Exploring the Patient Perspective of In-Hospital Blood Testing
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INTRODUCTION

Background:
- Canadian healthcare system: blood tests are by far the most common medical activity performed and 4% ($5.9 billion annually) of the total public health budget is spent on laboratory services.1
- AHS: Edmonton Zone blood tests have increased by 1.5 million tests in the last 5 years.2
- Ordering a standard panel of blood tests at hospital admission has become the norm and is not sustainable.3
- "Daily" blood tests ordered upon hospital admission increases: possibly unnecessary follow-up testing, length of hospital stay, use of false positive test results, rate of hospital acquired anemia, patient discomfort, anxiety, stress, and bruising.4

A literature review of the last 10 years identified a significant volume of research that has been completed in the area of decreasing lab test ordering volume. In conclusion, the studies utilized multi-component interventions reported higher overall test ordering reductions - reducing both lab test ordering volume and frequency (daily orders).5

Within the literature, the common intervention/approaches align into 4 domains:

1. Physical and residnet behavior: Interventions targeting physician’s internal motivation such as audit/feedback, education, hospital, ward campaign, incentives, cost displays, and cost-protest cards.
2. Diagnostic reasoning: Interventions to support physicians and residents with critical thinking related to laboratory test selection such as paper-based algorithms and computer-supported clinical decision tools.
3. System-focused interventions related to policy updates, workflow/process changes (formal inclusion in ward-rounding, progress note justifications), updating hospital-wide order sets, and unburdening laboratory test panels.
4. Patient experience: Interventions such as measurements of the number of blood transfusions and tubes of blood collected. However, no study was found that formally included the perspective of patients to assist in the development of an intervention to improve the in-hospital patient experience of blood testing.

Purpose Statement:
- To explore Alberta patients’ perspectives related to in-hospital blood testing.

METHODS

Research Question:
What are Alberta patients’ needs and preferences regarding consultation in the decision of blood testing while in hospital and what is the relationship between these needs and preferences?

Sub-question: Do Alberta patients perceive in hospital as a health system concern?

Purpose Statement:
- To explore Alberta patients’ perspectives related to in-hospital blood testing consultation and to determine patient experience intervention characteristics that may support a reduction in LTOOs.

Methodology: Grounded Theory
- Develop a pragmatic understanding, based on patient reality, of blood testing in the hospitalward setting. To generate a substantive theory from textual data.

Research Team:
- Patient Advisor, QI Consultant, Patient Experience Consultant, Resident, and Medical Student.

Study Population: Purposive sampling of the Alberta Patient and Family Advisory Council (n=16)
- June 2019: Conducted a 2 hour semi-structured focus group using a structured facilitation technique (Think, Pair, Share).

Consultation Aim: When and how do patients and families want to be involved in shared decision-making related to blood testing during a hospital stay?

In-hospital Patient Survey: October - November 2019, conducted a patient survey (n=45) at the University of Alberta on 5 General Internal Medicine (GIM) wards

ARECCI Screening Tool Completed - I am going to apply for an ethical waiver also

WHAT WAS HEARD

Thematic Analysis Inductive Approach:
- Each researcher independently performed open coding of the respondents paper tracking tool, the focus group session flip charts (facilitator documented responses for each question during ‘share’) and a transcript (the session was audio-recorded and transcribed by an administration staff that supports the patient experience intervention staff).4
- Meeting held to review stage-one coding - agreement was set at 90% and used consensus to solve disagreements.
- Research team finalized developed code book (codes, categories, and definitions).
- Independent coding occurred and supportive quotes aligned.
- Themes determined.

Survey Development and Dissemination:
- Thematic analysis results guided the development of survey questions.
- One medical student obtained patient verbal consent prior to questionnaire completion.
- Patient population: randomized GIM patients.
- Survey completed one or two days prior to patient discharge.
- Survey until data saturation

Substantive Theory:
- Current Approach Related to In-Hospital Blood Testing: Patient-oriented with assumed consent regarding hospital blood testing where “no news is good news.” There is an inherent trust that blood tests are ordered with purpose to effect care/treatment decisions and most patients lack clinical knowledge about diagnostic testing. Patients infrequently ask blood test questions, are unaware of hospital or health system resource issues, and may endure the negative effects of blood testing with minimal complaint.

Future Approach Based on Patient Needs and Preferences:
- A consistent in-person discussion which includes: informed consent, shared decision-making, simple plain language where patients and families feel safe to ask questions about blood testing (or all diagnostic tests), use of computer process for sharing results (e.g., verbal explanation supported by a computer screen or written).

LESSEES LEARNED:
- Qualitative findings can identify patient and family preferences for, and perspective on, desirable intervention characteristics and perceived needs which may lead to a more targeted, effective intervention.
- It is difficult to develop a patient-initiated intervention and consultation approach; thus, a shared decision-making conversation about in-hospital blood testing is physician-dependent.

Limitations:
- Patient and Family Advisory Council is well-versed in hospital and health system issues; therefore, to improve validity, we surveyed 45 GIM patients who corroborated the focus group findings.
- Findings are subjective based on patient experiential knowledge and the research team were novice coders and new to qualitative analysis.
- Manual coding completed with an agreed-upon codebook developed.

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CONCLUSION

Survey until data saturation

...TO PATIENTS and PROVIDERS
Determine patients needs and preferences improves awareness, engagement, and shared decision-making regarding blood testing while in hospital

...TO ALBERTANS and THE HEALTHCARE SYSTEM
Patient involvement in lab test ordering decisions may reduce lab testing overuse
- Reducing the cost delivery burden
- Allocating funds to other areas/programs supporting patient care

WHO THIS QUALITATIVE INQUIRY MATTERS?

TO PATIENTS AND PROVIDERS
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SURVEY RESULTS

The recommended intervention design based on the above findings:
- A daily, structured diagnostic test consultation that occurs with the physician at the bedside using simple language. The discussions should begin post hospital admission day1 with the ordered test(s)/written or electronically accessible to the patient and family.
- A hospital-wide campaign that combines Choosing Wisely (CW) – ASK ME WHY? With an acronym ‘TESTing’ to support the education of care providers, patients, and families using posters, CW buttons, patient pamphlets, and in-hospital patient room white boards. The intervention approach is aimed at increasing awareness of diagnostic/blood testing for both patients and providers by providing a structured platform for shared decision-making which may further support the multifaceted programs to reduce LTOOs.

TESTING - Ask Me Why?
T: Test name
E: Explain need and frequency
S: Support shared decision-making
T: Test results provided

Inherent Trust that Blood Tests are Purposefully Ordered

Blood Test Communication Involves-What, When, Why and How

Paternalism to Informed Shared Decision Making

Themes

• “Talk on admission”, “Beside report is a good time-do not wake patient to talk”
• “Why is the test ordered-what is the point, why repeated, when will it stop, what is the purpose”
• “Relieve anxiety by sharing results, when you get a test you think about the results”
• “Talk to me in a language I can understand”
• “Explain rationale for tests to open the opportunity for dialogue”
• “During rounds the doctor should explain when and why”
• “Plain language with clear eye contact-like NOD”
• “Conversation as a formal part of daily interactions”
• “Provide signage, somehow, informing patients that they can ask information”
• “Clinicians need to educate patients and families on WHY test is needed, what measure and basics of normal vs abnormal results”
• “We need to understand to be able to ask informed questions”, “Not enough to know if tests are involved, do we have the knowledge to understand the test”
• “Don’t use cost to personalize care”

• “Inherent”
  • “I want to be knowledgeable and involved in my own care”
  • “Patients know their bodies” and “we are having our blood taken”
• “Discuss with patients/families so they understand their care plan and can voice any concerns”
• “Nothing about us without us”
• “Just be direct, talk to me, with me”
• “Create an environment for shared decision making”
• “I never want to hear the words, well that is what the doctor ordered or no news is good news”
• “I don’t think I have ever been asked to be involved in blood test decisions”
• “Inform patients that they can ask questions”

• “We expect physicians to be ordering blood tests when needed and with clear purpose”
• “Doctor knows best”