

Multi-level factors influence the implementation and use of complex innovations - synoptic reporting tools - in cancer care

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Background

Knowledge to practice

- **Moving knowledge into healthcare practice is a significant challenge**
- **Critical issues relate less to dissemination and more to implementation^{1,2}**
- **Characterized by *action***
“The transition period during which targeted organizational members ideally become increasingly skilled, consistent, and committed in their use of an innovation”³
- **Relatively little research on innovation implementation in healthcare⁴**

¹Glasgow & Emmons 2007

²Green et al 2009

³Klein & Sorra 1996

⁴Alexander 2008

Objective

- **To examine the key interpersonal-, organizational-, and system-level factors that influence the implementation and use of synoptic reporting tools (SRTs) in three cases of cancer care**

TREATMENTS FOR BREAST CANCER

Was surgery delayed for any reason:

No delay (<30 days)

PREOPERATIVE ASSESSMENT

Current pregnancy: No

Past Personal History: None

Genetic Testing: None

Contraindications to radiotherapy: No

Patient candidate for breast conservation: Yes

PALPABLE LESION

Distance from Nipple: Peripheral

PREOP TREATMENT

Preop Treatment: No

METASTATIC WORKUP

Metastatic work up: Negative

BREAST SURGERY

Specify surgery: Unilateral

Specify side: Right

Current diagnosis: invasive

Nipple removed: No

Breast surgery performed: Breast Conservation

Indications: Primary excision

Specify breast: Right

LYMPH NODE SURGERY

Unilateral lymph node surgery: right breast

Lymph node surgery: axillary node & sentinel node dissection

Preop lymphoscintigraphy: Yes

Number of nodes seen: 1

Site of nodes: Axilla

Localization Technique used: Technetium

Sentinel nodes: Clinically negative

Node 1: Radioactive

Counts ex vivo: 700

BMI: Normal (18.5-24.9)

Size of breast: Medium (B)

Method of detection: Patient/family

Palpable: Yes

Can be seen on: Mammogram, U/S, MRI

Preop Biopsy: Core Mammotome

Clinical Axillary Node Status: Negative

Other nodes: None

Clock Position: 9

Tests Done: Bloodwork, CXR

Invasive TNM: Unifocal

Size of Tumor: 2.0-2.9

Clinical Stage: IIA

Skin excision with specimen: Yes

Depth of resection: To fascia

Margins checked by pathologist: gross assessment

If checked: negative

Centimeters clinically negative margin: 0.5-1

Needle localization: No

Clips in segmental site: No

Axillary dissection performed using: Same incision as breast surgery

Axillary vein seen: Yes

Latissimus dorsi identified: Yes

Latissimus cleared: Yes

Medial limits of axillary dissection identified:

Lateral border of pectoralis minor (level 1), medial border of pectoralis minor (level 2)

Serratus anterior identified: Yes

Serratus anterior cleared: Cleared

Methods

Study design

- **Case study methodology^{5,6}**
- **Explanatory**
 - Focus on ‘how’ and ‘why’
- **Multiple cases**
 - 3 cases of SRT implementation in Nova Scotia

⁵Yin 2009

⁶Stake 2006

Three cases

- 1. Synoptic reporting in the Nova Scotia Breast Screening Program (NSBSP)**
- 2. Synoptic reporting in the Colon Cancer Prevention Program (CCPP)**
- 3. Surgical Synoptic Reporting Tools Project(SSRTP)**

Data sources

- **In-depth interviews with key informants**
- **Documents**
 - Project plans, project evaluations, communication materials
 - Legislation, health system/service evaluations
- **Non-participant observation**
 - 6 training sessions (SSRTP case only)
- **Physical artifacts**

Key informants

| | NSBSP | CCPP | SSRTP |
|----------------------------|---|---|---|
| Implementation team | 3 | 4 | 3 |
| Clinician users | 4 <i>1 tertiary, 3 community</i> | 5 <i>3 tertiary, 2 community</i> | 6 <i>4 tertiary, 2 community</i> |
| Organization | 5 <i>2 tertiary, 3 community</i> | 5 <i>3 tertiary, 2 community</i> | 7 <i>6 tertiary, 1 community</i> |
| System | 3 | 5 | 5 |
| | <u>15</u> | <u>19</u> | <u>21</u> |

Analysis

- 1. Case history/description**
- 2. Separate analysis for each case**
 - a) Thematic analysis⁷**
 - b) Explanation building**
 - Iterative, flexible process of moving between prior and case-specific knowledge
 - c) Presentation of findings**
- 3. Cross-case analysis**

⁷Braun & Clarke 2006

Key results

Cases

Nova Scotia Breast Screening Program

2 SRTs
Mid 1980s
Slow expansion
All use screening SRT
(*policy*)

Colon Cancer

Prevention Program

1 SRT
2009-2010
Rapid expansion
All using for screening
(*policy*)

Surgical Synoptic Reporting Tools Project

1 SRT
2010-2011
Pilot project, 2 tertiary & 1
community hospitals
Voluntary use

*Nova Scotia
healthcare system*

| | NSBSP | CCPP | SSRTP |
|--|--------------|-------------|--------------|
| Stakeholder involvement^a | +/- | - | + |
| Managing the change process^a | - | - | + |
| Champions & respected colleagues^b | +/- | + | + |
| Administrative & managerial support^{b,c} | +/- | +/- | + |
| Innovation attributes^d | +/- | +/- | +/- |
| Implementation approach^a | | + | +/- |
| Project management^a | | - | |
| Resources^b | - | | - |
| Culture^b | + | | |
| Leadership^b | + | | |
| Monitoring & feedback^b | + | | |
| Socio-political context^c | | - | - |

^a Interpersonal level; ^b Organizational level; ^c System level; ^d Innovation level

Complexity of implementation

- **Deviations from planned paths**
 - Timelines and resource requirements changed
 - SRT not implemented as planned
 - SRT implemented, used, and abandoned
- **Did not occur in clearly delineated stages**
- **Many discussed frustrations and setbacks**

Discussion

Seeing the ‘forest’

- 1. Relationships are incredible enablers**
 - Stakeholder involvement, clinical champions
- 2. A top-down, policy-driven approach works –**
 - Resistance
 - Effective implementation?
- 3. The “macro” level needs to be considered before/during implementation**

Extending our understanding

| Issue | What this study adds |
|---|---|
| Organizational management | <ul style="list-style-type: none">• Middle managers can have large effects on implementation• Reasons for low support of middle managers |
| Interpersonal aspects of implementation | <ul style="list-style-type: none">• More developed, nuanced picture of how stakeholder involvement and relationships may impact implementation |
| Healthcare system components | <ul style="list-style-type: none">• More developed, nuanced picture of numerous system components that may impact implementation |
| Nature of facilitation | <ul style="list-style-type: none">• Facilitation may be defined as a set of activities deliberately employed to ease implementation• Facilitation may be viewed as a team or organizational capacity |
| Complexities of implementation | <ul style="list-style-type: none">• Description of the complex, non-linear <i>reality</i> of implementation processes in three cases |

Acknowledgments

- **Margaret Jorgensen, Cynthia Kendell**
- **Dr. Mark Dobrow**

- **CIHR/CCNS Team in Access to Colorectal Cancer Services in Nova Scotia**
- **Nova Scotia Health Research Foundation**

Extra slides

Implications for *practice*

| Implication | Potential impact(s) |
|---|--|
| Establish collaborative relationships with stakeholders at all levels | Administrative, managerial, and clinical buy-in; sense of ownership |
| Communicate about the project and what it means for those affected | Those affected understand the reason for change and how it impacts them |
| Provide training and ongoing (easily accessed) support | Increase skill level for use, remove barriers to use |
| Acquire high level <i>and</i> mid level support for project | Acquisition and leveraging of resources; influence policy |
| Identify, engage, and support provincial and local clinical champions | Leverage relationships; influence policy |
| Be willing to work with stakeholders to adapt the innovation to local conditions | Innovation a better “fit” and more likely to be accepted; local ownership |