Behaviour Change: Impact on hand hygiene programs

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Goals and Objectives

• How do people change behaviours?

• What is the psychology behind hand hygiene behaviour?

• How can we create conditions that facilitate behaviour change as it relates to hand hygiene programs?
Hand Hygiene is a behaviour

- It is imperative to find ways to increase adherence to HH practice
- HH is a complex *behaviour*
- We tend to ignore behaviour theory in HH behaviour change
- Our focus is on education to impart knowledge; not on motivation, attitudes and beliefs
- Our job is to motivate and facilitate health behaviour change
Hand Hygiene is a behaviour

• Literature search: Very few articles where HH interventions are based on theories of behaviour change

• Internal factors that motivate HCWs to practice HH are largely understudied

• But….these factors play a role in HH just like in any other behaviour

• Use an approach which integrates health behaviour theories and existing research findings
## Sources of Influence*

<table>
<thead>
<tr>
<th>PERSONAL</th>
<th>MOTIVATION</th>
<th>ABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Do HCWs want to practice hand hygiene (HH)?</td>
<td>Do HCWs have knowledge and skills needed to practice HH?</td>
</tr>
<tr>
<td>SOCIAL</td>
<td>3</td>
<td>4</td>
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<tr>
<td></td>
<td>Are others encouraging HCWs to practice HH?</td>
<td>Do others provide help, information, and resources for HH?</td>
</tr>
<tr>
<td>STRUCTURAL</td>
<td>5</td>
<td>6</td>
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<tr>
<td></td>
<td>Is the environment (i.e., appraisals, rewards) facilitating HH?</td>
<td>Does the environment enable HH behaviour?</td>
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Key Messages

• Change is hard, but change is possible

• We often use underwhelming solutions to solve overwhelming problems

• Use multiple strategies (personal, social, and environmental) to facilitate behaviour change

• Lessons are widely applicable to a variety of patient, healthcare worker, and organizational behaviours
Theory of Planned Behaviour*

- Behavioral Beliefs
- Normative Beliefs
- Control Beliefs
- Attitude Toward the Behavior
- Subjective Norm
- Perceived Behavioral Control
- Intention
- Behavior

Theory of Planned Behaviour

- **Attitude**: How do you *feel* toward HH?
  - The degree to which the act of HH is positively or negatively valued (i.e., positive or negative attitude)

- **Behavioral Beliefs**: What are your perceived *outcomes* about performing HH?
  - Evaluation of the outcomes of HH (i.e., infection transmission).
Theory of Planned Behaviour

- **Subjective Norm**: Do you perceive pressure from others to perform HH?
  - Perceived social pressure to perform HH

- **Normative Beliefs**: What do you believe are other people’s expectations of your HH behaviour?
  - Evaluation of specific other people’s expectations and the motivation to comply with these expectations
Theory of Planned Behaviour

- **Perceived behavioral control:** Do you think you can perform HH as recommended?
  - The belief in how easy or difficult performing HH is going to be

- **Control Beliefs:** Do you have the internal and external resources to perform HH?
  - Presence of factors which facilitate (resources) or inhibit (barriers) the behaviour and the perceived power over these factors
Applying TPB to Changing Behavior

- Support for the utility of TPB constructs
  - Most focus on patients not HCWs
  - In terms of clinician behavior, a review of limited studies (N=20) provided promising support

- Few studies in HH, but of those that exist:
  - TPB variables predict intention for HH, and intention is related to self-reported HH adherence
  - Attitudes predict HH intention; perceived control and intention predicts HH behaviour

- Research focuses on the predictive validity of TPB, but not TPB to guide the intervention development

1Perkins, 2007; 2O'Boyle, 2001; 3Jenner, 2002
Putting theory into practice

• Targets: attitudes, subjective norms, and perceived behavioral control

• Tailor intervention to where the problem lies…
  • High control but negative attitudes
    • Focus on benefits of HH behavior to patients and the facility
  • Positive attitude but low control:
    • Problem-solve with the HCWs to enhance self-efficacy and perceived control
    • Focusing on skill development rather than attitudes may be more important

Perkins, 2007; O’Boyle, 2001; Jenner, 2002
Putting theory into practice

• Behavioral beliefs:
  • HCWs may not see the direct effects of HH. Long time lag between HH non-adherence and patient infection
  • We need to make the link between HH and intended outcome

• Normative beliefs:
  • Feedback systems that articulate adherence as the norm
  • Establishing a cultural norm is important to improve HH adherence

Perkins, 2007; O’Boyle, 2001; Jenner, 2002
Transtheoretical Model of Behavior Change*

Stage of Readiness for Change

- Decisional Balance (Pros/Cons)
- Processes of Change
- Self-Efficacy

Stages of Change (Readiness)

- **Pre-Contemplation**
  - Change date <6 months

- **Contemplation**
  - Change date <6 months

- **Preparation**
  - Change date <1 month

- **Maintenance**
  - Change ≥6 months

- **Action**
  - Change <6 months
Stage-based descriptors

Unaware and unwilling

Considering change, but ambivalent

Committed to changing behaviour

Stabilizing behaviour

Made the change

Processes of Change

Precontemplation  Contemplation  Preparation  Action  Maintenance

Consciousness raising

Emotional arousal

Social Liberation

Environmental re-evaluation

Self-re-evaluation  Self-liberation

Reward

Helping relationships

Countering

Environmental control

Keys to facilitating change

• Relapse is the norm; our chronic state
• We *learn* how to initiate and sustain change
• “Readiness to change” is variable over time, across situations, and regulated by personally salient priorities and demands

How do our HH programs accommodate this experience?
Principles of Motivational Interviewing*

1. Listen and validate
   - Emphasis on acceptance and reflective listening

2. Develop Discrepancy
   - Change is motivated by discrepancy between behaviour (poor HH) and professional goals and core values (patient safety, duty of care)

3. Roll with Resistance
   - Avoid arguing for change
   - Reluctance to make change is part of the natural change process

4. Support Self-Efficacy
   - Reinforce staff’s ability to succeed in making changes

Putting theory into practice*

• **Precontemplation**: Consciousness raising and self-awareness
  – What are your staff’s priorities?
  – Provide knowledge and information on the effects of HH

• **Contemplation**: Identify the pros/cons of behaviour and resolving ambivalence
  – What are the key ways that you or others are affected by HH non-adherence?
  – Creating opportunities to express the pros/cons of HH
  – Foster self-motivational statements (Change talk)

• **Preparation**: Strengthen motivation and commitment to change
  – What plan will help you to feel more confident about adhering to HH guidelines?
  – Have staff come up with next steps, options and strategies for HH
  – Trial and error
Putting theory into practice

- **Action/Maintenance**: Sustain confidence and prevent relapse
  - Provide reinforcement for HH adherence
  - Continuous monitoring
  - Provide feedback on effects of change
  - Identify triggers for non-adherence and how to mitigate
Importance and Confidence Scales in MI

How important would you say it is for you to change your HH behaviour? On a scale of 0 to 10, where 0 is not at all important, and 10 is extremely important, where would you say you are?

0 1 2 3 4 5 6 7 8 9 10

Not at all Important  Extremely Important

How confident would you say you are, that if you decided to change your HH behaviour, you could do it? On a scale of 0 to 10, where 0 is not at all confident, and 10 is extremely confident, where would you say you are?

0 1 2 3 4 5 6 7 8 9 10

Not at all Confident  Extremely Confident

Explore reasons why the reported value is not a “0”
Research grounded in theory for HH change

• Grant & Hoffman (2011)*: “How can psychological science guide the development of messages to address HH?”

• Proposed that part of the problem may be psychological and cognitive (What we think?)

• We suffer from cognitive biases which skew judgment of our risk
  • “Illusion of invulnerability” and overconfidence about immunity
  • Confirmation biases
  • Availability heuristic

• Motivation: For a message to resonate to create change, it must be relevant to the audience

• Rethink messaging for motivation: If HCWs feel invulnerable to illness, let’s take the focus off them and switch it to patients?

So, are HCW more motivated by messages that emphasize patients’ welfare rather than their own?
Research grounded in theory for HH change

• Measure soap/hand gel in dispensers for 2 weeks pre and post-intervention.

• Randomly assigned 1 of 3 signs to each dispenser:

  - Hand hygiene prevents you from catching diseases
  - Hand hygiene prevents patients from catching diseases
  - Gel in, wash out

Which sign was most effective?
• HCW used more soap and gel when the signs emphasized patient safety than personal safety
Putting it into practice….

- HCW see themselves as invulnerable but not their patients
- Altruism is a better motivator than self-interest
- Influencing motivation changes behavior
Summary

• Education has not translated into acceptable levels of HH compliance and behaviour change
• Motivation has been largely ignored
• Theoretically driven approaches are warranted when designing interventions
• Research is greatly needed to apply these models and principles
Summary

• Understanding motivation underlying HH is key when designing HH programs

• Change is difficult, ambivalence is natural, and relapse is part of the change cycle

• Key targets to impact change: attitudes, subjective norms, and perceived behavioral control

• Use stage appropriate interventions (multiple) and strategies appropriate to the target

Are you ready, willing, and able to change your practice and programs?