ACENDIO’S ROUND TABLE
‘GETTING RESEARCH FINDINGS INTO PRACTICE’

Anna Ehrenberg
&
Wolter Paans
Objective

To increase the knowledge on effective methods for implementing and sustaining evidence-based practice in health care

Questions

Which implementation strategies works?

For whom?

Under what circumstances?

Why?

Which factors influence the process of change?
Round Table: The Aim

To share experiences in implementing nursing research findings.

This Round Table is an invitation to share your best practices and your best failings.
Scientific Method

100% Curiosity
Made in the Mind
One size does not fit all
Click image for care
ONE SIZE DOES NOT FIT ALL.
KEEP TRYING...

AND EVENTUALLY YOU WILL FIND THE PERFECT FIT.
Standard model of the research process

1. Conduct a study
2. Analyze data
3. Draft article
4. Submit for publication
5. Peer Review
6. Article published
7. New research inspired
Phenomenon
“Big picture” question about a ψ process or behavior.

Theory
“How or why” behavior works: Abstract statement about how ψ processes are related.

Hypothesis
Cast processes as specific variables. Specific, testable prediction.

Methods
Concrete study procedures. Operational definitions: turn variables into numbers.

Data/Results
Statistical tests of hypotheses.

Discussion
Meaning of the results for the theory. Study limitations.

Conclusion
What do we know now about the phenomenon? What other research follows from this?

The research process

Research idea

Literature review

Theoretical formulation of the research problem

Empirical research questions (operationalization)

Data collection

Research design (planning)

Data analysis

Answering the empirical research questions

Theoretical interpretation of the results

Comparison with earlier research

Conclusions

Comparison with earlier research

Research idea

Literature review

Theoretical formulation of the research problem

Empirical research questions (operationalization)

Data collection

Research design (planning)

Data analysis

Answering the empirical research questions

Theoretical interpretation of the results

Comparison with earlier research

Conclusions

Comparison with earlier research

Research idea

Literature review

Theoretical formulation of the research problem

Empirical research questions (operationalization)

Data collection

Research design (planning)

Data analysis

Answering the empirical research questions

Theoretical interpretation of the results

Comparison with earlier research

Conclusions
Designing Research

Research Proposal

What do you want to investigate?
Establish context.
Develop main research question.
Extract and order your subsidiary questions (3)
Write up the background of your research problem.

What do other researchers say?
Find appropriate background info from appropriate sources.
Write up what they said in your Literature Review.

How are you going to investigate the topic?
Appropriate theories.
Select methods and styles of research as well as a practical outline of how you will go about answering your research problems.
Your Research Methodology.
Analysis
A systematic exploration of the way things are and the way things should be. The difference is the performance gap.

Design
If the analysis identifies a performance gap, the Design phase will outline the performance objectives.

Evaluate
Measurement of how well the performance solution achieved the objectives.

Implement
This stage includes delivery of the performance solution.

Develop
Using the information gathered in the Analysis and Design phase, the performance solution is created.
Roger’s Theory of Diffusion

Characteristics of the intervention

Organizational characteristics

Environmental context

Adoption decision

Effective implementation

Outcomes
Decision weights across the innovation adoption curve

- Innovators: 2.5%
- Early Adopters: 13.5%
- Early Majority: 34%
- Late Majority: 34%
- Laggards: 16%

Possibility vs. Uncertainty
Emerging Technology Hype Cycle

- Innovation Trigger
  - People-Literate Technology
  - Digital Security
  - Virtual Personal Assistants
  - Smart Dust
- Peak of Inflated Expectations
  - Neurobusiness
  - Citizen Data Science
  - Biochips
  - IoT Platform
  - Connected Home
  - Affective Computing
  - Smart Robots
  - 3D Bioprinting Systems for Organ Transplant
  - Volumetric Displays
  - Human Augmentation
  - Brain-Computer Interface
  - Quantum Computing
  - Bioacoustic Sensing
  - Autonomous Vehicles
  - Internet of Things
  - Speech-to-Speech Translation
  - Machine Learning
  - Wearables
  - Cryptocurrencies
  - Consumer 3D Printing
  - Natural-Language Question Answering
- Trough of Disillusionment
  - Augmented Reality
  - Hybrid Cloud Computing
  - Enterprise 3D Printing
- Slope of Enlightenment
  - Virtual Reality
  - Autonomous Field Vehicles
  - Cryptocurrency Exchange
  - Gesture Control
- Plateau of Productivity

Years to mainstream adoption:
- less than 2 years
- 2 to 5 years
- 5 to 10 years
- more than 10 years
- obsolete before plateau

As of July 2015

gartner.com/SmarterWithGartner

© 2015 Gartner, Inc. and/or its affiliates. All rights reserved.
Research development
- Content development
- Instrument development (nursing process)
- Prevalence and accuracy
- Knowledge resource research
- Diagnostic reasoning research
- Reasoning Research
- Standardisation Research
- Usability in e-structure
- Implementation Research
Johan Cruijff: "Rook verstandig, Roxy Dual."

"More Doctors Smoke CAMELS than any other cigarette!"

"20,679" Physicians say "LUCKIES are less irritating" "It's toasted"

"Always Buy CHESTERFIELD"

"You'll like it!"
Smoke contains benzene, nitrosamines, formaldehyde

WARNING: Cigarettes cause cancer.

WARNING: Cigarettes cause fatal lung disease.

You can quit. Call 1-800-QUIT-NOW.
Design Research

Action Research

Implementation Research
Bridging the know-do gap is one of the most important challenges for public health in this century.

WHO 2006
Implementation research

Research question: Effect of a method to support implementation of an evidence-based intervention
Impact of guideline implementation support Systematic reviews Cochrane EPOC, Grimshaw 2012

- **Printed Educational Materials**: 12 RCTs, 11 nonrandomised studies, median improvement +4.3%
- **Educational Meetings**: 81 RCTs, +6%
- **Educational Outreach**: 69 RCTs: prescribing behaviours +4.8%
- **Local Opinion Leaders**: 18 RCTs, +12.0%
- **Audit and Feedback**: 118 RCTs, +5.0%
- **Computerized Reminders**: 28 RCTs, +4.2%
- **Tailored interventions**: 26 studies, Odds ratio 1.54
Which strategy to use?

- Positive results, but moderate impact
- Imperfect evidence base to support decisions on dissemination and implementations strategies – no magic bullet!
- Different strategies are likely to be efficient under different circumstances
- Success is related to many factors – how barriers and opportunities to change are handled
- Need more research, particularly research that take context in account
- Theoretical base for selecting/adapting strategy
State of the science

- In progress - but lack of complete answers
- No gold standard for implementation strategy
- Need increased use of theory
- Need to understand processes, not only outcomes
- Implementation is a social process
- Context is influential – and needs to be considered, maybe even changed
- Implementation is about system change, but ultimately it is the individuals that have to change
- Emotions, attitudes, beliefs and motivation are important for behaviour change
Considerations for implementation

- Adequate evidence base
- Team approach for change
- Management needs to be involved (leading change)
- Involving patients?
- Map context
- Tailor a plan for change
- Consider theoretical base for change – why would it work?
- Realize the plan
- Evaluate and feed back
Successful implementation is a function of evidence, context and facilitation.
Context dimensions
Facilitation

…. is the process of enabling people to work co-operatively and effectively  Gaffney 2000

A facilitator is someone that support and make things easier  Harvey 2002
DISCUSSIONS!
Are you facilitated?
Can you bring your innovation into practice?
Personalized Digital Health

Implementation and how to (not) change a lifestyle
Implementation by patient participation

Gimme My Damn Data!

ePatientDave.com
Richard Davies deBronkart Jr.
Cancer survivor & blogger
Found proper cancer treatment through online social network after diagnosis
Activist for participatory medicine & patient engagement through information technology
How e-Patients are changing healthcare

“e-Patient Dave” deBronkart
Twitter: @ePatientDave
facebook.com/ePatientDave
LinkedIn.com/in/ePatientDave
dave@epatientdave.com
Discussions

What nursing research is needed?

What are priorities in e-health implementation?