Using Design-Thinking to Inform Preoperative Informed Consent: Balancing Surgeon and Patient Preferences

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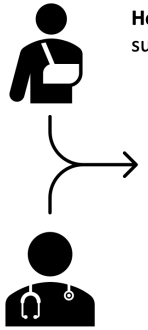
Background

- Preoperative informed consent represents a key ethical and legal component of the surgeon-patient relationship
- The literature indicates it is complicated by the lack of a uniform, consensus standard for surgeons and discordant patient expectations
- Shared-decision making, risk calculators, tenet of patient-centered care have emerged in recent decades to address these limitations
- Exactly how these solutions synchronize patient and surgeon needs in practice has yet to be determined

Hypothesis



How might we improve the informed consent process for surgeons and their patients?

Our Visual Consent Tool

1. Visualization of Risk
2. Patient Preference
3. User Interface Designed for both Patient and Providers

Patient Perspectives

Data Visualization for Surgical Informed Consent to Communicate Personalized Risks and Patient Preferences

Undina Gisladottir, Drashko Nakikj, Rashi Jhunjhunwala, Gabriel Brat, Nils Gehlenborg
doi: https://doi.org/10.1101/2020.03.25.20038398

Surgeons' Perspectives
Our Study

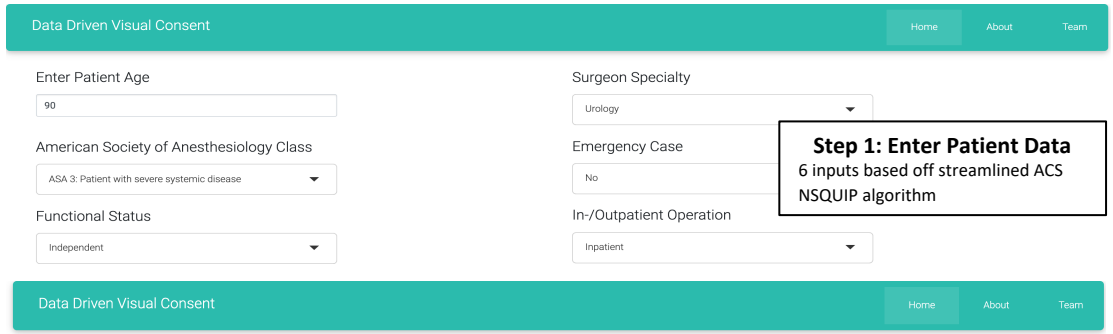
Methods

Multi-center, Qualitative Study

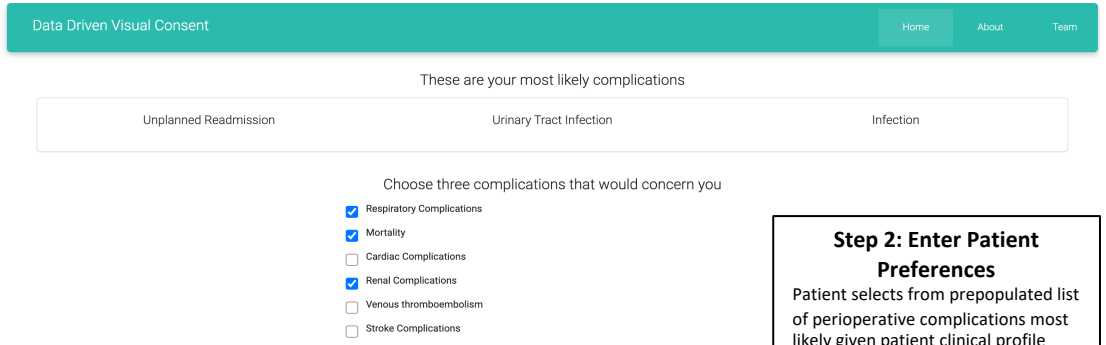
- Semi-structured interviews with prototype demonstration and feedback
- Thematic analysis
- 13 **User Interviews** w/ academic surgeons at BIDMC and DHMC

Does our consent and visualization tool address challenges experienced by surgeons during pre-operative informed consent?

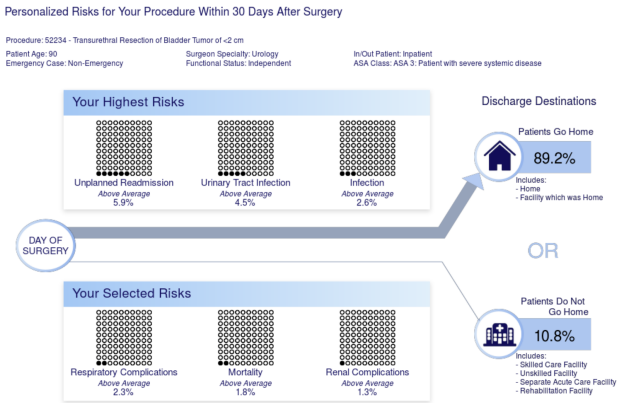
Our Prototype: **Visual Consent Tool (VCT)**



Step 1: Enter Patient Data
6 inputs based off streamlined ACS NSQUIP algorithm



Step 2: Enter Patient Preferences
Patient selects from prepopulated list of perioperative complications most likely given patient clinical profile



Step 3: Individualized Patient Report
Report offers three distinct evidence-based visualizations for communication of risk incorporating (1) Patient's unique clinical profile and (2) their personal, pre-selected perioperative concerns

Results

Demographics

- n=13
- Median age of surgeon was 46y (min. 36y, max. 61y)
- Average years practicing as an attending 11.6 (min. 2y, max. 27y)
- Most represented specialties: colorectal (n=3) and surgical oncology (n=3)

Thematic saturation at 7 interviews

- Our VCT appropriately centers patient concerns to guide surgeon's discussion
- Multiple visualizations align with spectrum of patient health literacy
- Virtual offering aligns with widespread implementation of telehealth infrastructure for pre- and post-op care
- Adaptable across multiple encounter-types
- Short-term perioperative data leveraged by risk calculators well-suited for high-risk cases but is misaligned with surgeons' preoperative focus for low-risk procedures: long-term quality of life complications

Conclusion

- Our tool meets goal of facilitating preoperative informed consent
- Future iterations should leverage quality-of-life data to more closely mirror content of archetypal preop consent

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