A Mixed Methods Study of Surgeon Perspectives on the STITCH Trial

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Introduction

STITCH trial

- 2015 prospective, multicenter RCT
- 560 patients undergoing elective abdominal operations and primary fascial closure
- Randomized small bite (5mm), small suture (2-0 PDS) vs conventional technique (1cm bite, 1/0-0 PDS)
- Findings showed 8% risk reduction in incisional hernia

Adoption and perspective

- Integration and adoption of techniques has not been widely accepted
- Identifying obstacles to adoption of STITCH trial findings can help identify targets for future interventions to improve adherence to evidence-based practices

Methods

Quantitative analysis

- Surveys with questions based on Theoretical Domains Framework (TDF) operationalized by The Patient Safety Behaviors Questionnaire
  - PSBQ was adapted for this study questionnaire
    - Pilot tested amongst 5 practicing surgeons for usability assessment
    - Embedded qualitative responses

Qualitative Interviews

- 14 surgeons agreed to 1 on 1 semi-structured phone interviews with a standardized interview guide designed from quantitative findings
- Responses were coded for thematic analysis using Nvivo 12 Plus
  - Total data set integrated using a joint display

Results

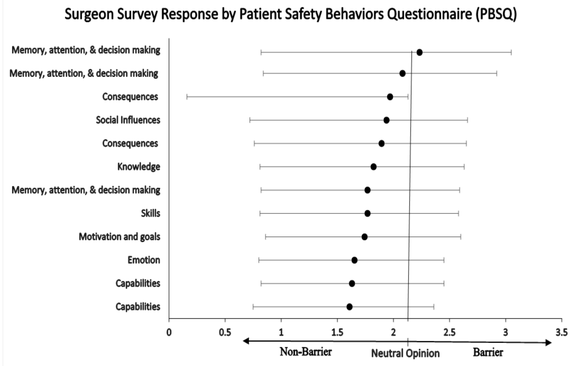


Figure 1: Quantitative Survey Responses (n=139), Mean scores close to 3 indicate the factor was more of a barrier to STITCH technique implementation with mean scores of 2 indicating neutral opinion.

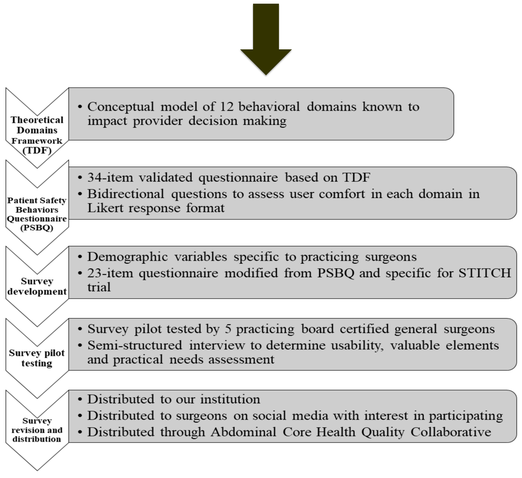


Figure 2: Survey development. Mean responses to quantitative survey were used as basis for qualitative interview guide structure and design

Qualitative Responses
Applicability
Additional patient population issue - primarily trauma patients with multiple ex-lap history.
I am concerned if this applies in the face of high-dose steroids and immunosuppression.
Use in emergent trauma often not able to close laparotomies at index procedures in emergent cases/need for re-look
Technique
when I ask surgeons to show me a 5 mm bite, it is what I call a 1 cm bite
doubt the ability to actually take consistent 5mm bites, seems extremely subjective to "eyeball" 5 mm
I disagree with absorbable suture and my patients either have MIS approach or have had many prior laparotomies so it isn't appropriate
Comfort
I agree with smaller stitch but have reservations about the use of 2-0 versus 0 unlooped PDS.
I rarely need to do an ex lap bc of my MIS operations, and when I do, I feel a little uncomfortable to use the techniques bc the opportunities are so rare.
I don't have the patience to take that many bites
availability of appropriate suture.
Do very little open surgery and it is usually pre-operative and a little needle won't go through the scar
Data quality
I would like to see longer term data in a more heterogeneous cohort before completely embracing STITCH trial techniques.

Figure 3: Qualitative responses recorded in survey. Examples provided were a selected assortment, separated into respective domains.

Conclusions

Practical factors influencing surgeon behavior and decision-making

- Applicability of study findings in setting of specific patient demographics and variables
- Role of anecdotal evidence and surgical logistics

Peer influence impacting behavioral choices

- Mentor opinions affecting decision making
- Peer practice and adherence to techniques

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