

Sigma Theta Tau International's 29th International Nursing Research Congress

Using Health Information Technology to Reduce Disparities in Shared Decision Making About Birth After Cesarean

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Purpose: Decision aids are central to shared decision making (SDM) and recommended for value-sensitive healthcare decisions. Effective strategies for widespread implementation of decision aids to reduce disparities in decision making experiences, including use of interactive web-based platforms, are lacking. The purpose of this research was to evaluate the feasibility and acceptability of implementing a web-based decision aid designed to support shared decision making about birth after previous cesarean, for women receiving care in high volume, urban, ethnically diverse outpatient clinic settings. We hypothesized that an interactive decision aid implemented into routine practice using health information technology (IT) would increase opportunities for shared decision making for women through effective decision preparation and communication of women's preferences and values with providers.

Methods: A before and after study design was used to assess the feasibility and acceptability of the decision aid for women's preparation for shared decision making. This included assessing changes in women's knowledge about their birth options, levels of decisional conflict, preferences for mode of birth and actual birth outcomes. Decision aid users rated acceptability of the content, features, and function of the decision aid. Documentation of women's birth preferences and actual birth outcomes were compared.

Results: Participants included 68 pregnant women from diverse background with mean age 29.3 years; black, 46.2%; Hispanic 35.4%; White 13.8%; Asian/Other 4.6%. All had experienced one previous cesarean section. Knowledge of birth options test scores increased by 2.58 points out of 15 ($p < 0.001$; $d = 0.87$) for women participating in the study. Decisional conflict scores also reduced by 0.45 points out of five points ($p < .001$; $d = 0.69$). Forty-four women (65.9%) attempted VBAC, of whom 29 (65.7%) succeeded. Most participants used the decision aid during pregnancy and rated the decision aid content, features and functions as good/excellent. All women who rated the decision aid indicated they would recommend the decision aid to other women.

Conclusion: It is feasible to implement web-based decision aids within ethnically diverse pregnancy care settings to address disparities in decision preparation. Strategies to improve timely decision aid access and promote consistent utilization of decision support for all women are needed. Seamless integration into workflow, including use of the electronic medical record, is an important next step for future dissemination and implementation.

Title:

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Keywords:

Birth After Cesarean, Health Information Technology and Shared Decision Making

References:

1. National Institutes of Health Consensus Development Program, *Vaginal Birth after Cesarean: New Insights*, Final Statement, March 8-10 2010, Bethesda, Maryland. <http://consensus.nih.gov>
2. Durand MA, Carpenter L, Dolan H, Bravo P, Mann M, Bunn F, Elwyn G. Do interventions designed to support shared decision-making reduce health inequalities? A systematic review and meta-analysis. *PLoS ONE*. 2014; 9: e94670. doi:10.1371/journal.pone.0094670
3. Shorten A, Shorten B, Kennedy HP. Complexities of choice after prior cesarean: A narrative analysis. *Birth*. 2014; 41: 178-4.
4. Shorten A, Fagerlin A, Illuzzi J, Kennedy HP, Lakehomer H, Pettker C, Saran A, Witteman H, Whittemore R. Developing an Internet-based DA for women choosing between vaginal birth after cesarean and repeat cesarean birth. *J Midwifery Women's Health*. 2015; 60: 390-400
5. Wallwiener S, Müller M, Doster A, Laserer W, Reck C, Pauluschke-Fröhlich J, Brucker SY, Wallwiener CW, Wallwiener M. Pregnancy eHealth and mHealth: user proportions and characteristics of pregnant women using Web-based information sources – a cross-sectional study. *Arch Gynecol Obstet*. 2016; 294:937-4.

Abstract Summary:

This presentation will focus on research exploring the acceptability and feasibility of using health information technology to implement a decision aid designed to reduce disparities in shared decision making, for women from ethnically diverse backgrounds facing birth after previous cesarean within high volume, urban, outpatient settings.

Content Outline:

I. Introduction

A. Shared decision making using evidence based decision aids has been recommended for routine pregnancy care.

B. Decision aids implemented into routine practice using health information technology have the potential to contribute to reducing disparities in decision making about birth after cesarean by increasing opportunities for shared decision making.

C. Few decision aids have been effectively implemented into routine clinical practice using SDM.

D. Research should be focussed on adapting and implementing shared decision making with decision aids to give voice, and support decision making needs of women with diverse backgrounds

II. Body

A. Indicators of Preparation for Shared Decision Making in Practice:

i) Knowledge Improvement

ii) Decisional conflict reduction

iii) Preferences and Outcomes

B. Decision aid Acceptability in Practice: Indicators of acceptability of decision aid for potential users

i) Decision aid user acceptability

ii) Satisfaction with decision making process

C. Decision aid Feasibility in Practice: Indicators of feasibility to use in practice within and outside of clinics

i) Decision aid access and use by women during pregnancy

III. Implications for Practice and Research

A. Future research and practice: Integration into systems of care: eg. Electronic medical record integration; scheduling decision support education, provider preparation for shared decision making

B. Tailoring and adapting decision aids to language, culture and literacy

C. Addressing patient diversity and access issues for mobile decision support tools

First Primary Presenting Author

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Professional Experience: Director University of Alabama at Birmingham, Office of Interprofessional Curriculum; Birmingham, AL. Professor, University of Alabama at Birmingham School of Nursing; Birmingham, AL. Nursing and Midwifery Educator and Researcher for 25 years. Author or coauthor of over 80 publications primarily relating to nursing education, evidence based practice, midwifery models of care and shared decision making. Numerous presentations at international scientific meetings.

Author Summary: Dr. Shorten is Director of the Office for Interprofessional Curriculum, University of Alabama at Birmingham. Professor, School of Nursing. Her research spanning 25 years focuses on evaluating birth outcomes, promoting physiological birth and developing, evaluating and implementing decision aids for shared decision making in pregnancy. Her recent research applies systematic strategies to improve women's access to health decision support using information technology. Her educational leadership focuses on innovative curriculum to facilitate interprofessional teamwork in healthcare.

Second Author

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Professional Experience: Robin Whittemore is a Professor at Yale School of Nursing and an expert in use of technology to improve health behaviors. She received her BSN from the University of Bridgeport in 1978, a MSN from the University of Connecticut in 1991, and a PhD in nursing from Boston College in 2000. She also completed a post-doc fellowship at Yale School of Nursing from 2001-2003.

Author Summary: Dr. Whittemore's extensive research spans lifestyle change to prevent and treat type 2 diabetes as well as the psychosocial adjustment to chronic illness development. Her recent work has evaluated the translation of the diabetes prevention program, delivered by homecare nurses, for residents

of subsidized housing and the use of technology to improve health behaviors and psychosocial outcomes in youth at risk for obesity and youth with type 1 diabetes.

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Professional Experience: Brett Shorten brings over 30 years experience in quantitative analysis of data. He has broad experience in teaching statistics and economics in the tertiary sector. His current research expertise is in analyzing the comparative effectiveness of models of healthcare.

Author Summary: Mr Shorten has extensive experience in evaluating pregnancy care services to promote physiological birth and shared decision making. He is a statistical consultant and data analyst for numerous national cohort studies and coauthor of numerous publications relating to birthing outcomes and birth intervention studies.