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GETTING THE RIGHT THINGS INTO OLDER PEOPLE CARE

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In the next half hour……

- Healthcare quality problems
- The importance of implementation readiness
- Why is it so difficult to get the right things into practice?
- Effects of implementation strategies
- Our future challenges

Quality problems in healthcare

- Can refer to age old quality issues

  Adherence with hand hygiene prescriptions in less than 50% off all relevant situations
  (Pittet et al. - Lancet 2000;
  Erasmus et al. - Inf Contr Hosp Epidem 2010)

- Can refer to the introduction of new types of care

  Mindfulness-based Cognitive Therapy little used in UK care for individuals with recurrent depression
  (Rycroft-Malone et al - Implementation Science 2014)

Quality problems in healthcare

- So care quality improvement is hard work
- Hardly any innovation is ‘self-implementing’
- No reason to assume that this is any different with care for older people

What to implement?

The case of technology for supporting older adults

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The Ambient and Assisted Living Joint Programme

- AAL JP program instituted by the EU in 2008
- AAL refers to various technologies, products and services ranging from simple devices to intelligently networked homes and complex interactive systems.

Main project aims are to

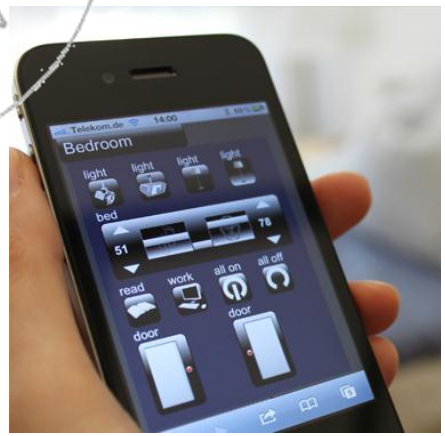
1. create better conditions for the lives of older adults
2. strengthen industrial opportunities in Europe by funding ICT projects

The Ambient and Assisted Living Joint Programme

- The original program ran from 2008 to 2013
- The program covered a budget of 600 million Euros
- A total of 152 projects were funded
- Projects were selected for:
  * potential to support healthy and independent living
  * potential to deliver marketable products

The Ambient and Assisted Living Joint Programme

Examples of the technology



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The Ambient and Assisted Living Joint Programme

Results of a recent review

- 149 out of 152 projects completed by spring 2016
- 12 out of 152 projects assessed health and well-being outcomes for older adults; all 12 are very low quality studies, results of 6 still to be published
- in-depth qualitative evaluations of the experiences of older adults were not identified
- 2 marketable products resulted from the projects

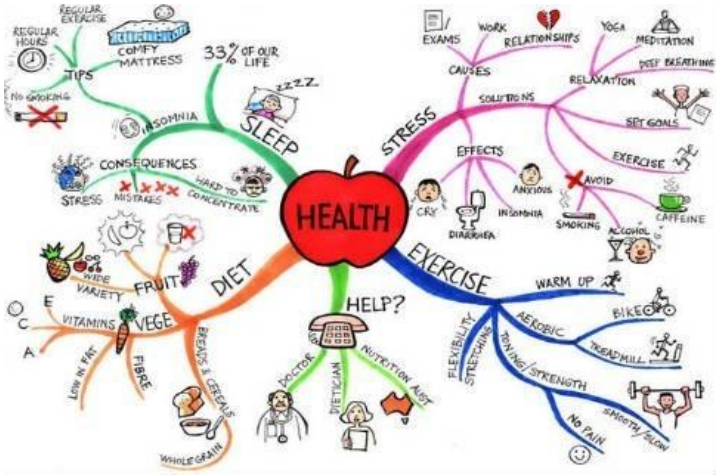
The Ambient and Assisted Living Joint Programme

- The results could be seen as very disappointing: 600 million Euros, 152 projects, 2 marketable products and no evidence of benefits older adults.
- However, the vast majority of the projects started with (partly) new ICT solutions and ran for 3-4 years
- AAL JP probably encouraged project consortia to promise marketable solutions and demonstrated benefits, but it could be questioned if this is realistic.

Why is implementation so difficult?

We're only human, e.g. parallel with health behaviors

Change is difficult



Many actors and stakeholders in healthcare add to complexity

Change is very difficult

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INFLUENCING FACTORS
Checklist for determinants of healthcare practice

Determinants of practice		(examples)
1	Innovation/Guideline factors	Source, quality of evidence, feasibility
2	Health professional factors	Knowledge, awareness, skills, intention, motivation, self-efficacy
3	Patient factors	Patient needs, preferences, beliefs, motivation
4	Professional interactions	Communication, team processes, referral
5	Incentives and resources	Materials, financing, information, education
6	Capacity for organizational change	Mandates, authority, leadership, rules, priorities, feedback
7	Social, political, legal	Healthcare budget, contracts, legislation, influential persons, corruption

(Flottrop et al. Implementation Science 2013; 8: 35.)

For implementing technology in nursing care

Determinants of practice		(examples)
1	Innovation/Guideline factors	Relative advantage, functionality, ease of use
2	Health professional factors	Skills, involvement in techno development
3	Patient factors	Risks for patients
4	Professional interactions	Support from colleagues
5	Incentives and resources	Manuals, equipment, time
6	Capacity for organizational change	Authoritative decisions vs praticipation, leading figures
7	Social, political, legal	

(De Veer et al. BMC Med Inform Decis Mak. 2011; 11: 67.)

SO HOW TO IMPLEMENT?

The message from implementation models is:

- Make sure you identified a problem in practice
- Make sure you identified a beneficial solution
- Define a clear proposal for change
- Analyze barriers and facilitators for change

→ *Only then start thinking about implementation strategies*

e.g. Skolarus & Sales. In: Richards & Rahm Hallberg (2015). Complex interventions in health. An overview of research methods. (Chapter 27)
Grol & Wensing In: Grol et al. (2013). Improving patient care. (Chapter 3)

CHOOSE MATCHING STRATEGIES

For instance ...

- **Education of health professionals, if they lack knowledge or skills**
- **Computerized reminders, if forgetting is the problem**
- **Investing in leadership if guidance within the organisation is lacking**
- **….**

TAXONOMIES OF IMPLEMENTATION STRATEGIES

LINKING STRATEGIES TO BARRIERS & FACILITATORS

- EPOC classification of quality improvement strategies
  reviewer tool: https://epoc.cochrane.org/epoc-taxonomy
- ERIC implementation strategy compilation
  consensus based: Powell et al. Implementation Science 2015
- Behavior Change Techniques classification
  theory based: Michie et al. Ann of Behav Medicine 2013
- Taxonomy of Behavior Change Methods
  theory based: Kok et al. Psych Rev 2015

Taxonomy of behavior change methods

Kok G et al. Health Psych Rev 2016;10:297-312.

TYPES OF CHANGE STRATEGIES	N
Basic methods at individual level	13
Methods to increase knowledge	6
Methods to change awareness & risk perception	9
Methods to change habits, automatic and impulsive behaviors	9
Methods to change attitudes, beliefs, outcome expectations	10
Methods to change social influence	5
Methods to skills, capability, self-efficacy and overcoming barriers	12
Methods to reduce public stigma	6
Methods to change environmental conditions	6
Methods to change social norms	4
Methods to change social support and social networks	3
Methods to change organizations	5
Methods to change communities	7
Methods to change policy	4

Table 5: Methods to Change Attitudes, Beliefs, and Outcome Expectations (Adapted from Bartholomew et al., 2011)

Method (related theories and references)	Definition	Parameters
Classical conditioning (Theories of Learning; Kazdin, 2008)	Stimulating the learning of an association between an unconditioned stimulus (UCS) and a conditioned stimulus (CS).	Most effective when the time interval is short and the CS precedes the UCS.
Self-reevaluation (Trans-Theoretical Model; Prochaska et al., 2015)	Encouraging combining both cognitive and affective assessments of one's self-image with and without an unhealthy behavior.	Stimulation of both cognitive and affective appraisal of self-image. Can use feedback and confrontation; however, raising awareness must be quickly followed by increase in problem-solving ability and self-efficacy.
Environmental reevaluation (Trans-Theoretical Model; Prochaska et al., 2015)	Encouraging realizing the negative impact of the unhealthy behavior and the positive impact of the healthful behavior.	Stimulation of both cognitive and affective appraisal to improve appraisal and empathy skills.
Shifting perspective (Theories of Stigma and Discrimination; Batson, Chang, Orr, & Rowland, 2002)	Encouraging taking the perspective of the other.	Initiation from the perspective of the learner; needs imaginary competence.
Arguments (Communication-Persuasion Matrix; Elaboration Likelihood Model; McGuire, 2012; Petty & Wegener, 2010)	Using a set of one or more meaningful premises and a conclusion.	For central processing of arguments they need to be new to the message receiver.
Direct experience (Theories of Learning; Maibach & Cotton, 1995)	Encouraging a process whereby knowledge is created through the interpretation of experience.	Rewarding outcomes from the individual's experience with the behavior or assurance that the individual can cope with and reframe negative outcomes.
Elaboration (Theories of Information	Stimulating the learner to add	Individuals with high motivation and

Effects of implementation strategies: *small to modest*

- Overview of systematic reviews on professional behaviour change (total of 363 trials)
- Improvement resulting from…..

printed educational materials:	*4.3%*
educational meetings:	*6.0%*
educational outreach:	*6.0%*
local opinion leaders:	*12.0%*
audit & feedback:	*5.0%*
computerized reminders:	*4.2%*

- Rationale for strategies often unclear

(Grimshaw et al. Implementation Science 2012, 7: 50)

IMPLEMENTATION = TAILORING

Tailored interventions *vs.* a non-tailored intervention

Meta-regression analysis of trials OR 1.56 (95% confidence interval (CI) 1.27 to 1.93, P value < 0.001).

Baker et al.
Cochrane Database Syst Rev. 2015 Apr 29;(4):CD005470.

EXAMPLE

Implementation of guidelines for basic nursing care

SAFE or SORRY? an evidence based inpatient safety program for the prevention of adverse events

(Van Gaal et al. Int J Nurs Studies 2011; J Nurs Scholarsh. 2014;46:187-98.)

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SAFE or SORRY?

- Background – Project tiredness and a lack of comprehensive safety thinking
- Aim - to develop and test a patient safety program that addresses several AEs simultaneously in hospitals and nursing homes

- The program addresses three AEs: pressure ulcers, falls and urinary tract infections

Development

- Developed with experts, using existing guidelines & supplementary material
- Consensus about the essence of the guidelines and formulated bundles of key recommendations
- Bundles and indicators discussed with the user group (n=17)
- Implementation strategy consisting of
  * education
  * patient involvement
  * feedback through a computerized registration program

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Operational implementation strategies

- **Education**
- Group lessons on wards
- Interactive educational material
- Interactive knowledge test
- Case discussions
- **Patient involvement**
- Brochures on each adverse event
- Oral information given by the nurse
- **Feedback**
- Nurses register risk, daily care and adverse events in a web based registration system
- System generates feedback on indicators

Voorkom doorligwonden

Wat kunt ú doen!

"Het lijkt zo onschuldig, zo'n rood plekje… De eerste keer besteedde ik er nauwelijks aandacht aan. Ik dacht: dat trekt wel weer weg. Nee dus…Voordat ik er erg in had zat er een lelijke wond."

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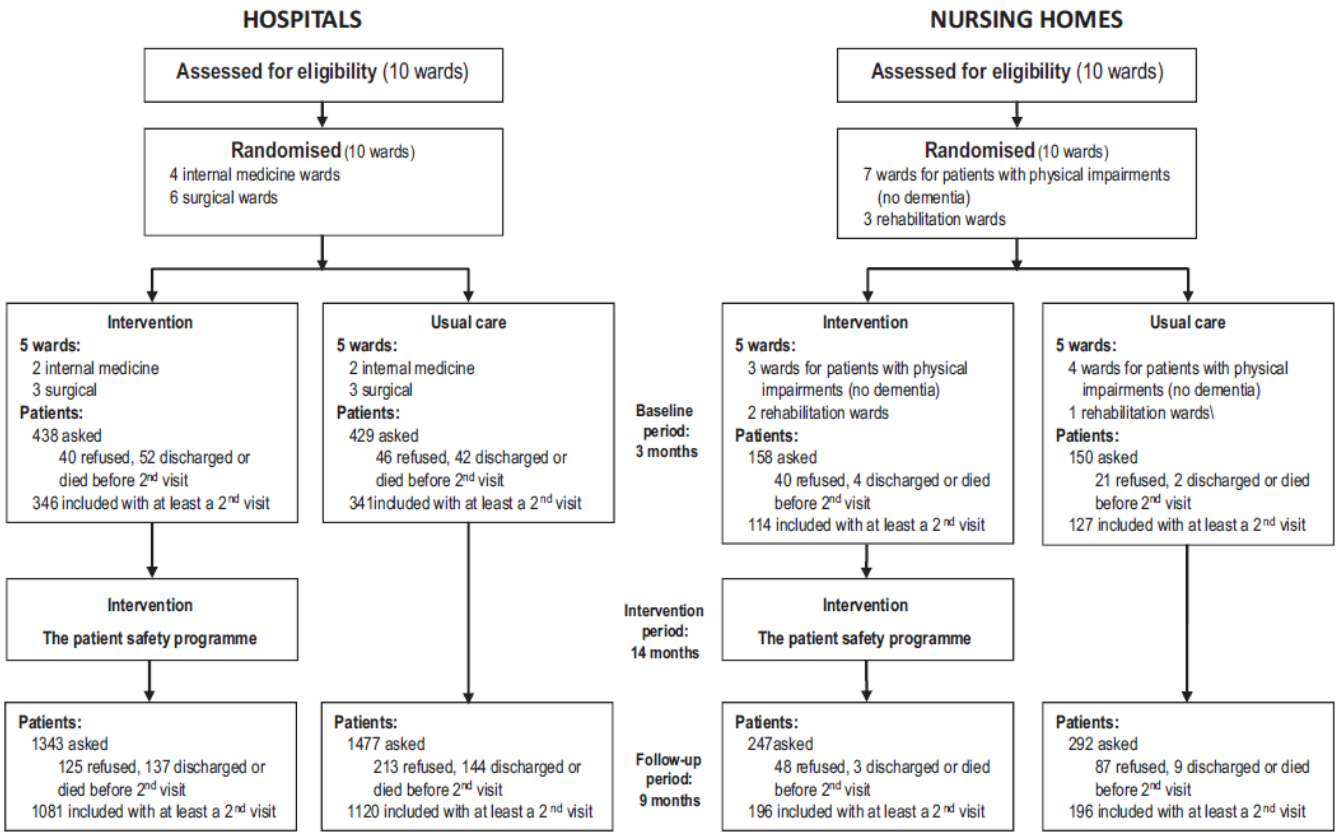
Study design



Main outcome
combined incidence of falls, urinary tract infections and pressure ulcers

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Results

- Lower Adverse Events incidence rates in intervention wards 43% lower in hospital; 33% lower in nursing homes

- Preventive care improved but still unsatisfactory

CONCLUSION - *Simultaneous implementation of multiple guidelines seems feasible and effective for improving basic nursing care*

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Future directions:
1. improving nursing practice

- Implementation asks for a well-considered approach
- An operational proposal for change is essential
- Implementation strategies should be chosen
  * in relation to factors hindering or facilitating improvement
  * based on a clear rational of why they should work
  * based on available theory and evidence

Future directions:
2. challenges for adding to body of knowledge

- Rigorous whenever we can
  need for more rigorously performed trials & process analyses
- Exploration of more types of strategies needed
  e.g. non-cognitive approaches towards breaking habits, using middle management as change agents etc.
- Looking into cost-effectiveness of alternative strategies
  relatively few studies relate implementation to costs
- Building more evidence on sustained improvement
  little implementation evidence beyond 12 months follow-up

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