Resistance to Change
## Resistance to change: Handwashing

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<table>
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</thead>
<tbody>
<tr>
<td><strong>Nurse</strong></td>
<td>Cognitions</td>
<td>See no complications</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No hard evidence</td>
<td>43%</td>
</tr>
<tr>
<td></td>
<td>Attitude</td>
<td>Irritation of hands</td>
<td>81%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Takes too much time</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Routine</td>
<td>Forgetting rush hour</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Falling back old routine</td>
<td>49%</td>
</tr>
<tr>
<td><strong>Team</strong></td>
<td>Social influence</td>
<td>Nobody controls</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Manager not interested</td>
<td>45%</td>
</tr>
<tr>
<td><strong>Hospital</strong></td>
<td>Organization</td>
<td>Not feasible in process</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No protocols/ guidelines</td>
<td>49%</td>
</tr>
<tr>
<td></td>
<td>Resources</td>
<td>Sinks, soap, rub tissues</td>
<td>42%</td>
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Explaining the effects of two different strategies for promoting hand hygiene in hospital nurses: a process evaluation alongside a cluster randomised controlled trial

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Abstract

Background: There is only limited understanding of why hand hygiene improvement strategies are successful or fail. It is therefore important to look inside the ‘black box’ of such strategies, to ascertain which components of a strategy work well or less well. This study examined which components of two hand hygiene improvement strategies were associated with increased nurses’ hand hygiene compliance.

Methods: A process evaluation of a cluster randomised controlled trial was conducted in which part of the nursing wards of three hospitals in the Netherlands received a state-of-the-art strategy, including education, reminders, feedback, and optimising materials and facilities; another part received a team and leaders-directed strategy that included all elements of the state-of-the-art strategy, supplemented with activities aimed at the social and enhancing leadership. This process evaluation used four sets of measures: effects on nurses’ hand hygiene compliance, adherence to the improvement strategies, contextual factors, and nurses’ experiences with strategy components. Analyses of variance and multiple regression analyses were used to explore changes in nurses’ hand
Implementation

‘Systematic introduction of effective new practice or changes in practice with the objective to create a structural place for this practice in the care given by professionals’

Grol, Wensing & Davis, 2013
Knowledge Translation

“Dynamic and iterative process that includes the synthesis, dissemination, exchange and ethically sound application of knowledge to improve health, provide more effective health services and products, and strengthen the health care system”

Strauss, Tetroe & Graham, 2009
Implementation science

“The scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services”

Eccles & Mittman, 2006
Statement 1:
Implementation ~ Knowledge Translation (KT)

Statement 2:
Implementation Science ~ Integrated KT Research
Theory
Provides explanation of how and why specific relationships lead to specific events: cause-effect

Model
Graphical simplification of relationships in a theory

Framework
Structure, overview, outline, system or plan with descriptive categories
How to organize the implementation process...
### Implementation of Change Framework

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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</table>
| 1.   | Development of proposal for change  
      *e.g. recommendations in guidelines, quality indicators*  
| 2.   | Analysis of actual performance  
      *gap between theory and practice*  
| 3.   | Problem analysis  
      *target groups, setting, facilitators, barriers*  
| 4.   | Strategies  
      *development and selection of interventions*  
| 5.   | Implementation plan  
      *development, testing and execution*  
| 6.   | Integration in routine care  
      *creating practice routines*  
| 6.   | Evaluation and adaptation  
      *evaluation of effects and costs, adjustment of plan*  

Grol, Wensing & Davis, 2013
Knowledge to Action Framework (K2A)

Strauss, Tetroe & Graham 2009
How to organize implementation determinants...
Consolidated Framework for Implementation Research (CFIR)

Damschroder 2009
National Implementation Research Network (NIRN)

Bertram, Blase, and Fixsen 2015
Theoretical domains framework

- **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 or difficult?
- **Optimism**
  - Is the actor generally optimistic that doing the behaviour will make a difference in the grand scheme of things?
- **Beliefs about consequences**
  - What are the benefits and negative aspects of doing the behaviour?
- **Reinforcement**
  - Does the behaviour lead to any personal or external reward when it is performed?
Linking theory with strategies

**Individual health professional**
- Educational theories, Motivational theories

**Social context**
- Social influence, Leadership theories, Team climate

**Organizational context**
- Total Quality Management, Organizational theories

**System context**
- System theories, Complexity theories
How to evaluate implementation impact...
REACH
How do I reach those who need this intervention?

MAINTENANCE
How do I incorporate the intervention so it is delivered over the long-term?

IMPLEMENTATION
How do I ensure the intervention is delivered properly?

ADOPTION
How do I develop organizational support to deliver my intervention?

EFFECTIVENESS
How do I know my intervention is working?

RE-AIM
Green 2005
Methods and designs of implementation research

**Methods**
- Process, formative and summative evaluations
- Participatory research
- Action research
- Co-production of end-users and researchers

**Designs**
- Observational studies on variation in performance
- Qualitative studies on facilitators and barriers
- (Controlled) Before and After Studies
- Cluster randomized trials
- Pragmatic/ adaptive trials
- Stepped Wedge trials
Theoretical approaches used in implementation science

Describing and/or guiding the process of translating research into practice
- Process models

Understanding and/or explaining what influences implementation outcomes
- Determinant frameworks
- Classic theories
- Implementation theories

Evaluating implementation
- Evaluation frameworks

Nilsen 2015
In a learning health care system, research influences practice and practice influences research.

Evaluate:
Collect data and analyze results to show what works and what doesn’t.

Adjust:
Use evidence to influence continual improvement.

Design:
Design care and evaluation based on evidence generated here and elsewhere.

Implement:
Apply plan in pilot and control settings.

Disseminate:
Share results to improve care for everyone.

Internal and External Scan:
Identify problems and potentially innovative solutions.