

VIEWS & REVIEWS

PERSONAL VIEW

“This may hurt”: predictions in procedural disclosure may do harm

Open ended statements such as “You may feel something now” allow for patients’ widely varying responses to stimuli and are less likely to invoke a nocebo reaction, says **Baruch S Krauss**

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The practice of “procedural disclosure” involves clinicians providing a description of the sensations that they assume patients are likely to experience during a procedure. The presumed rationale is threefold: as a corollary of the principle of informed consent; as part of truth telling in the clinician-patient relationship that fosters trust; and to help patients cope with procedures. But this seemingly intuitive rationale has not been critically assessed.

Subjective descriptions of sensations

Procedural disclosure includes statements that warn the patient that something is about to happen, along with subjective descriptions of sensations that the patient may experience. Statements are either declarative (“I am going to give you some numbing medicine now”), descriptive (“You will feel some cold soap on your back”), or a combination (“I am going to do X, and you will feel Y”), and they can be expressed as either definite (“This will feel cold”) or qualified (“You may feel some burning”). The content depends on the age of the patient, the type of procedure, and the expected response from the patient. Disclosures are based on the model that clinicians learned in their training and the assumption that most patients will respond similarly to a given, and often potentially noxious, stimulus.

This assumption allows clinicians to make general statements as to what patients will, or may, experience with each procedural stimulus. However, this does not account for the wide range of individual responses (based on temperament, previous experience, coping style, and cultural tradition) that patients display in clinical practice, from no anxiety/pain response to severe distress.

The value of procedural disclosure is taken as self evident. It is assumed that disclosure is ethically the right thing to do; that it is accurate, does no harm, and benefits patients. Procedural disclosure differs from informed consent because it does not communicate the risk of an adverse event—rather, it outlines what sensations patients may experience, and it takes place after

informed consent has been obtained. Unlike informed consent, procedural disclosure is a process learned informally without an evidence based method or established rules governing the process.

Negative expectations may produce symptoms or worsen existing symptoms, studies on nocebo effects have shown¹⁻⁹—allowing for inferences about how specific types of procedural disclosure communications can shape patient response. Telling patients that something will hurt is likely to increase their reports of pain. Videos of patients undergoing interventional radiological procedures show that warning them of impending pain or an undesirable experience results in significantly greater pain and anxiety than informing them with a neutral statement (for example, “What does it feel like?”) or a statement focusing on competing sensations (such as “cooling, tingling, or numb”).¹⁰

Women receiving epidural or spinal anesthesia who were randomized to “reassuring” words (“We’re going to give you a local anesthetic that will numb the area, and you’ll be comfortable during the procedure”) had lower pain ratings than those who heard “harsh” words (“You’re going to feel a big bee sting; this is the worst part of the procedure”).¹¹ Similarly, patients requiring intravenous catheter placement for surgery who received the communication, “I am going to apply the tourniquet and insert the needle in a few moments. It’s a sharp scratch, and it may sting a little,” reported higher pain scores than patients who were told, “I am going to apply the tourniquet on the arm. As I do this many people find that the arm becomes heavy, numb, and tingly. This allows the drip to be placed more comfortably.”¹²

A recent study combined behavioral and neuroimaging data to consider how three different cognitive frameworks—expectations of analgesia, no analgesia, or hyperalgesia—modulated a fixed concentration of remifentanyl on constant heat pain. Positive expectations doubled the analgesic effect when compared with no expectation, and

negative expectation abolished remifentanyl analgesia. Positive expectation was associated with activation of pain inhibitory regions in the brain; negative expectation was correlated with increased hippocampal and prefrontal cortex activity.⁹

Nocebo research

Nocebo research has shown that communications that elicit negative expectations have the potential to harm and that this effect is neurobiological.⁹ Therefore, calibrated and nuanced language is required for procedural disclosure to communicate truthful information that positively influences the patient's affective state while minimizing negative responses. Because patients may have individual, and often idiosyncratic, responses to procedural stimuli, it may not always be possible to match disclosure language to the patient's subjective experience.

Open ended statements, therefore, can be more helpful than firm predictions and can allow maximum latitude for individual responses without directing the patient toward a particular sensation or experience: "I am going to give you an injection now," instead of "This may hurt a little"; or "You may feel something now," instead of "This will sting for a moment"; or "You may be feeling some of the changes from the medication," instead of "This medication may make you dizzy."

It has been the accepted norm that formal training is not needed for clinicians to communicate procedural disclosure information. Although there is a method for, and training in, communicating a terminal diagnosis or poor prognosis (that is, compassionate delivery of information that tells the truth but does not destroy hope), no analogous training or method exists for delivering procedural disclosure information. Nocebo research highlights the need for such training and provides a framework for developing an evidence based method through the specific phrasing of information—one that avoids negative expectations without compromising the ethical standards of informed consent.

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