MEDINFO 2007
HISA Ltd Australia
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Innovative Approach to Childbirth Decision Making

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Abstract and objective

In the era of limited healthcare resources, patients will increasingly manage their own health including making decisions. We have developed a computerized decision aid to help a woman with a prior cesarean consider decision factors for a future delivery (vaginal vs. repeat cesarean). The objective was to evaluate the impact of the decision aid on the decision making processes in a randomized trial.

Keywords:

decision support techniques, vaginal birth after cesarean, response format, patient preferences, decision aid

Introduction

The childbirth decision aid is built on an underlying, evidence-based,[1] multi-criteria decision model. In using the decision aid the patients determined the importance of decision criteria and considered the two options, trial of labor (vaginal) and repeat cesarean. Because there was uncertainty about which scale format for measuring childbirth preferences was most accurate and user friendly, we compared a graphic-numeric scale to a text-anchored scale in a randomized trial.

Methods

We recruited 96 women who had just had a cesarean delivery from the postnatal unit of a large university hospital. After all patients completed a baseline computerized questionnaire, they were randomized to use either a graphic-numeric scale (n=48) or a text-anchored scale (n=48) for measuring their preferences. The patient made a series of pairwise comparisons to determine the importance of each decision criterion,[2,3] e.g., comparing the importance of "wanting convenience" of a scheduled delivery to "wanting a smooth recovery," using one of two formats (Figures 1, 2).

Figure 1 - Graphic-Numeric Scale

Figure 2 - Text-Anchored Scale

For both interfaces, the women received summary information on their preferences related to having a repeat cesarean or attempting a vaginal delivery. Our analyses focused on changes in the decision making process measures (baseline and after using the decision aid) and the patient's internal inconsistency using the two formats.

Results

The dominant criterion was "Avoiding injury to the baby" (64%) (Figure 3).

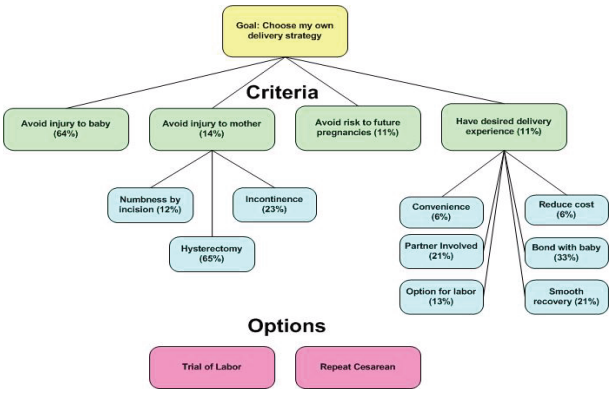

Figure 3 - Decision model and preference weights

Our ANOVA revealed that both groups of patients significantly improved several decision making processes: increased knowledge, $p<0.001$; increased clarity about childbirth values, $p<0.001$; increased sense of support, $p<0.001$; and reduced overall perceived decisional conflict, $p<.001$ to the same extent after using either scale format. The patients were more consistent in evaluating risk using the graphic-numeric format, $p<0.05$.

Conclusion

While both formats improved the decision making processes, patients were more consistent in decision making involving risk when the scale format was graphic-numeric.

Acknowledgement

This study was supported by grants from the OHSU Foundation, NIH K12 grant:BIRCWH, and the Agency for Healthcare Research and Quality.

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