



UMC St Radboud

Quality improvement science

Dr. Michel Wensing,
senior lecturer / associate professor

Centre for Quality of Care Research
(WOK), Radboud University
Nijmegen Medical Centre,
The Netherlands

UMC St Radboud

Outline of presentation

- Some backgrounds
- Theoretical perspectives on quality improvement
- Terminology for implementation interventions and factors
- Conclusions

UMC St Radboud

The Netherlands

- Approx. 14 mln inhabitants
- Economically larger than geographically
- Approx. 9% of GDP spent on healthcare
- Life expectancy at birth: 74,1 years
- 3,5 physicians and 14 nurses per 1000 inhabitants
- Competing health insurers in highly regulated market
- 8 universities with medical centres

UMC St Radboud

Centre for Quality of Care Research (WOK)

- Societal mission: support practice, management and policy regarding decisions on quality of health care (but very few direct consultancy)
- Academic mission: provide education at various levels and research, particularly focused on Ph.D. students
- Active in primary care, hospital care, mental healthcare and many health professions; will include medical ethics in the near future
- About 40 Ph.D. studies finished since 2000; a total of 70 is ongoing

UMC St Radboud

My background

- 1991 M.Sc. Sociology (research methods)
- 1997 Ph.D. Medical Sciences (patient perspectives)
- 2003 UHD (ass.prof) Research on quality improvement
- 2007 Co-ordinator (PI) of a research with about 4 postdoc researchers and about 25 Ph.D. students

Focus: research of quality improvement in healthcare

- Quality improvement, including professional development, organisational/economic and patient-related factors and interventions
- Research methodology, mainly quantitative (RCTs, observational evaluations, etc.)
- Particularly primary care and chronic diseases, but increasingly also in other domains and disciplines

Use of theoretical perspectives in research of improvement (Grol et al, Milbank Quat 2007)

- Process theories: how implementation should be planned, organized, and scheduled
- Impact theories: what factors are associated with change, and why intervention are effective
 - Individual professionals
 - Social context
 - Organizational context
 - Political and economic context

Process theories: analysis of 9 models

- Stages of change models: between 4 and 9 steps / stages, but content is largely the same
- Planning models for implementation: at least 6 models, also with large overlap

=> Do we need more process models ?

Theories on individuals

- Cognitive theories: decision process, information processes
- Educational theories: need and motivation to learn, teaching theories
- Motivational theories: attitudes, social norms, experienced control

Theories on social context

- Theories of communication: credibility of source, framing and rehearsal of messages,
- Social learning theory: demonstration, modelling, reinforcement by others
- Social network and influence theories: opinion leaders, weak ties, structural holes
- Theories on teamwork: team effectiveness, group processes
- Professional development theories: professional identity, pride, loyalty
- Theories of leadership: types of leadership, involvement of management

Theories on organizational context

- Theory of innovative organizations: slack, specialised knowledge, decentralised decision making etc.
- Theory of quality management: culture, collaboration, measurement, feedback, cyclic approach
- Theories of integrated care, system approaches: various aspects that need to be in place
- Complexity theories: non-linear adaptation, attractors
- Theories of organizational culture: specific aspects that need to be in place, e.g. rationality or clan

Political and economic context

- Reimbursement systems: financial incentives and risks for care providers, citizens/patients
- Theory of contracting/purchasing health care: economic and institutional arrangements
- Agenda setting: effectiveness of lobby work by stakeholders
- Development of professions: professional autonomy, role of management, role of inspection

Conclusions

- A variety of interesting theoretical perspectives is available, many of which focus on contextual factors
- Empirical evidence on its value for improvement of patient care is very limited or not available
- Quality improvement science should use existing impact theories, test these, and perhaps develop new ones

Terminology for implementation interventions and factors associated with improvement (*in Dutch*)

- Aim: standardisation of terminology for describing implementation projects in Dutch
- Method: expert group, literature analysis, consultation of 22 "implementation workers"
- Result: list of 26 intervention concepts and 11 types of factors
- Published in: TSG 2007 (in Dutch)

Implementation interventions –individual focused

- Mass media
- Personal material
- Personal contact
- Small group meetings
- Large group meetings
- Feedback based on measurements
- Decision support
- Change of life or work setting
- Use of "symbols"

Implementation interventions –organisation focused

- Change of organisation size
- Change of physical environment
- Change of skill mix
- Change of professional roles
- Change of teams
- Process redesign
- Work process standardisation
- Work process knowledge management
- Change of internal communication
- Change of external communication
- Change of leadership and culture

Implementation interventions –structures focused

- Societal agenda setting
- Professional development of health professions
- Financial incentives for patients/citizens
- Financial incentives for health providers/institutions
- Contracting health providers/institutions
- Laws and regulations

Types of influential factors – individual related

- Individual cognitions
- Individual motivations
- Individual behaviours
- Professional teams
- Professional networks

Types of influential factors – context related

- Organisational structures and work processes
- Organisational processes
- Available resources
- Professional development
- Financial incentives
- Regulations

