Factors influencing medical decision-making

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When a patient is faced with deciding to have major surgery, it seems clear that how treatment options are presented to the patient can influence decisions. However, it is hard to find any medical studies or patient materials on the effect of presentation format on influencing such decisions. The authors of this unique study looked at how doctors presented information as well as details about the doctor, to include gender and race, as these may affect what choices a patient makes. They also looked at how patient features could affect decision-making.

For this study, the research participants were given a situation where they were advised on treatment options for a medical problem. The problem was narrowing of the carotid artery. This artery supplies blood to the brain. The treatment options include a major operation which has both risks and benefits, starting medications, such as aspirin, or both. Major medical trials have shown that in the right setting surgery, in addition to best medical therapy, can reduce stroke risk further.^{1,2}

A total of 420 people, who came to a neurology clinic for other reasons, were asked to participate in this study. None of the people in the study actually had narrowed carotid arteries. They were separated into groups. The groups watched one of five 30-second videos on treatment options. Four videos gave statistics about the treatment options, and one video stated that treatment with surgery plus using best medical therapy greatly reduces stroke risk. This video did not give statistics. The doctor on the video was either a middle-aged white man, middle-aged black man, middle-aged white woman, or middle-aged black woman. Each clinician read the same information in a neutral voice. The subjects were then asked to complete a survey including information on their gender, age, race, level of education, and decision on surgery. A total of 409 subjects returned surveys that could be used.

Results showed that statistics were not as important a factor for choosing surgery; patients were more likely to choose surgery if simply told the benefit of surgery was significantly greater. There was a trend for subjects younger than 55 and those with a high school education or greater to choose surgery, regardless of presentation format,

but this was not significantly different from the other subjects. The race of the clinician, race of the patient, gender of the clinician, and gender of the patient did not contribute to the decision.

This study is unique because it tried to answer how presentation format, presenter characteristics, and patient characteristics can affect decision-making regarding a type of surgery to reduce stroke risk. However, there were many issues that may limit the authors' conclusions; the authors recognized most of these. For example, the subjects did not have the specific problem that was presented, and made a decision on a "pretend" situation. Someone with no real feelings toward this operation may be able to give opinions with fewer influences. However, they may also be less interested and focused on the information. In real life, with a serious illness that may have a bad outcome, there are strong emotions, so it may be hard to determine in any study how these factors can affect a patient's choice.

Other problems might have affected decisions. The clinician was only on video, and that may have an effect on the strength of information given. There is no way to know if the influences on decisions would be the same for another medical problem. The presentations were also short. There was not further talking and no chance to ask questions. The doctors were all middle aged, read from a script, and presented the information with no emotions. Subjects were not allowed to get a second opinion or given extra time to make their decision. Subjects did not have time to do their own research. Family or friends were not there to give support or opinions. No other types of patient information were available. Some people, for instance, are more "visual" learners. Though it was a good idea to look at possible racial, gender, and cultural factors, these were studied only in a very basic way.

Patient and clinician interactions are complicated, and include all the factors listed above. Also, the experience level of the clinician and his or her feelings about a treatment may affect decisions. The trust level and the time a doctor has seen the patient can affect patient decisions. Those things are difficult to measure. Until researchers

can figure out ways to get this information from studies, there is no way to tell how these results can apply to real life.

Studies like this are good to build on, but there is a long way to go to figure out the best ways to present treatment options to patients. Until then, it seems wise for a clinician to use multiple ways to present options, use visual and other aids in presenting information, and ensure patients have ample time to ask questions to be sure they clearly understand their options.

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