least some current definitions provided, patients are justified in understanding 'treat' as entailing some reference to a potential positive medical outcome and are therefore also justified in hoping for the best when hearing such treatability statements made in reference to serious and even life-limiting diseases. Further evidence that patients' understanding of treatability statements does not relate to their inability to grasp the HPs' intended meaning is offered by the authors themselves; some HPs use and understand the word 'treat' and its derivatives or synonymous phrases in exactly the same way as patients do, i.e. that these words and statements denote potential efficacy, impact, or intention to achieve some positive medical outcome. The authors' recognition that some, presumably American, HPs understand the meaning of 'treat' to extend to the intention to cure adds further support to the fact that at least some Americans still use the broader meaning of treat (despite the narrower American English dictionary definition). This also supports the view that our own understanding and use of 'treat' and its derivatives has not led us to analyse treatability statements based solely on <u>our</u> understanding of 'treat'.

In an attempt to justify the mismatch between HPs' "intended" meaning of treatability statements and patients' received meaning, the authors turn to Grice's conversational implicature and claim:

> *…the physician's intended meaning is framed in technical terms relevant for the physician's work (specific clinical problems and interventions), while the patient's*

> *received meaning is framed in everyday terms relevant for the patient's life and experience (surviving, hoping, getting better).*

Despite the broader and narrower meanings of 'treat', it is important to firmly note that 'treat' is not in any way a "technical term" with a meaning, intended or not, beyond the patient's experience with medical terms, as suggested by the authors.

### *'Intentional ambiguity' in treatability statements*

We would like to offer an alternative explanation for the reason why such treatability statements are used in circumstances where no cure or amelioration for the disease is possible. In a 2007 systematic review focusing on HPs' truth-telling practices when discussing prognoses with patients with advanced life-limiting illnesses (many of which focused on cancer), it was found that many HPs develop strategies of avoidance or withholding of prognostic information even though they acknowledged the benefits of open and honest disclosure to patients and their families [8].

Hancock and colleagues identified several reasons why HPs do not always disclose information in an open and transparent manner or are reluctant to do so [8]. These included HPs':

1. perceived lack of training in prognostication
2. uncertainty about estimating illness trajectory
3. stress relating to dealing with family members, the patient's emotions, depressing their patients, and about controlling their own emotions during discussions as well as the HPs' own attitudes towards death
4. limited time to attend to the patient's emotional needs
5. feeling of inadequacy or hopelessness regarding the unavailability of further curative treatment
6. fear of a negative impact on the patient, and
7. requests from family members to withhold information

We would like to propose that, where life-limiting conditions are concerned, HPs are aware of the hope that patients derive from treatability statements so they sometimes consciously or unconsciously use treatability statements to create 'Intentional Ambiguity'. This is a term we have coined to describe the use of treatability statements for incurable conditions which address HPs' need to satisfy important obligations, both as a professional and a feeling human being. First, by uttering "This is a treatable condition" to patients with terminal cancer, for example, the HP feels that s/he does not strip patients of <u>all</u> hope; the patient and their family are not crushed by the deafening fact that medicine cannot fix all and that time may be short. Second, the HP does not ignore his/her obligation to be 'truthful' to patients and their families; s/he will indeed be providing a medical intervention targeted at the disease. Third, the *intentional ambiguity* created by such treatability statements helps defer the need to confront items listed in 3-6 above, i.e. the messy patient, family, and HP emotions that come to the fore in the face of death. While such *intentional ambiguity* may function as a shield against deep emotional discomfort, it is, in the end, damaging to patients and their families and perhaps even HPs.

### *Grice's Cooperative Principle (CP) and Intentional Ambiguity*

Grice's work aimed to elucidate how it is possible for speakers to know how to generate implicit meaning and assume that the listener will understand their intended meaning despite the intended meaning being unrelated to the actual words spoken. In addition, his focus was also necessarily on how listeners understand the speaker's intention despite the use of implicit language. Grice's focus was therefore on the logic of conversations which could account for the gap that often exists between what is said and what is meant. Grice called this additional meaning (i.e. the intended meaning) *conversational implicature*. Underlying Grice's CP is the notion that rationality is central to human action and language as a system and the CP expresses a general principle governing how people interact communicatively with one another (see Davies [9] for an interesting analysis).

> "Our talk exchanges do not normally consist of a succession of disconnected remarks, and would not be rational if they did. They are characteristically, to some degree at least, cooperative efforts; and each participant recognizes in them, to some extent, a common purpose or set of purposes, or at least a mutually accepted

> direction." [10, p.45]… "We might then formulate a rough general principle which participants will be expected (ceteris paribus) to observe, namely: Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged. One might label this the COOPERATIVE PRINCIPLE." [10, p.45]

Batten and colleagues offer an example of seemingly unrelated conversational exchanges which nevertheless cohere as a result of the listener making sense of the speaker's intended meaning. Below we further clarify how it is possible for us to both convey and understand implicit meaning when the surface meaning seems unrelated.

Four Conversational Maxims are associated with the CP. When communicating, both the speaker and the listener assume that these 'rules' are, in broad terms, being observed, i.e. that we

1. give enough, but not too much, information (Maxim of Quantity)
2. only convey things we believe to be true and based on evidence (Maxim of Quality)
3. provide information relevant to the discussion (Maxim of Relation) and that we
4. convey information clearly so that there is no confusion & that we do not engage in long-winded explanations (Maxim of Manner).

Grice clarifies that we *exploit* these maxims to generate conversational implicature by deliberately flouting a maxim. When a maxim is flouted (e.g. the response to the listener's question seems completely unrelated) the listener seeks to find the intended meaning which coheres with and furthers the exchange, precisely because the underlying assumption is that rationality underlies the exchange and that the CP is being observed. If not flouting these maxims for communicative effect, observing the maxims is the default assumption.

When we want to *opt out* from the operation of a maxim, we usually signal this to the listener. For example, we use phrases such as "This may or may not be the case but…" – this signals that we are unsure about the veracity of the statement and by stating it in advance we will not be violating the Maxim of Quality (and hence cannot be labelled a liar or rumour monger).

On occasion speakers *violate* the maxims intentionally or unintentionally. The violation of maxims can lead to concerns about the reliability of the speaker as well as impressions about their character, which, in the clinical context particularly, can be detrimental given the obligations we feel HPs have towards their patients and their families. For example, when the HP gives less information than required for a patient to fully understand the prognosis, the patient would be justified in feeling let down and concerned that critical information is being withheld. In previous work, we have shown that major communicative and emotional issues arise when the maxims are violated in the clinical context [11]. Here we would like to draw on Grice's Cooperative Principle and the associated maxims to illustrate why *intentional ambiguity* is particularly damaging.

- the speaker (HP) indicates that there is treatment (narrow meaning) for a terminal cancer
- the patient interprets this statement, with its core broader meaning in mind, to mean that there is at least some hope that the disease may be successfully controlled (or even perhaps eradicated!)
- the HP does not clarify that there is no medical intervention that will fully or partially restore the patient's health because the ambiguity that has been created with 'there is treatment' serves other useful purposes, as outlined above
- when it comes to light that there is no possibility for the extension of life, the patient and family may feel that at least three conversational maxims have been violated:
    - **the maxim of quality** - the HP's statement was either not truthful or was not based on evidence – *Can I ever trust him again? Does he even know what he is doing?*
    - **the maxim of quantity** - the HP did not provide enough information to convey an accurate understanding of the gravity of the situation – *How could he leave me in the dark like that? How am I supposed to cope with all this and make important decisions?*

    - **the maxim of manner** – the HP allowed a cloud of ambiguity to hang in the air even though there was evidence the patient remained hopeful – *Why didn't he just tell it as it is? How could he show such little regard for me when I am dying?*
- the violation of these maxims in the clinical context leads to powerful emotions of anger and sadness as we have shown in analyses in the paediatric context [11, 12].

In Table 2 below we focus on Batten and colleagues' case to further illustrate how the treatability statements with their broad and narrow meanings are understood and how intentional ambiguity arises in some contexts. We also offer some suggestions for alternative wording which could have been used to help avoid ambiguity.

Excerpt from Batten and colleagues' case to provide context: *Given Ms. P's age and medical comorbidities, the ICU team wonders if she will survive this acute episode of sepsis. And even if she does survive, they predict she will return to the hospital with another decompensation. According to the oncologist, multiple forms of treatment for her breast cancer may be available if Ms. P stabilizes and survives to discharge, including further hormonal therapy, chemotherapy, or palliative radiation for symptomatic masses. However, her oncologist wonders if her poor functional status might mean that these treatments will have a poor benefit-burden ratio. To discuss these matters, the ICU team and the consulting oncologist hold a conference with the patient's daughter.*

**Table 2. Understanding how and where Intentional Ambiguity is created and ways to improve communication**

| Batten and colleagues' case | Meaning of Treatability Statement | Manifestation of Intentional Ambiguity | Alternative wording for clarity |
|---|---|---|---|
| *The intensivist provides a summary of Ms. P's ICU course, being careful to explain that Ms. P is elderly, critically ill, and may not survive to discharge. As part of explaining what the ICU team is currently providing, the intensivist says that, in addition to providing supportive care:*<br><br>*Sentence 1: "We're continuing to treat her infection."* | Standard broad meaning of 'treat'<br><br>The ICU doctor is referring to "treating" the infection as a way to convey that they are directing medical attention to the infection in an effort to cure it (but they do stress that Ms P may not survive to discharge, i.e. the treatment may not be effective). | No intentional ambiguity is evident in this treatability statement, as Ms P's daughter is likely to have understood that the intention is to cure her mother's infection.<br><br>The intensivist and Ms P's daughter appear to be using and understanding 'treat' in the same way. | While we do not perceive intentional ambiguity in the intensivist's treatability statement, the wording could nevertheless be improved:<br><br>*"We are continuing to try to treat her infection, but we don't honestly know if that will work. She is really very sick, and there is a high chance that she won't survive"* |
| *The conversation then turns to a discussion of the patient's underlying cancer. The oncologist carefully explains that, if Ms. P survives this hospital stay, "she will still ultimately die from her cancer." In order to reassure Ms. P's daughter, the oncologist adds:*<br><br>*Sentence 2: "The cancer is still treatable."*<br><br>*He clarifies that any treatment options "will need to be discussed" with Ms. P's outpatient oncologist at a later time.* | Narrow meaning of 'treat'<br><br>'treatable' is used to mean that there are interventions that can be deployed. The oncologist clearly does not incorporate in this meaning the intention to cure, as s/he is aware that the cancer is terminal. | "In order to reassure Ms P.'s daughter", the oncologist says; "the cancer is still treatable".<br><br>This appears to acknowledge that the oncologist knows the treatability statement provides hope - but that seems likely only if s/he knows that there is at least some chance that the daughter will understand 'treat' as cure. | *"She will still ultimately die from her cancer. The cancer is still "treatable" but it is important that you know that sadly there is no cure for your mother's cancer. At this stage, the only treatments available are to try to reduce symptoms or slow the growth of the cancer. And even if she recovers from this infection, your mother may be too unwell for those treatments to help her."* |

We contend that *intentional ambiguity* is ultimately very damaging; partially satisfying the maxim of quality and temporarily shielding the HP and patient & family from the immediate discomfort and anguish that transparency would have caused are not robust enough justifications for such ambiguous treatability statements. Despite the individual and cultural differences in the informational needs of people with life-limiting conditions, there is significant evidence that patients and families want and benefit from truthful but sensitively conveyed information [12, 13] and that they find relief in having greater control of their difficult circumstances as a result of open discussions [14]. Research has also shown that HPs' concerns about the negative impact of truthful prognostic information on patients and families is unfounded [15].

The changing meaning of 'treat' and its derivatives, both transatlantic and contextual, as we have shown above, also highlights the real challenges posed when doctors are communicating with families from different cultural contexts, or when they themselves come from a different culture. This is a point we have not focused on here but which merits brief mention. In such contexts, navigating and negotiating the explicit surface meaning is challenging enough let alone the implicit intended meaning in challenging communicative exchanges.

Particularly around end of life, communication is fraught with potential for misunderstanding for all involved and, particularly so, for some groups of patients and their families. This is one of the reasons why health professionals need to work hard to be explicit and unambiguous in their communication. Observing basic communicative expectations in the clinical context is paramount, as important decisions must be made based on the information exchange with HPs; if patients are to be shown respect and supported in processing and accepting devastating prognoses, HPs must refrain from what we have termed *intentional ambiguity*, and/or be made aware of the standard broader and locally or situationally narrower meanings of 'treat'. Anything less than open and transparent communication of prognostic information not only impacts on patients and their families in a devastating way but also ultimately undermines the broader relationship of trust between communities and healthcare professionals.

### *Conclusion*

Following careful consideration of the authors' analysis of treatability statements, we have argued that the mismatch between intended and received meaning in such statements is unrelated to conversational implicature, i.e. the patient's inability to grasp the HP's intended meaning. We believe the mismatch relates to a much more basic linguistic phenomenon known as semantic shift and, in this instance, the narrowing of the meaning of 'treat'. If the HP is using the narrower meaning of 'treat' and the patient is assuming the broader more standard meaning, this leads to the mismatch between the statement spoken and the statement understood. We have further proposed that the narrower use of 'treat' in treatability statements for incurable conditions could represent *intentional ambiguity*, which is theoretically supported partially by the HP's need to adhere to the Maxim of Quality and partially by empirical evidence on reasons why HPs do not always disclosure information transparently.

While our analyses arrive at different conclusions, we are grateful to Batten and colleagues for their careful consideration of the issues raised by treatability statements used in life-limiting conditions. Focusing on such statements and the communicative challenges they can present highlights aspects of clinical communication that continue to require attention.

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