EFFECTING BEHAVIOUR CHANGE: GETTING A HANDLE ON PHYSICIAN HAND HYGIENE

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OVERVIEW

- Behavioural theories / perspectives
- Theoretical Domains Framework: recap
- Practical example of using behavioural theory to improve physician hand hygiene compliance

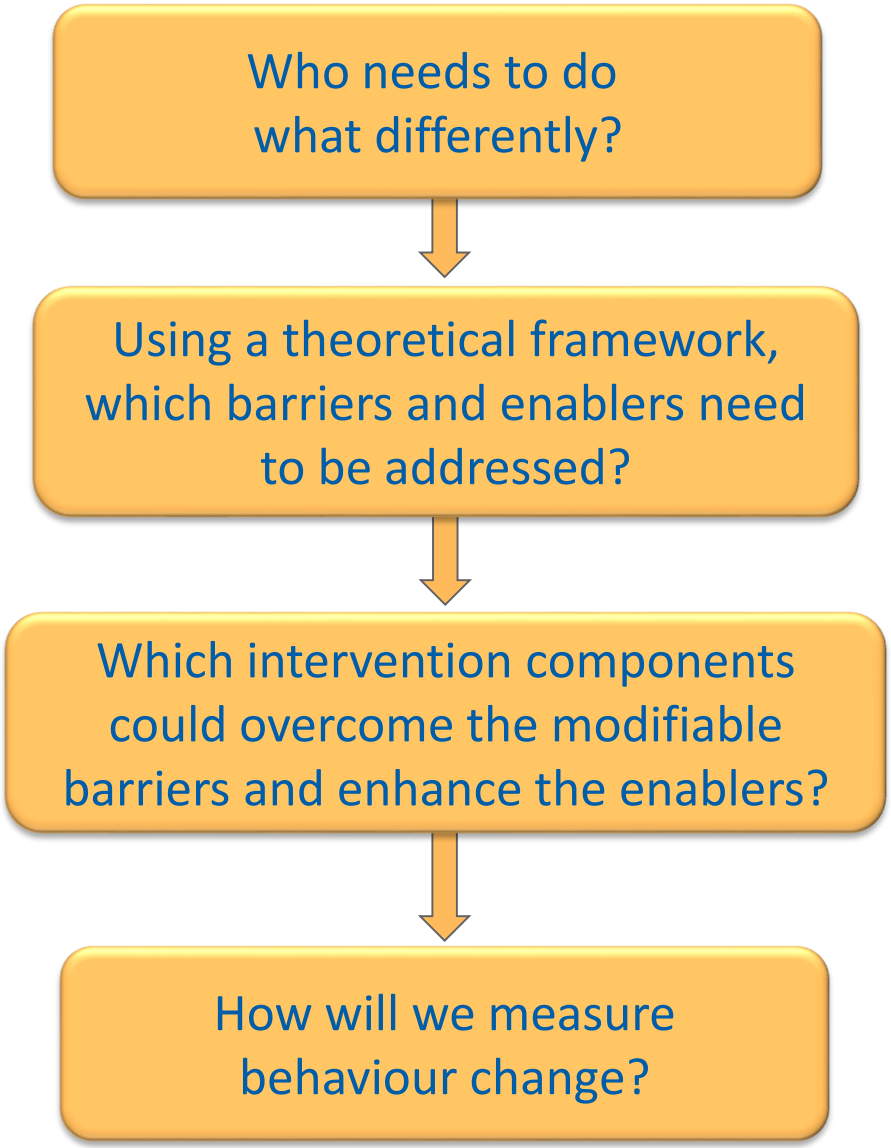
BACKGROUND

- Ensuring patient safety remains a high priority for healthcare systems, organizations and providers
- However, there remain substantial challenges to implementing best / optimal practices
  - Infection prevention and control
  - Antibiotic / medication prescribing
  - Pre-operative / diagnostic testing
- Behavioral approaches can help improve outcomes

BEHAVIOURAL PERSPECTIVE

- Successful implementation of patient safety programs needs key actors (patients, healthcare providers, managers and policy makers) to change their behaviours and/or decisions whilst working in the complex (ordered chaos) of health care environments
- There is a substantial evidence base in behavioural sciences that can support the development of patient safety programs and increase the likelihood of success

DESIGNING CHANGE PROGRAMS



Slide: Jeremy Grimshaw

THEORETICAL DOMAINS FRAMEWORK

Making psychological theory useful for implementing evidence based practice: a consensus approach

S Michie, M Johnston, C Abraham, R Lawton, D Parker, A Walker, on behalf of the ''Psychological Theory'' Group

Qual Saf Health Care 2005;**14**:26–33. doi: 10.1136/qshc.2004.011155

See end of article for authors' affiliations

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Background: Evidence-based guidelines are often not implemented effectively with the result that best health outcomes are not achieved. This may be due to a lack of theoretical understanding of the processes involved in changing the behaviour of healthcare professionals. This paper reports the development of a consensus on a theoretical framework that could be used in implementation research. The objectives were to identify an agreed set of key theoretical constructs for use in (1) studying the implementation of evidence based practice and (2) developing strategies for effective implementation, and to communicate these constructs to an interdisciplinary audience.

Methods: Six phases of work were conducted to develop a consensus: (1) identifying theoretical constructs; (2) simplifying into construct domains; (3) evaluating the importance of the construct domains; (4) interdisciplinary evaluation; (5) validating the domain list; and (6) piloting interview questions. The contributors were a ''psychological theory'' group (n = 18), a ''health services research'' group (n = 13), and a ''health psychology'' group (n = 30).

Results: Twelve domains were identified to explain behaviour change: (1) knowledge, (2) skills, (3) social/professional role and identity, (4) beliefs about capabilities, (5) beliefs about consequences, (6) motivation and goals, (7) memory, attention and decision processes, (8) environmental context and resources, (9) social influences, (10) emotion regulation, (11) behavioural regulation, and (12) nature of the behaviour.

Conclusions: A set of behaviour change domains agreed by a consensus of experts is available for use in implementation research. Applications of this domain list will enhance understanding of the behaviour change processes inherent in implementation of evidence-based practice and will also test the validity of these proposed domains.

- Knowledge
  - Aware of guidelines and evidence?
- Skills
  - Sufficient training in techniques required?
- Social/professional role and identity
  - Is the action part of what the actor sees as typical of their profession?
- Beliefs about capabilities
  - Confident in capacity to do the behaviour. What makes it easier/difficult?
- Optimism
  - Is the actor generally optimistic that doing the behaviour will make a difference?
- Beliefs about consequences
  - What are the benefits and negative aspects of doing the behaviour?
- Reinforcement
  - Does the behaviour lead to any personal or external rewards when it is performed?
- Intentions
  - How motivated is the actor to do this?
- Goals
  - How much of a priority is this action compared to other competing demands
- Memory, attention, decision processes
  - Does the actor ever forget? Are there reminders in place?
- Environmental context and resources
  - Are there sufficient resources for the behaviour,? If not, what is missing?
- Social influences
  - Who influences the decision to perform the behaviour?
- Emotion
  - Is performing the behaviour stressful?
- Behavioural regulation
  - What does the actor personally do to ensure that they perform the behaviour?

Slide: Janet Squires

DESIGNING IMPLEMENTATION PROGRAMS

ann. behav. med. (2013) 46:81–95
DOI 10.1007/s12160-013-9486-6

ORIGINAL ARTICLE

The Behavior Change Technique Taxonomy (v1) of 93 Hierarchically Clustered Techniques: Building an International Consensus for the Reporting of Behavior Change Interventions

Susan Michie, DPhil, CPsychol · Michelle Richardson, PhD · Marie Johnston, PhD, CPsychol · Charles Abraham, DPhil, CPsychol · Jill Francis, PhD, CPsychol · Wendy Hardeman, PhD · Martin P. Eccles, MD · James Cane, PhD · Caroline E. Wood, PhD

Published online: 20 March 2013

Technique for behaviour change	Techniques judged to be effective in changing each construct domain										
	1	2	3	4	5	6	7	8	9	10	11
Goal/target specified: behaviour or outcome											
Monitoring											
Self-monitoring											
Contract											
Rewards; incentives (inc. self-evaluation)											
Graded task, starting with easy tasks											
Increasing skills: problem-solving, decision-making, goal-setting											
Stress management											
Coping skills											
Rehearsal of relevant skills											
Role-play											
Planning, implementation											
Prompts, triggers, cues											
Environmental changes (e.g. objects to facilitate behaviour)											
Social processes of encouragement, pressure, support											
Persuasive communication											
Information regarding behaviour, outcome											
Personalised message											
Modelling/demonstration of behaviour by others											
Homework											
Personal experiments, data collection (other than self-monitoring of behaviour)											
Experiential: tasks to gain experiences to change motivation											
Feedback											
Self talk											
Use of imagery											
Perform behaviour in different settings											
Shaping of behaviour											
Motivational interviewing											
Relapse prevention											
Cognitive restructuring											
Relaxation											
Desensitisation											
Problem-solving											
Time management											
Identify/prepare for difficult situation/problems											

KEY[a]:

	Agreed use
	Uncertain
	Disagreement
	Agreed non-use

Techniques judged to be effective in changing each construct domain

1. Social/Professional role and identity
2. Knowledge
3. Skills
4. Beliefs about capabilities
5. Beliefs about consequences
6. Motivation and goals
7. Memory, attention, decision processes
8. Environmental context and

PHYSICIAN HAND HYGIENE

- Healthcare-associated infections are one of the top 10 causes of hospital deaths worldwide
  - affect 10% of all patients in acute-care hospitals
- Physician hand hygiene compliance is an international problem
  - average reported compliance rate: 49-57%
- Reasons for poor compliance not well understood

A PRACTICAL STUDY: PHYSICIAN HAND HYGIENE

Squires et al. Implementation Science 2013, 8:16
http://www.implementationscience.com/content/8/1/16

IMPLEMENTATION SCIENCE

STUDY PROTOCOL Open Access

Improving physician hand hygiene compliance using behavioural theories: a study protocol

Janet E Squires[1,2*], Kathryn N Suh[3,4], Stefanie Linklater[1], Natalie Bruce[4], Kathleen Gartke[5], Ian D Graham[1,2], Alan Karovitch[3], Joanne Read[6], Virginia Roth[3,4], Karen Stockton[4], Emma Tibbo[7], Kent Woodhall[8], Jim Worthington[9] and Jeremy M Grimshaw[1,3]

Abstract

Background: Healthcare-associated infections affect 10% of patients in Canadian acute-care hospitals and are significant and preventable causes of morbidity and mortality among hospitalized patients. Hand hygiene is among the simplest and most effective preventive measures to reduce these infections. However, compliance with hand hygiene among healthcare workers, specifically among physicians, is consistently suboptimal. We aim to first identify the barriers and enablers to physician hand hygiene compliance, and then to develop and pilot a theory-based knowledge translation intervention to increase physicians' compliance with best hand hygiene practice.

Design: The study consists of three phases. In Phase 1, we will identify barriers and enablers to hand hygiene compliance by physicians. This will include: key informant interviews with physicians and residents using a structured interview guide, informed by the Theoretical Domains Framework; nonparticipant observation of physician/resident hand hygiene audit sessions; and focus groups with hand hygiene experts. In Phase 2, we will conduct intervention mapping to develop a theory-based knowledge translation intervention to improve physician hand hygiene compliance. Finally, in Phase 3, we will pilot the knowledge translation intervention in four patient care units.

Discussion: In this study, we will use a behavioural theory approach to obtain a better understanding of the barriers and enablers to physician hand hygiene compliance. This will provide a comprehensive framework on which to develop knowledge translation interventions that may be more successful in improving hand hygiene practice. Upon completion of this study, we will refine the piloted knowledge translation intervention so it can be tested in a multi-site cluster randomized controlled trial.

ASSESSING BARRIERS AND ENABLERS

- Key informant interviews with 42 staff physicians and residents in Medicine, Surgery
- Two focus groups with four institutional hand hygiene "experts": hand hygiene auditors, infection prevention and control professionals, and Senior Management
- Observation of hand hygiene and audits on inpatient Medicine and Surgery units
- Intervention groups: Medicine C, Orthopedics
- Control (non-intervention) groups: Medicine G, General Surgery

- Knowledge
  - Aware of guidelines and evidence?
- Skills
  - Sufficient training in techniques required?
- Social/professional role and identity
  - Is the action part of what the actor sees as typical of their profession?
- Beliefs about capabilities
  - Confident in capacity to do the behaviour. What makes it easier/difficult?
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  - Is performing the behaviour stressful?
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Slide: Janet Squires

INTERVIEW GUIDE

- Knowledge: I am / am not aware of hand hygiene guidelines
- Skills: I have / have not had training in hand hygiene techniques
- Beliefs about consequences: hand hygiene reduces transmission of infection
- Memory and attention: reminders are / are not useful for hand hygiene
- Social influence: others on my team do / do not influence my hand hygiene behaviour

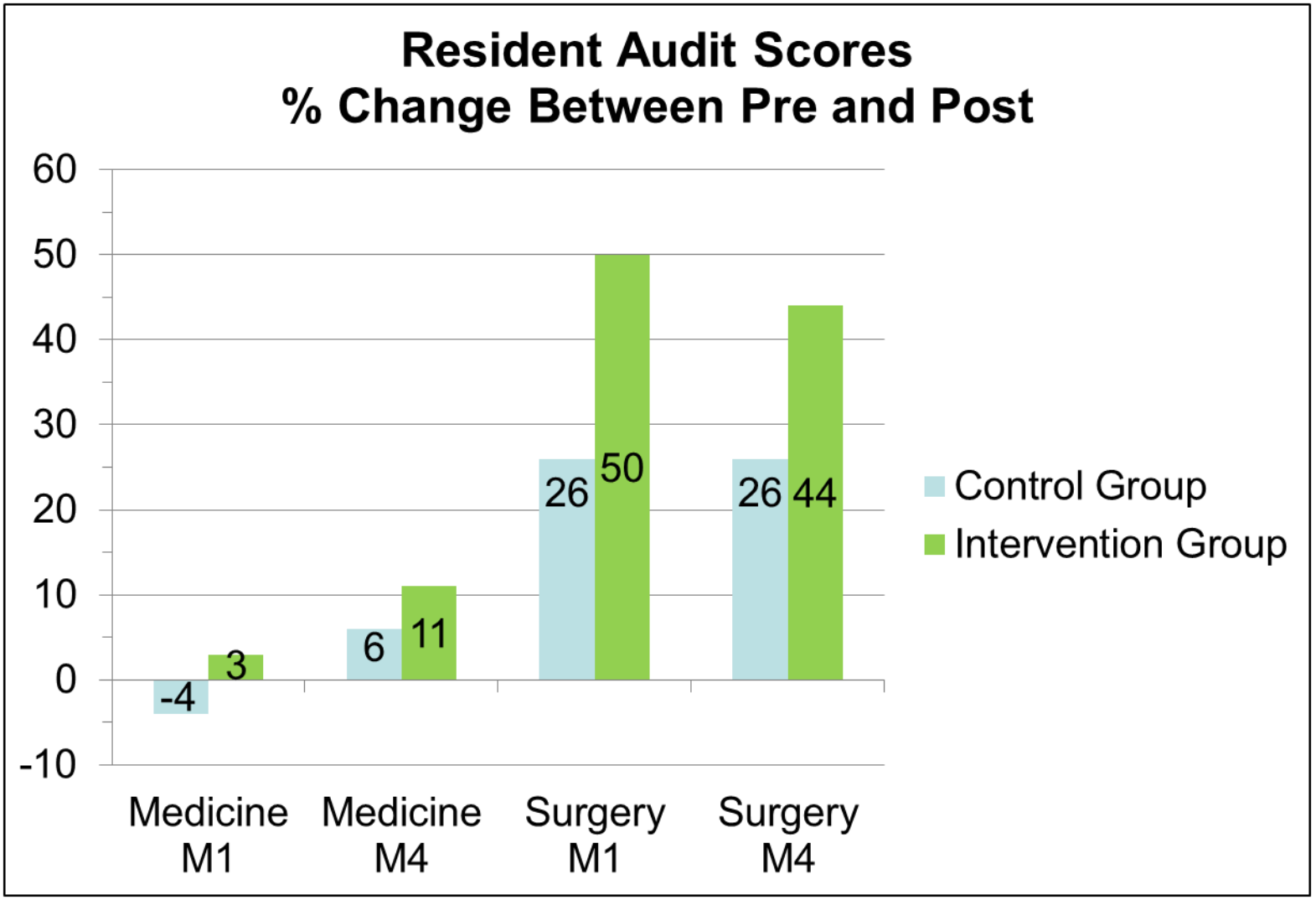
INTERVENTION MAPPING AND DESIGN

- Important TDF domains were prioritized with team input, and mapped to known effective behaviour change techniques
- Intervention focused on five prioritized domains, considering feasibility in our environment, and acceptability to the “actors”
  - Knowledge; skills; beliefs about consequences; memory, attention and decision processes; social influences
- **Intervention delivery differed for medicine and surgery**

IMPLEMENTATION

- Based on assessment of barriers, resources, practical aspects of implementation
- Medicine:
  - Two slides for resident orientation
  - Four x 2 minute sessions during stewardship rounds
  - Glo Germ™ demonstration
- Surgery:
  - 10 minutes at resident half day, with Glo Germ™
  - 10 minutes at staff division meeting

EFFECTS OF INTERVENTION



IMPROVING OTHER BEHAVIOURS

- Using behavioural approaches at TOH:
  - Antimicrobial prescribing
  - Antimicrobial stewardship
  - Behaviour change toolkit for change agents

SUMMARY

- Patient safety remains major concern in healthcare systems
- Successful implementation of safety change programs requires actors to change their behaviour(s)
- Insights from behavioural science can help optimise change programs and increase their likelihood of success

SUMMARY

- Think about capacity development to use behavioural approaches within your group
- When planning safety initiatives:
  - Identify behaviour change needed to implement safety procedures
  - Identify barriers to behaviour change preferably using behavioural theory
  - Consider assumptions and mechanisms to change when designing initatives