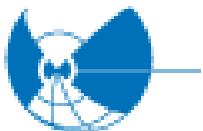


COMMON CHANGE STRATEGIES CLASSIFICATIONS & EVIDENCE OF EFFECTIVENESS

Theo van Achterberg

professor of Nursing Science, IQ healthcare
Radboud University Nijmegen Medical Centre

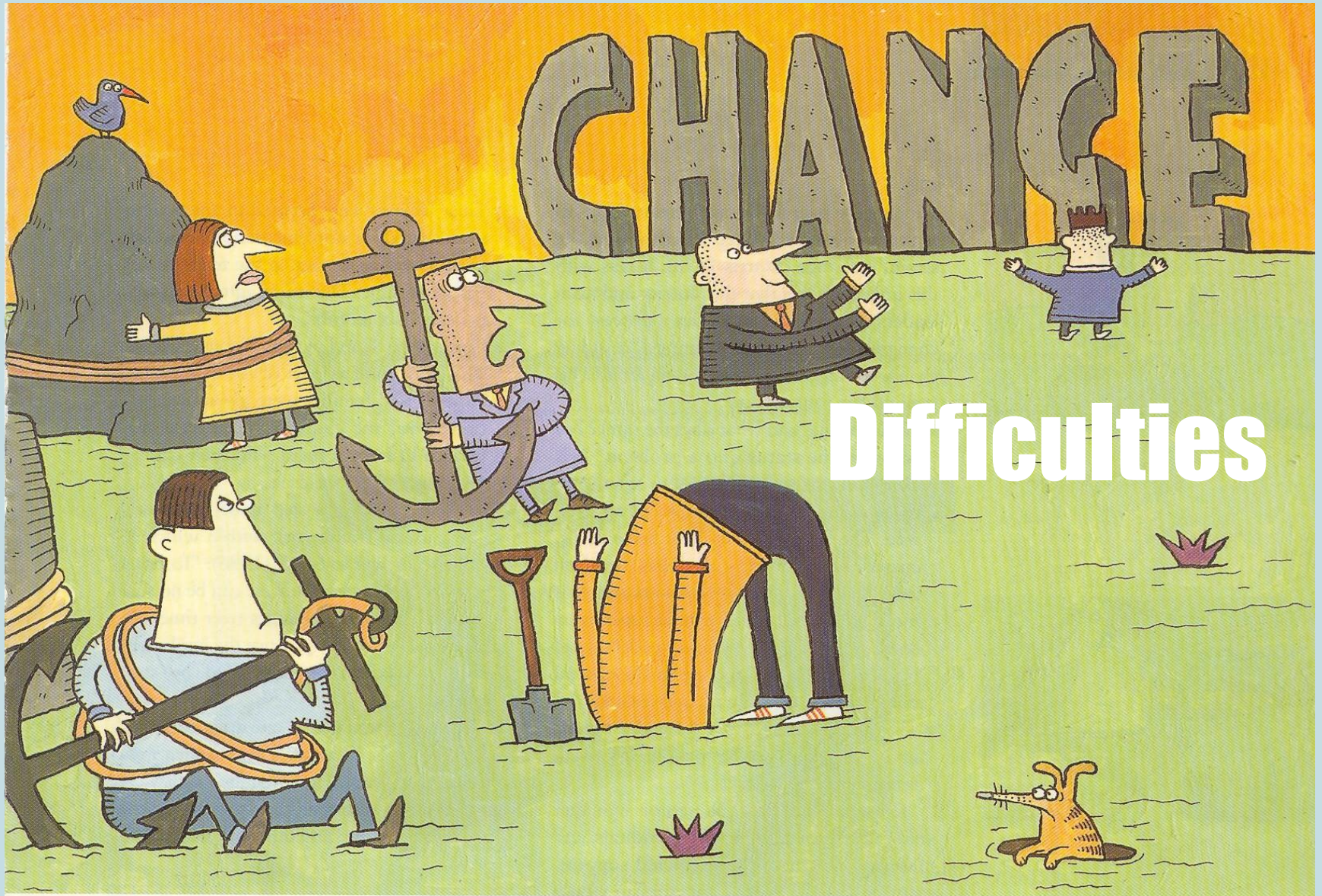


ZonMw

IQ Scientific Institute for
Quality of Healthcare

Addressed in this presentation.....

- The range of change strategies to be considered
- Classifications of change strategies
- Effectiveness of commonly used strategies
- The need to tailor to barriers and facilitators



Hard to (de)implement.....

Training and offering expert consultation did not reduce the use of restraints in nursing home clients with increased risk of falling
(Huizing et al. – BMC Geriatr 2006)

An effective intervention for smoking cessation is not or incompletely offered to patients in cardiology wards
(Segaar et al. Res Nurs Health 2007)

Instructions for fasting prior to surgery require patients to fast for three to four times longer than proposed in current guidelines
(Vermeulen et al. Nursing 2007)

SO HOW TO CHANGE?

*The story of a prize
winning nurse...*



IMPLEMENTATION OF A PRESSURE ULCER PREVENTION POLICY

Erik de Laat

Lisette Schoonhoven

Peter Pickkers

André Verbeek

Theo van Achterberg

(De Laat et al. Int J Qual Health Care. 2006)



THE STUDY

STARTING POINT

Too many hospital acquired pressure ulcers

PRESSURE ULCER PREVENTION POLICY

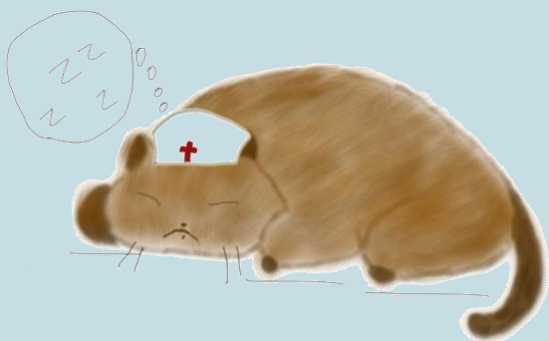
- * (inter)national guidelines
- * pressure ulcer consultant & contact nurse in every hospital ward
- * some media coverage
- * new mattresses in each bed (improved reduction of pressure)

DESIGN

- * collection of data on pressure ulcers and preventive care
- * 657 patients prior to implementation
- * 735 patients 4 months after start of the implementation
- * 755 patients 11 months post implementation

RESULTS

Hospital acquired pressure ulcers



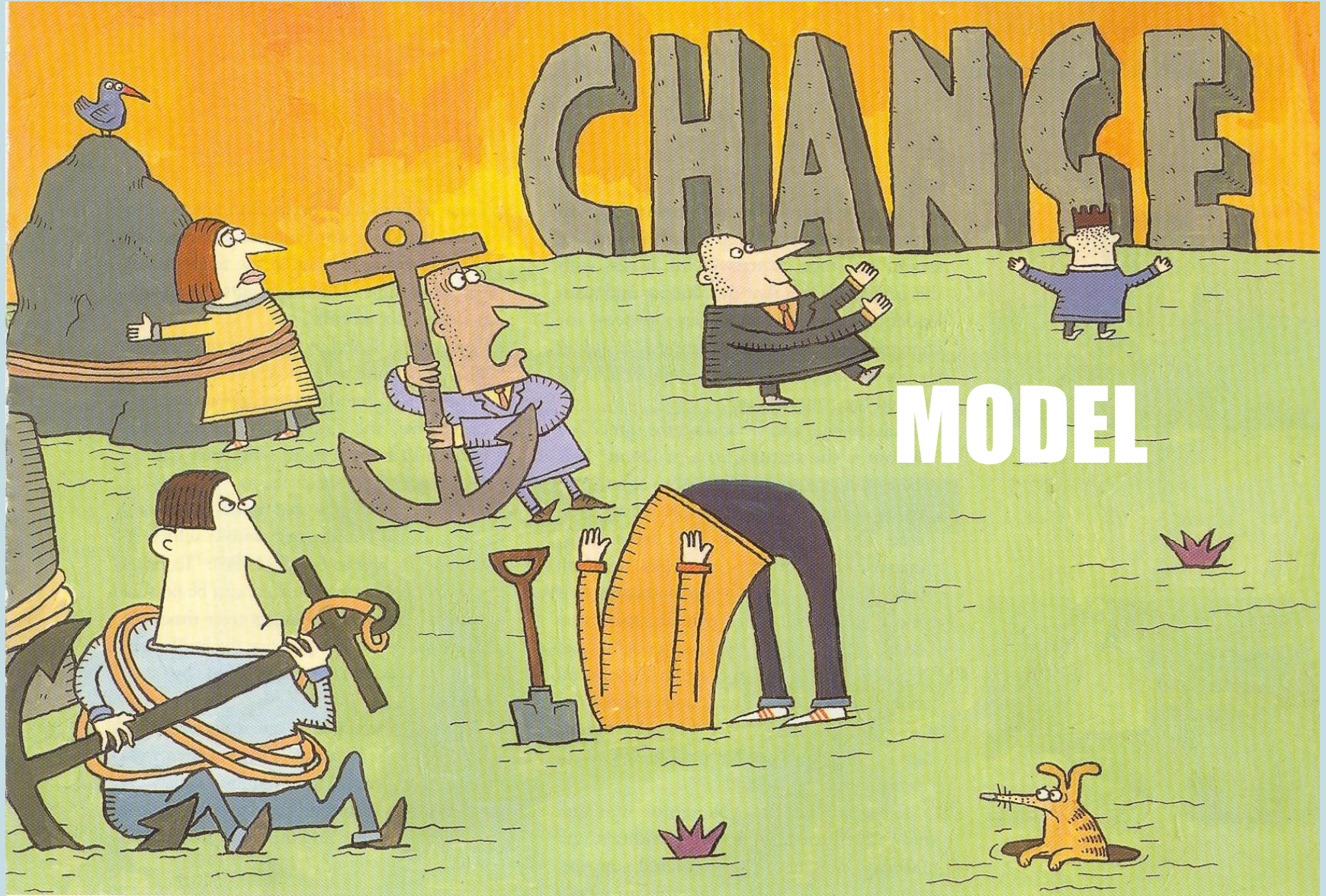
Preventive care by nurses

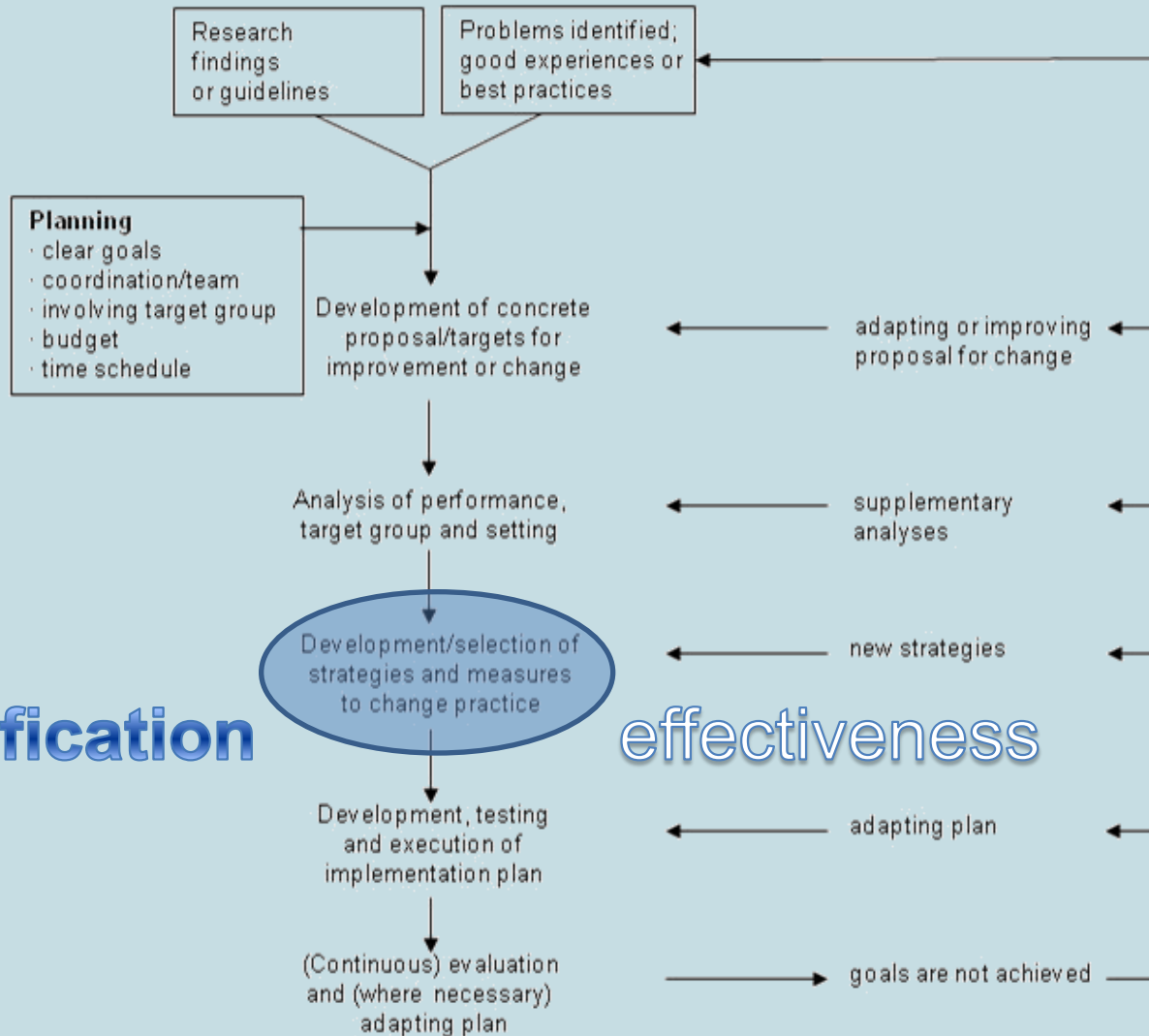
Effect mainly due to use of better mattresses



CONCLUSION

*Structural measure effective,
but still much to gain in pressure ulcer prevention*





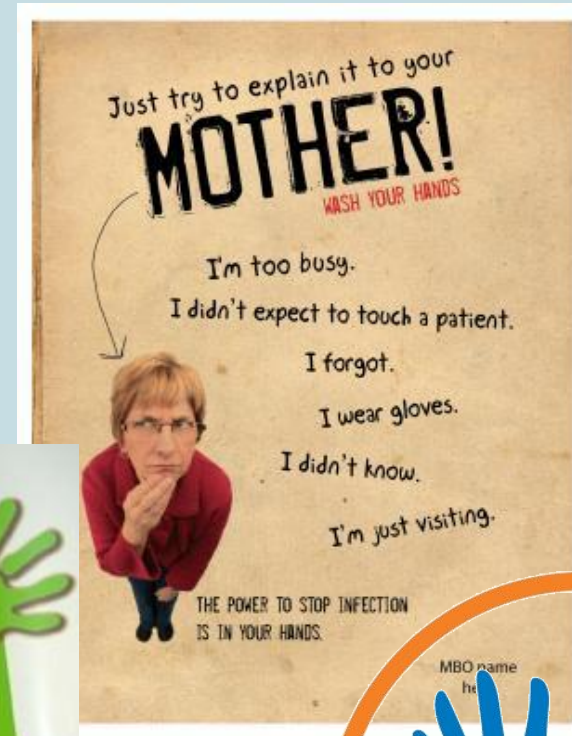
classification

effectiveness

classification



WHY CLASSIFY?



One of many hand hygiene campaigns

1. Observations of (poor) hand hygiene were presented as feedback.
2. Deficiencies were emphasized during inservice rounds.
3. No changes in hand hygiene policy were made.
4. HH posters were placed in the wards.
5. Ward doors were closed and hand hygiene was specifically requested of all persons entering.
6. An education programme was established and maintained.
7. Ward directors actively encouraged HH.

(Conly et al. Am J Inf Contr 1989)

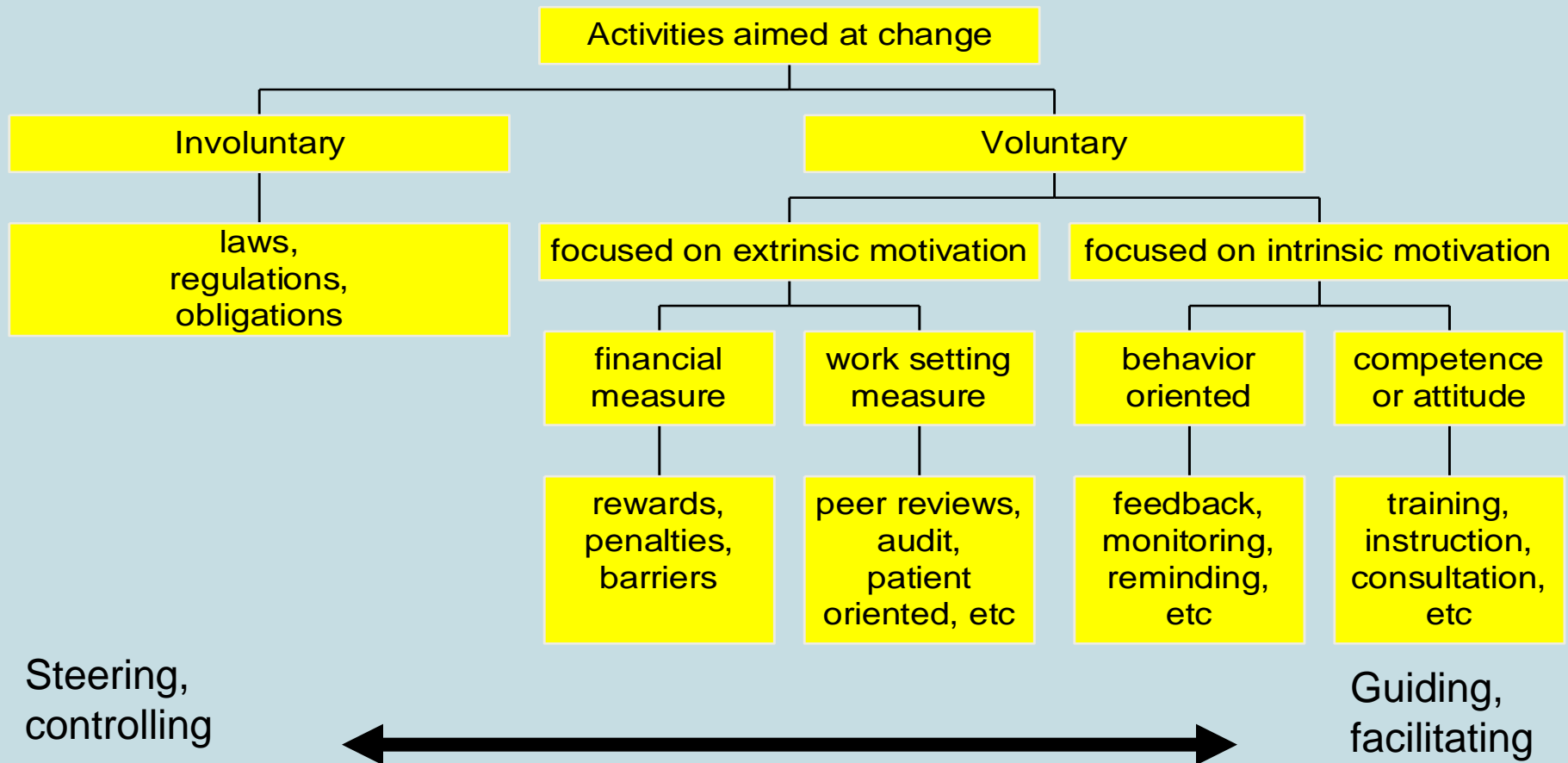
WHY CLASSIFY?



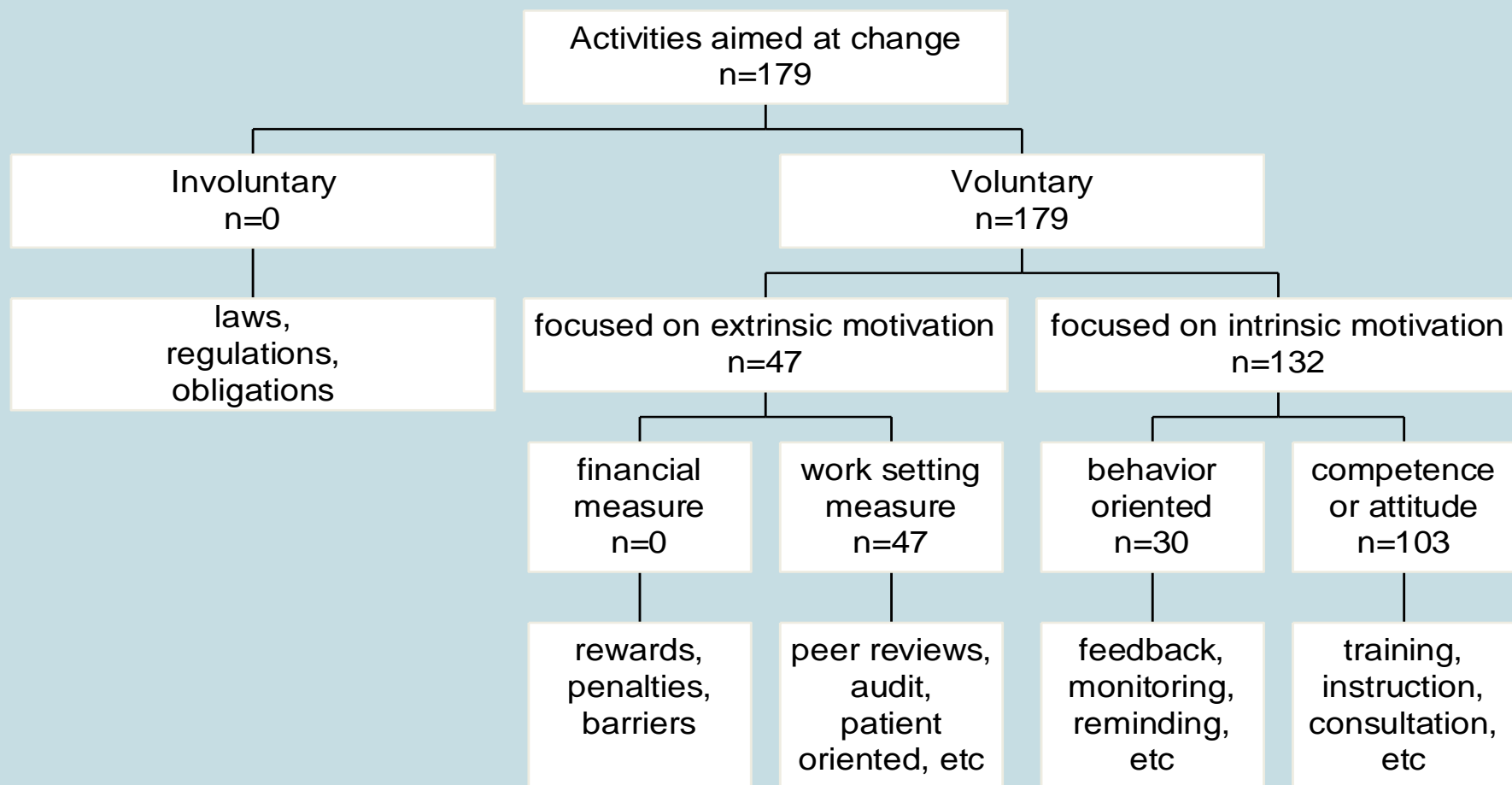
To know what's what
To be able to compare



IMPLEMENTATION STRATEGIES: overview of options

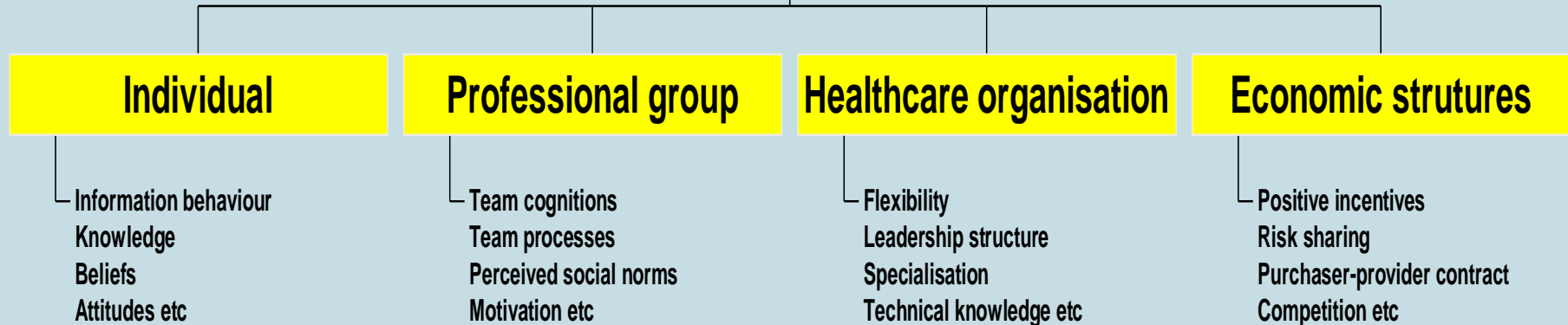


EBP-activities of nurses' professional associations



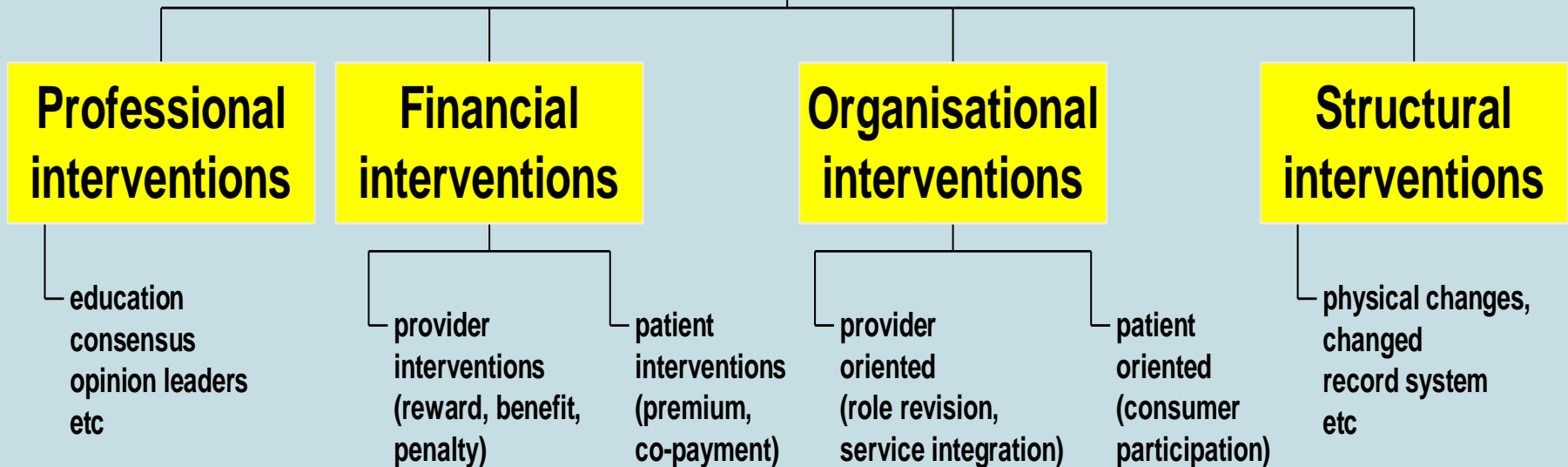
Factors from theories on behaviour and organisational change

Implementation / quality improvement



EPOC CLASSIFICATION OF IMPLEMENTATION STRATEGIES

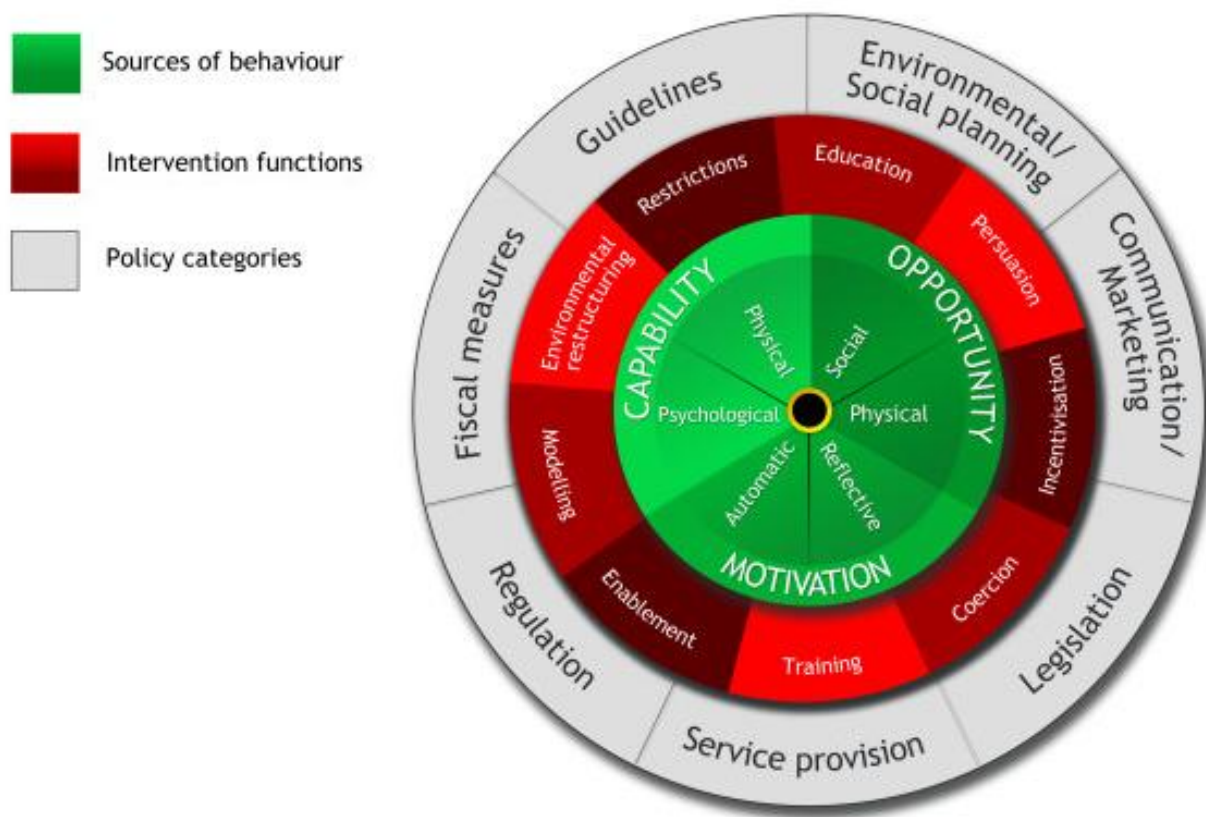
Quality improvement interventions



* <http://epoc.cochrane.org/epoc-resources-review-authors>

CLASSIFICATION OF BEHAVIOR CHANGE TECHNIQUES

Determinant	Technique (examples)
Knowledge	1. provide general info; 2 increase memory or understanding
Awareness	3. risk communication; 4. self-monitoring of behaviour; 5 self-report of behaviour; 6. electronic monitoring of behaviour; 7. reflective listening; 8. delayed feedback of behavior; 9. direct feedback of behaviour; 10. feedback of clinical outcomes
Social influence	10. info about peer behaviour; 12. social comparison; 13. mobilize social norm;
Attitude	14. reevaluation of outcomes; 15. persuasive communication; 16. reinforcement on behavioural progress; 17. reinforcement on motivational progress
Self-efficacy	18. modeling; 19. verbal persuarion; 20. guided practice; 21. plan coping responses; 22. goal setting; 23. reattribution training
Intention	26. specific goal setting; 27. review goals; 28 behavioural contract; 29. social support
Action control	30. use of cues; 31. self-persuasion
Maintenance	32. formulate maintenance goals; 33. relapse prevention
Facilitation of behaviour	34. provide materials; 35. professional support; 36. individualize regimen; 37. cope with side effects; 38. reduce environmental barriers;



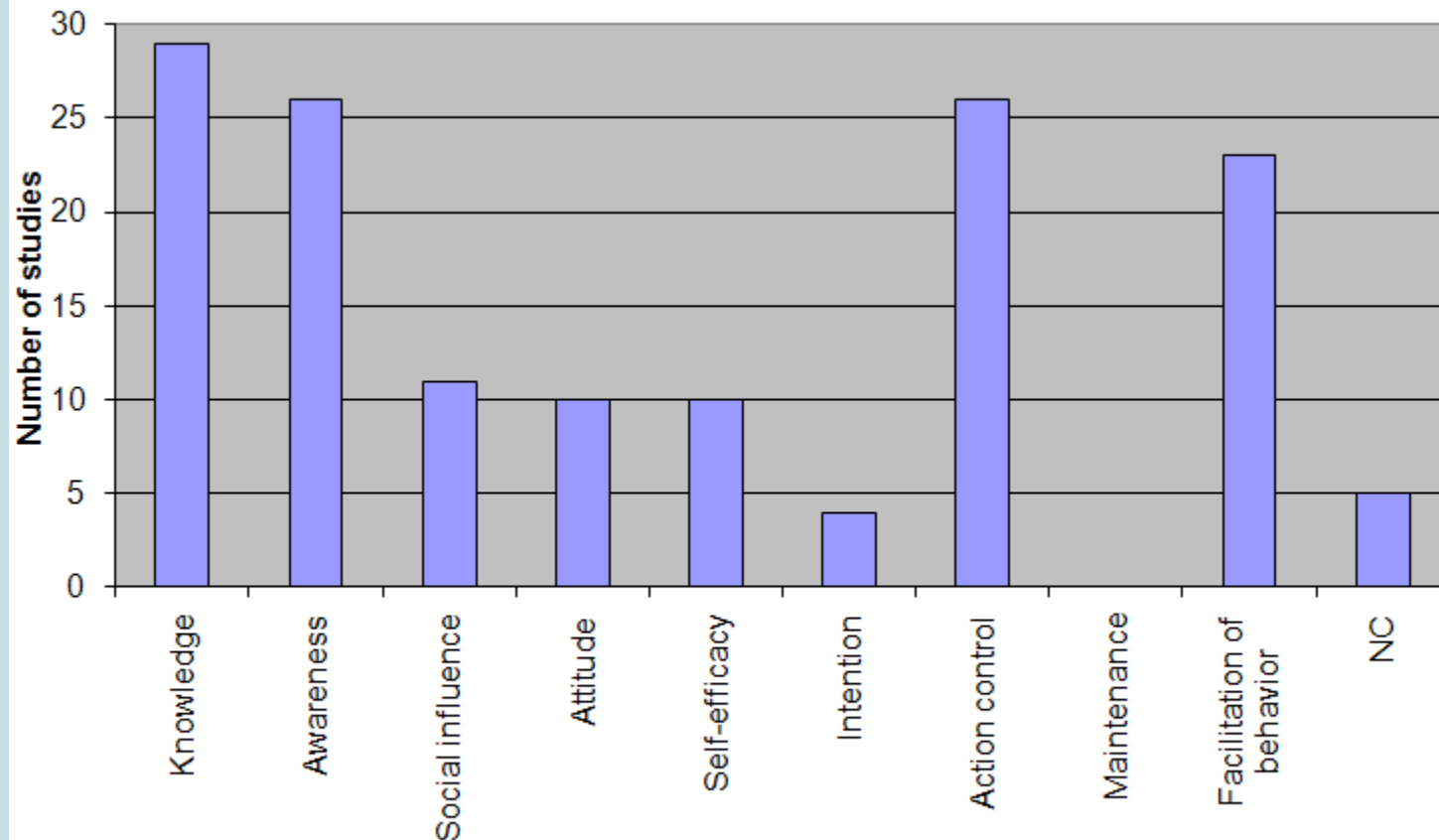
The Behaviour Change Wheel.

Michie *et al.* *Implementation Science* 2011 **6**:42 doi:10.1186/1748-5908-6-42

EPOC	Hand hygiene (HH) example	BCT
Professional intv	<p>Observations of (poor) hand HH were presented as feedback. Deficiencies were emphasized during inservice rounds. No changes in HH policy were made. HH posters were placed in the wards. Ward doors were closed and HH was specifically requested of all persons entering. An education programme was established and maintained. Ward directors actively encouraged HH.</p> <p>(Conly et al. Am J Inf Contr 1989)</p>	Knowledge
Financial – provider		Awareness
Financial – patient		Social influence
Organisational – provider		Attitude
Organisational patient		Self-efficacy
Structural intervention		Intention
		Action control
		Maintenance
		Facilitation of behaviour

EPOC	Hand hygiene (HH) example	BCT
Professional intv	<p>Observations of (poor) hand HH were presented as feedback. Deficiencies were emphasized during inservice rounds. HH posters were placed in the wards. Memoranda regarding HH were sent to all staff. Ward doors were closed and HH was specifically requested of all persons entering. An education programme was established and maintained. Ward directors actively encouraged HH.</p> <p>(Conly et al. Am J Inf Contr 1989)</p>	Knowledge
Financial – provider		Awareness
Financial – patient		Social influence
Organisational – provider		Attitude
Organisational patient		Self-efficacy
Structural intervention		Intention
		Action control
		Maintenance Facilitation of behaviour

Review of studies (n=41) on promoting hospital workers' hand hygiene



Determinants from classification of behaviour change techniques



Effects of implementation strategies

Mostly effective	Mixed effects
<p>Small group meetings</p> <p>Reminders</p> <p>Computerised decision support</p> <p>Introduction of computers</p> <p>Multi-professional collaboration</p> <p>Mass media campaigns</p> <p>Financial interventions</p> <p><i>Combined strategies</i></p>	<p>Educational materials</p> <p>Diff. educational strategies</p> <p>Conferences & courses</p> <p>Educational outreach</p> <p>Opinion leaders</p> <p>Feedback on performance</p> <p>Substitution of tasks</p> <p>Patient mediated interventions</p>

(Grol & Grimshaw, Lancet 2003)

Effects of implementation strategies

Systematic review (235 studies)

Overall effect = 10% improvement in behavior

reminders 14%

education materials 8%

audit & feedback 7%*

educational outreach 6%*

Multiple strategies not always *more* effective

Rationale for strategies often unclear

(Grimshaw & Eccles Med J Aust 2004; Grimshaw et al. J Cont Educ Health Prof 2004; Grimshaw et al. Health Tech Assess 2004)

* Similar findings in more recent reviews:

Jamvedt et al. 2006, Farmer et al. 2008, Forsetlund et al. 2008, Boaz 2011

Relevant Cochrane reviews on specific strategies

	N trials	ES
Printed educational material (Farmer 2008)	23	+4%
Educational meetings (Forsetlund 2009)	56	+6%
Educational outreach visits (O'Brien 2007)	34	+5%
Audit and feedback (Jamtvedt 2006)	118	+5%

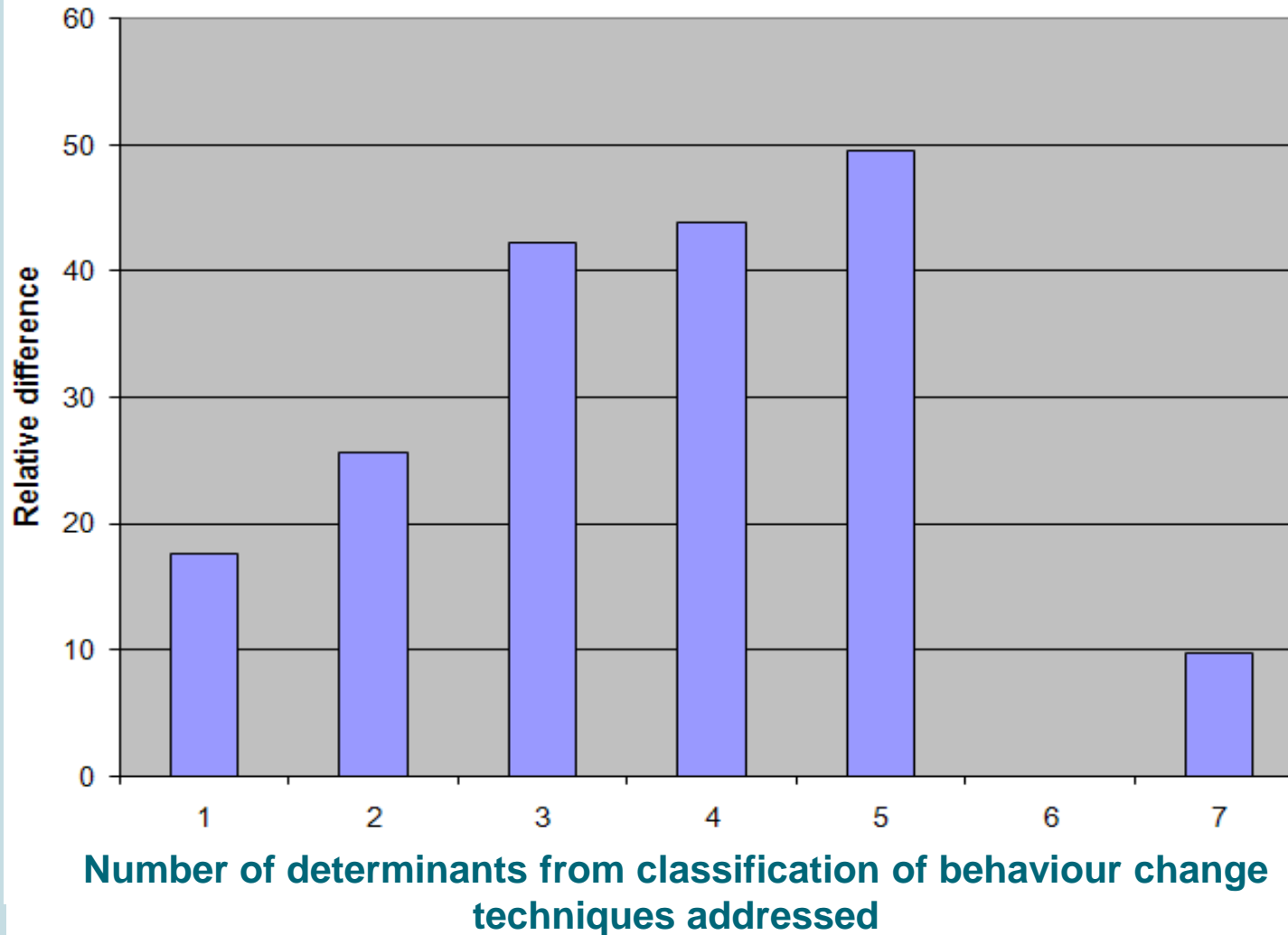
ES=median change on dichotomous performance measures

An overview of systematic reviews (BOAZ et al., Cochrane 2011)

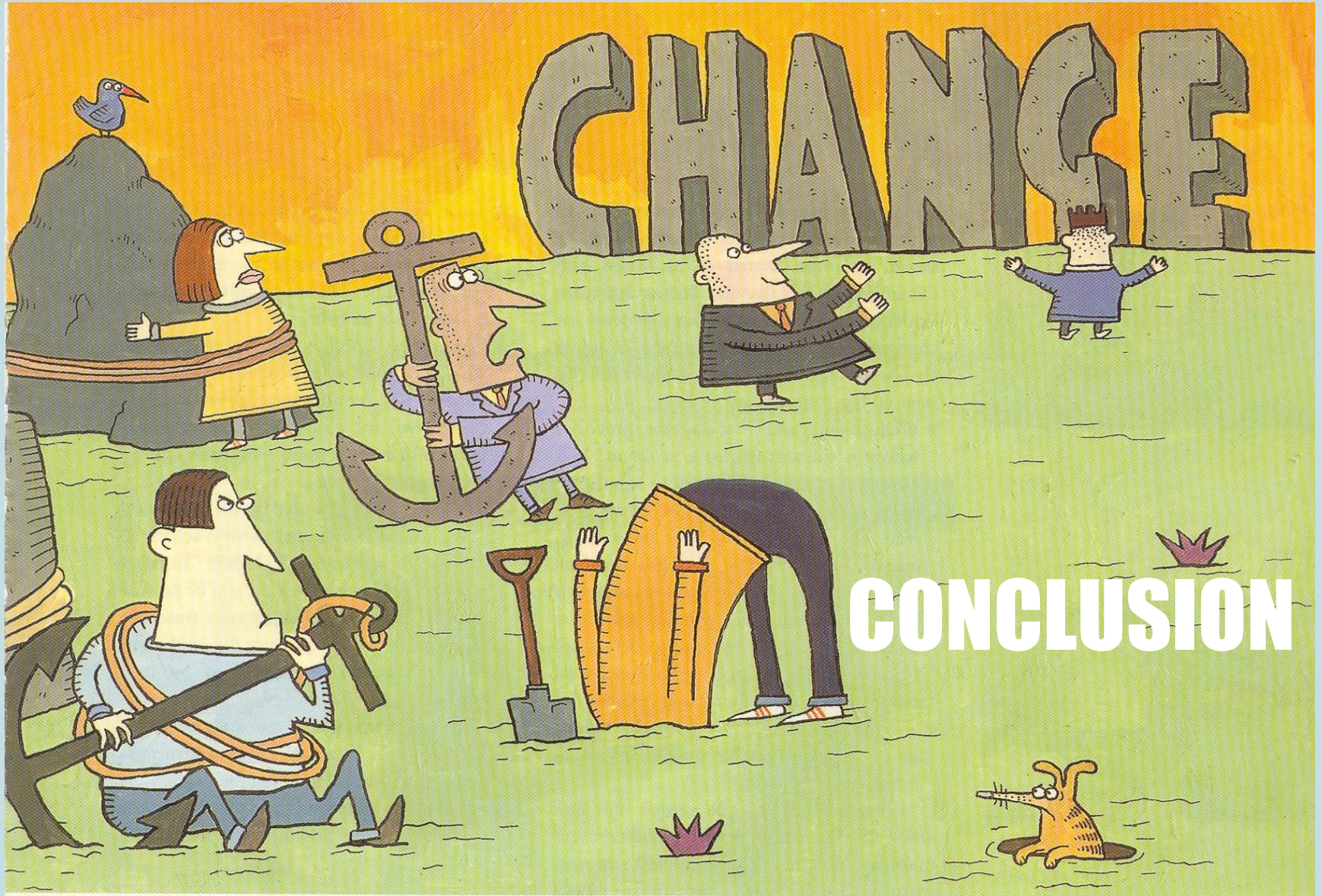
13 SYSTEMATIC REVIEWS; 313 ORIGINAL STUDIES	
<i>Some key conclusions</i>	<i>Small effect sizes</i>
Audit & feedback less effective with more complex areas	
Computerised decision support may be somewhat effective	
Opinion leaders effective, but identifying them can be difficult	
Opinion leaders, reminders, feedback more effective than info campaigns	
Multifacted approaches (multiple strategies) more effective	<i>Moderate effect sizes</i>
<i>Evidence base is still thin</i>	
<i>Few comparative studies</i>	

Once more: rationale for selection of strategies not taken into account

Review of studies (n=41) on promoting hand hygiene



*=diff for
groups at
follow-up
: baseline
x 100*



CONCLUSIONS

Strategy selection for successful change is not easy

Selection by intuition should probably be avoided

Referring to classifications helps transparency

Referring to classifications facilitates comparison

Considering the available evidence can enable choice

A rationale in relation to determinants is crucial however

NEED TO DEVELOP IMPLEMENTATION SCIENCE

