



# Health services research is crucial for evidence-based health policy

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# Key questions addressed in this presentation

1. What are the main challenges for national policy makers, healthcare providers and healthcare researchers?
2. What healthcare research has to offer and what still needs to be studied?
3. How can decision makers and researchers collaborate?

# My background

- Scientific researcher of ‘how to improve healthcare’ , mainly in primary care, since 1997, full professor since 2011
- Habilitation and Ph.D. in medical sciences, diploma health economics, M.Sc. sociology
- Based in university hospital in the Netherlands

# Dutch healthcare system

- Private healthcare providers
- Private healthcare insurers
- Strong primary care
- Complex regulation
- High and rising costs
- Introduction of market principles



# What are the challenges for policy makers, healthcare providers, and healthcare researchers

# Challenges for national and regional policy makers

- Keep the healthcare system sustainable
  - Control high and rising costs
  - Prevent workforce shortages
- Protect patients' safety in healthcare
  - Reduce hospital-related mortality
  - Reduce risk in ambulatory and primary care

# Challenges for healthcare providers

- Improve quality and safety of healthcare
  - Evidence-based practice => personalized healthcare
  - Improve coordination of patient care
- Organisational development of healthcare services
  - Integrated care delivery systems
  - Modernize information technology

# Challenges for healthcare researchers

- Discover how to tailor complex interventions to local settings
  - Multidisciplinary approach
  - Methodological challenges
  
- Discover how to put healthcare improvement in context
  - Conceptual clarification
  - Data-analysis challenges



# What has health services research to offer and what has yet to be done ?

# Control of rising healthcare costs: what do we know?

Do standard economic laws also apply to healthcare?

Is it acceptable to introduce economic mechanisms?

E.g.

- Higher price → higher production, lower consumption
- Fixed budget → lower production (waiting lists)
- Monopoly → high price for consumers
- Transparency → rational decision making (not in patients)

# Dutch experiment 2006: partial introduction of market principles

- One health insurance system for everyone → many mergers: from 40 to 5 insurers in the country
  - Insurers are supposed to compete, but financial risk was absent → policy makers say that they should compete more
  - Hospital are supposed to act like enterprises → volume of low cost services expanded, prices increased when allowed
- **Ministry of Health 2012:** knowledge centre in our centre to support evidence-based health policy

# Impact of financial incentives in healthcare: a Cochrane review

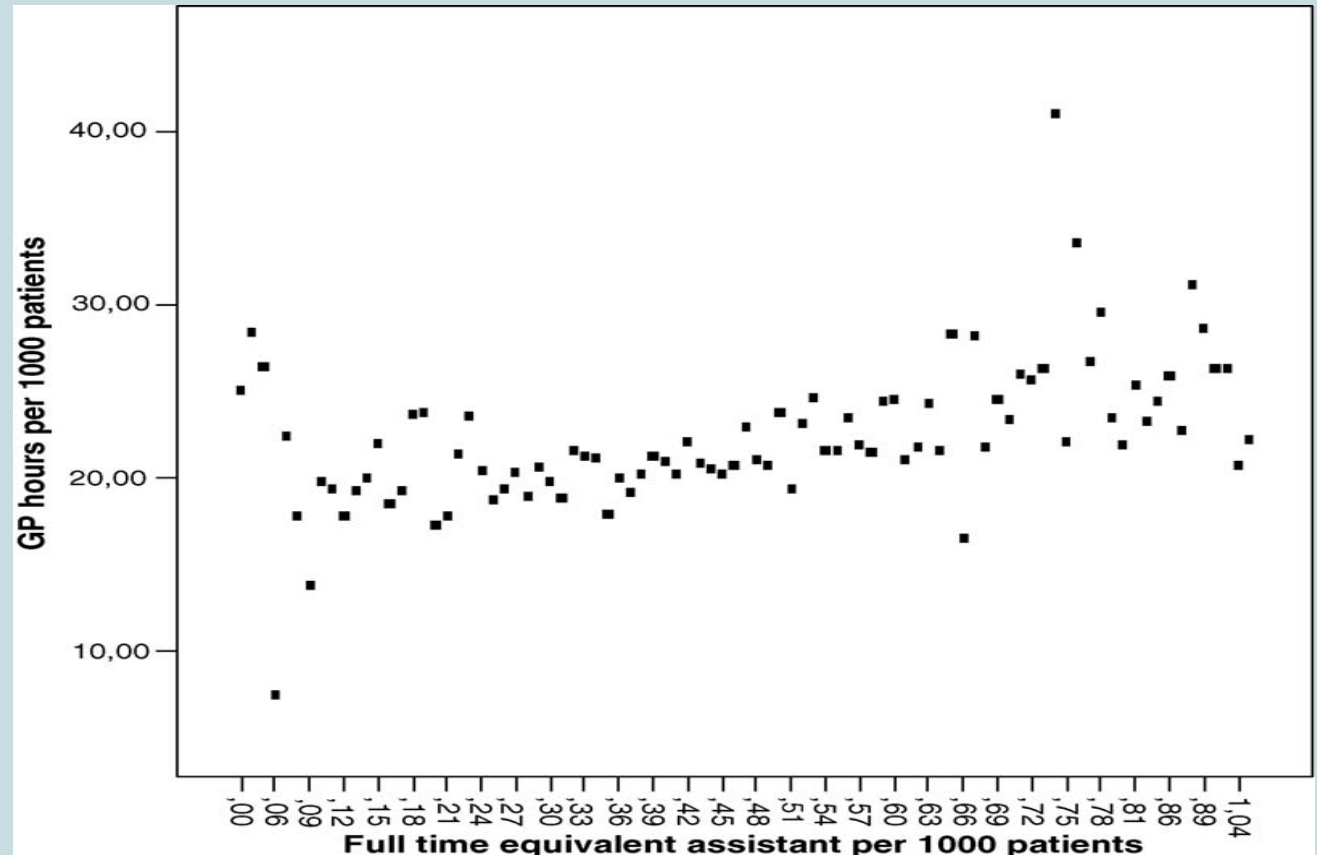
- N=32 studies in 4 systematic reviews suggest that financial incentives may be effective for changing healthcare
- Most effective: additional payment for specific patient or service, meeting a pre-specified standard of healthcare or change
- Other payment models had mixed impact
- Studies had low to moderate methodological quality

# Can we reduce cost and improve quality of healthcare simultaneously?

- De-implementation/ reversed implementation: stop ineffective clinical procedures
- Improve technical efficiency: more output for same or less costs
- Emphasize specific areas in quality improvement projects which have the potential to reduce costs
- ...?

# Healthcare workforce shortages

Weekly hours worked of primary care physicians versus volume of non-medical assistance in the practice (Wensing 2006)



# Potential mechanisms for effectiveness of involving non-physicians in teams

- **More knowledge and competencies (e.g. pharmacist)**
- **Better coordination of patient care (e.g. case manager)**

## Medical Care Research and Review

<http://mcr.sagepub.com/>

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**Review Article: Effectiveness of Patient Care Teams and the Role of  
Clinical Expertise and Coordination : A Literature Review**  
Marije Bosch, Marjan J. Faber, Juliette Cruijsberg, Gerlienke E. Voerman, Sheila  
Leatherman, Richard P. T. M. Grol, Marlies Hulscher and Michel Wensing  
*Med Care Res Rev* 2009 66: 5S originally published online 19 August 2009  
DOI: 10.1177/1077558709343295

The online version of this article can be found at:  
[http://mcr.sagepub.com/content/66/6\\_suppl/5S](http://mcr.sagepub.com/content/66/6_suppl/5S)

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# Ongoing research related to work force challenges in our centre

- Physician assistants versus (non-specialist) physicians in hospitals: a cluster randomized trial
- Teams with nurse specialists versus physician-only teams in primary care out of hours care: a comparative evaluation



# Patient safety



# Radboud cardiac surgery case

- **What happened:** high mortality in cardiac surgery department, inspection closed department, change of leadership and staff
- **What were outcomes:** dramatic reduction in mortality and complications rates
- **How was the improvement achieved:** we don't know, no research done

# Patient safety in Dutch healthcare: the current status

- Large investments in programs to improve patient safety in hospitals did not yet pay off in terms of lowered hospital-related mortality
- ➔ **Development and evaluation of more effective improvement programs needed**
- Patient safety in primary care is low on the policy agenda, despite high volume of contacts and procedures
- ➔ **Political action needed to raise awareness and priority**

# Implementation of evidence-based practice



# Impact of computerized clinical decision support systems

	Number of trials	Improved processes	Improved outcomes
Primary prevention	41	63%	29%
Diagnostic test ordering	35	52%	31%
Drug prescribing	65	64%	21%
Drug monitoring and dosing	33	60%	21%
Acute care management	36	63%	15%
Chronic care management	55	63%	15%

# Heterogeneity of organization of generalistic healthcare

- Range of clinical activities
- Preventive services offered
- Out of hours care
- Information technology
- Registration of patients
- Number of physicians
- Nurse involvement
- Practice size
- Reimbursement system
- Etc.

*J van Lieshout, M Goldfracht, S Campbell, et al*

## Primary care characteristics and population-orientated health care across Europe: an observational study

*Jan van Lieshout, Margalith Goldfracht, Stephen Campbell, Sabine Ludt and Michel Wensing*

### ABSTRACT

#### Background

The number of patients with chronic diseases is increasing which poses a challenge to healthcare organisations. A proactive, structured, and population-orientated approach is needed: the chronic care model (CCM) provides such a framework.

#### Aim

To assess organisational conditions for providing structured chronic care according to the CCM across different healthcare systems.

#### Design of study

International observational study.

#### Setting

A stratified sample of 315 primary care practices in 10 European countries and Israel in 2008 and 2009.

#### Method

Practice questionnaires and interviews. Outcome measures were mean practice scores on CCM domains per country, as a percentage of the maximum score, and the influence of practice size and urbanisation on these scores.

#### Results

Practice size showed large differences with the largest practices in Spain, England, Finland, and Israel. These countries, with a strong primary care orientation, had most physicians and staff involved per practice. The CCM domains 'clinical information systems' and 'decision support' had total practice means of 90%; other domains scored about 50%. Spain and England scored above average on almost all domains. Practice size and urbanisation had little impact.

#### Conclusion

Characteristics for chronic care delivery differed for most CCM domains. The most common characteristic related to computerisation, providing a good starting point and high potential to improve. All countries

### INTRODUCTION

Ageing populations, effective health technologies, and poor lifestyle have contributed to the increasing number of patients with chronic diseases. Comprehensive and coordinated management of chronic disease is a major challenge for healthcare systems, covering the full range of health care from prevention and early diagnosis to treatment of established disease. A proactive, structured and population-orientated approach is needed, with important implications for the organisation of health care. Two widely accepted frameworks on the organisation of chronic care and prevention are the chronic care model (CCM),<sup>1</sup> and the patient-centred medical home (PCMH).<sup>2</sup> In the CCM, outcomes of disease management are seen as the result of interaction between a proactive practice team and an active patient. The CCM seeks to coordinate activities

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# Chronic care model

Community resources and policies	Presence and link to community programs
Healthcare organization	Adequate reimbursement
Selfmanagement support	Patients are well informed and in control of their treatment
Delivery system design	Planned healthcare delivery involving non-physicians
Decision support	Access to clinical guidelines and expert consultation
Clinical information systems	Registries, reminders, feedback linked to patients with chronic diseases

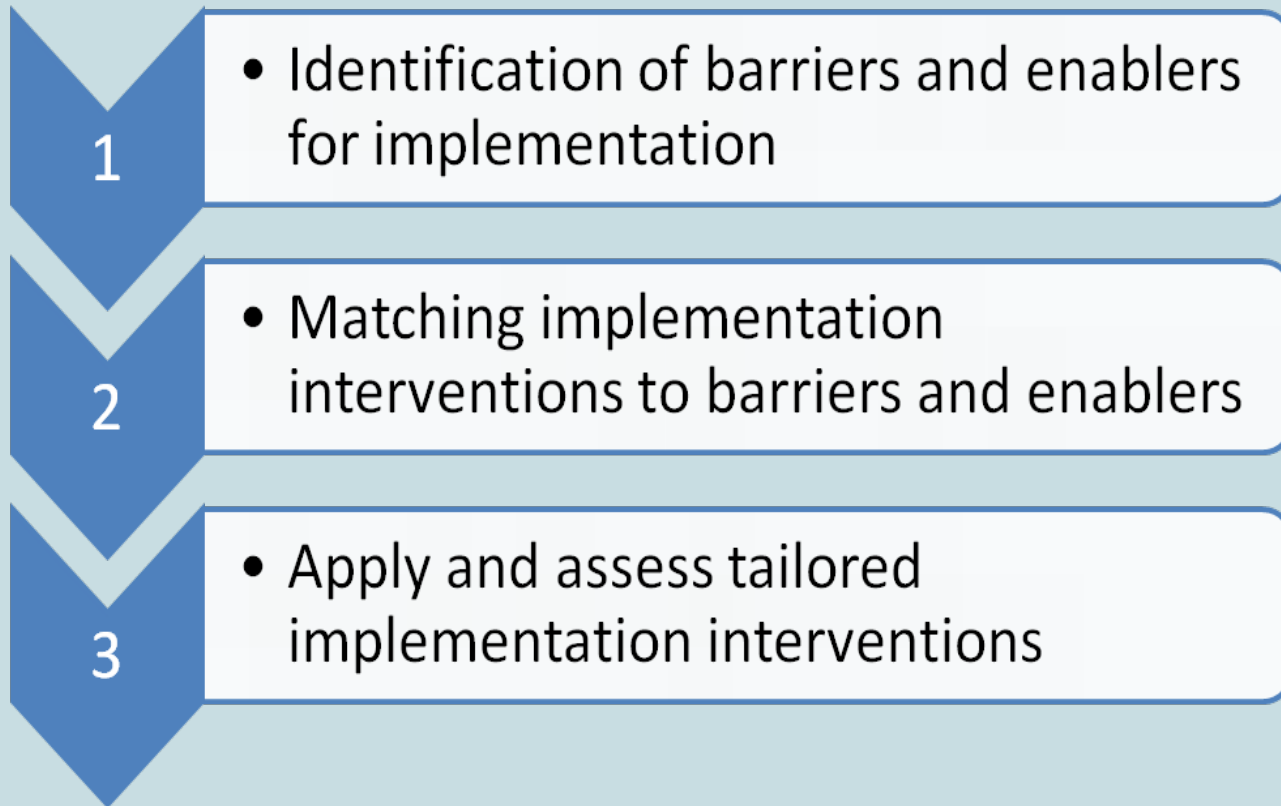
# Cardiovascular performance depends on clinical information systems

	Practice with low CCM score	Practice with high CCM score
Risk factor registration	72%	75%
Antiplatelet therapy	78%	89%
Influenza vaccination	45%	72%

Data refer to 4563 patients with coronary heart disease from 273 primary care practices in 8 countries. Cardiovascular performance based on clinical audit of medical records, practice organization data on self-report questionnaires.



# Tailoring implementation interventions to barriers and enablers



# Determinants of change in practice (“barriers and enablers”)

May be related to:

- guidelines /knowledge
- professional behaviour
- interactions of health professionals
- organisation of healthcare
- health system arrangements
- patient behaviours
- social and political environment

# Multidisciplinary approach is required to improvement in healthcare

- **Engineering:** innovation of products/services
- **Epidemiology:** population-based figures
- **Psychology:** individual motivation, cognitions, cognitive biases
- **Social psychology:** team functioning, social comparison
- **Economics:** price, transparency, market structure
- **Management:** leadership, processes design, organisational culture
- **Sociology:** social networks, professional development
- **Politology:** societal agenda, media influences

# Methodological research: what are the best methods?

1. Brainstorming by the implementation team
2. Analysis of performance data
3. Focus groups (professionals)
4. Focus groups (patients)
5. Observation
6. Interviews of professionals
7. Interviews of patients
8. Simple questionnaires
9. Detailed questionnaires.

STUDY PROTOCOL

Open Access

# Tailored implementation for chronic diseases (TICD): A project protocol

Michel Wensing<sup>1\*</sup>, Andy Oxman<sup>2</sup>, Richard Baker<sup>3</sup>, Maciek Godycki-Gwirko<sup>4</sup>, Signe Flottorp<sup>2</sup>, Joachim Szecsenyi<sup>5</sup>, Jeremy Grimshaw<sup>6</sup> and Martin Eccles<sup>7</sup>

## Abstract

**Background:** The assumption underlying tailoring is that implementation interventions are most helpful if these effectively address the most important determinants of practice for improvement in the targeted setting. The aim of the Tailored Implementation For Chronic Diseases (TICD) project is to develop valid and efficient methods of tailoring implementation interventions to determinants of practice for knowledge implementation in chronic illness care.

**Methods:** The TICD project has organized the planned empirical research in three work packages that follow the three main steps of tailoring: identification of determinants of healthcare practice, matching implementation interventions to identified determinants of practice, and applying and assessing the tailored implementation interventions. These three key steps of tailored implementation will be applied to targeted chronic conditions in five different healthcare systems: cardiovascular disease in the Netherlands, obesity in England, depression in Norway, chronic obstructive pulmonary disease in Poland, and multimorbidity in Germany. The design and interpretation of empirical research will be informed by systematic reviews of previous research on tailoring implementation interventions.

**Discussion:** The TICD project will provide much needed evidence on the advantages and disadvantages of different methods of identifying important determinants of practice and selecting implementation strategies that take account of those. It will also provide five rigorous evaluations of tailored implementation interventions for five different chronic conditions.

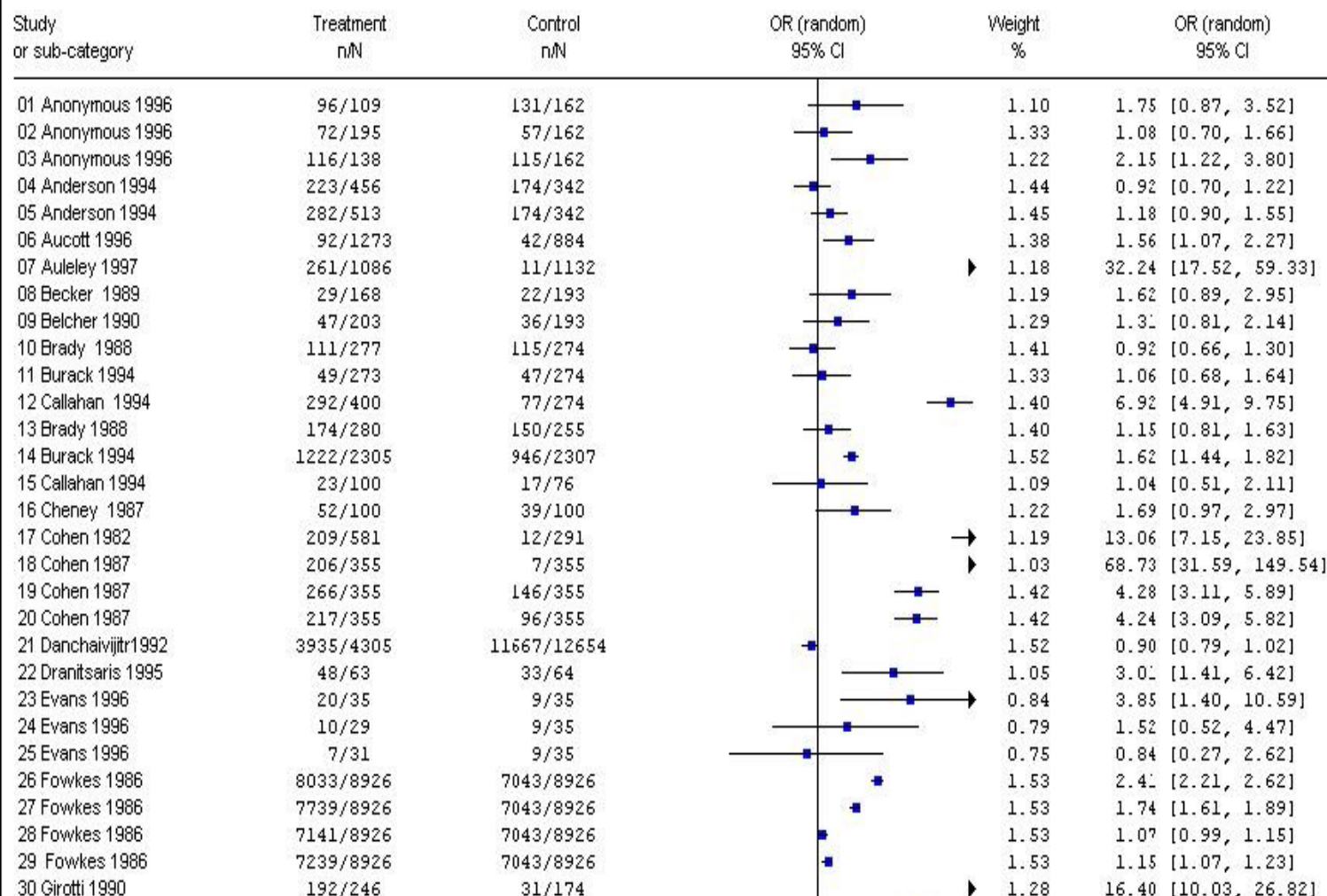
## Background

Tailored implementation interventions are strategies that are designed to achieve desired changes in health-

interventions resulting from a tailoring process. Little research evidence is available regarding how tailoring is best done in relation to implementation interventions.

# Putting improvement in context

Review: Dijkstra et al.  
Comparison: 01 Intervention vs. control  
Outcome: 01 Objective measures of provider behaviour, proportion of patients treated in accordance with guidelines



# Organisational determinants of primary care for chronic patients?

- Study in 42 practices concerning chronic heart failure (n=357)
- Study in 30 practices concerning diabetes mellitus (n=752)
- Little association of outcomes with organisational factors, including:
  - Aspects of chronic care model
  - Organisational culture (CVF)
  - Team functioning (TCI)

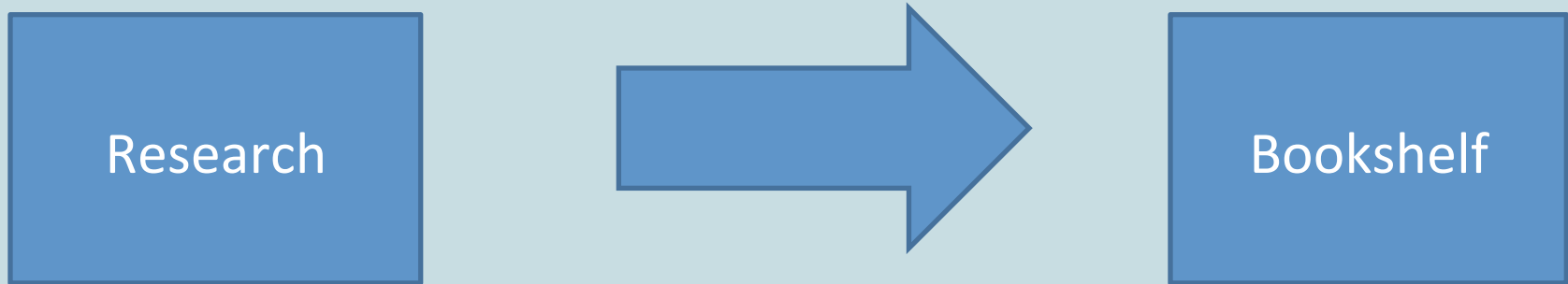
# Context of improving mental healthcare in NL

- 29 improvement teams worked to implement guidelines on anxiety, schizophrenia, or double diagnosis
- Data on team composition, participation, functioning and organizational context
- Outcomes data on n=1346 patients
  
- Few associations between team features and outcomes
- Some support for impact of:
  - managerial support
  - active, inspiring team leaders
  - higher educational level of team members



# How can decision makers and healthcare researchers collaborate?

# Researchers' perspective: From bench to bed or bookshelf ?



# Example: accreditation of primary care practices in the Netherlands

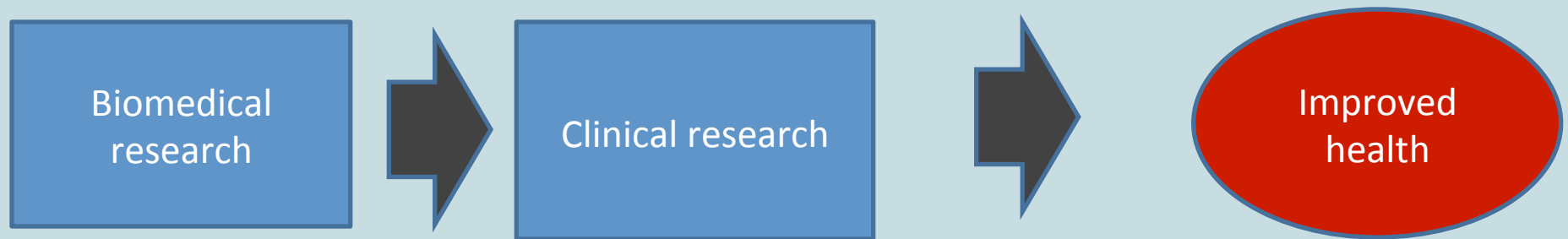
- Initiated and implemented by the Dutch College of General Practitioners in 2005
- Some related research, mainly focused on measures and experiences
- One study of its effectiveness (cluster RCT by our group) with results in 2013

Nouwens E, Van Lieshout J, Adang E, Bouma M, Braspenning J, Wensing M. Effectiveness and efficiency of a practice accreditation program on cardiovascular risk management in primary care: study protocol of a clustered randomized trial. *Implem Sci* 2012;7:94 x

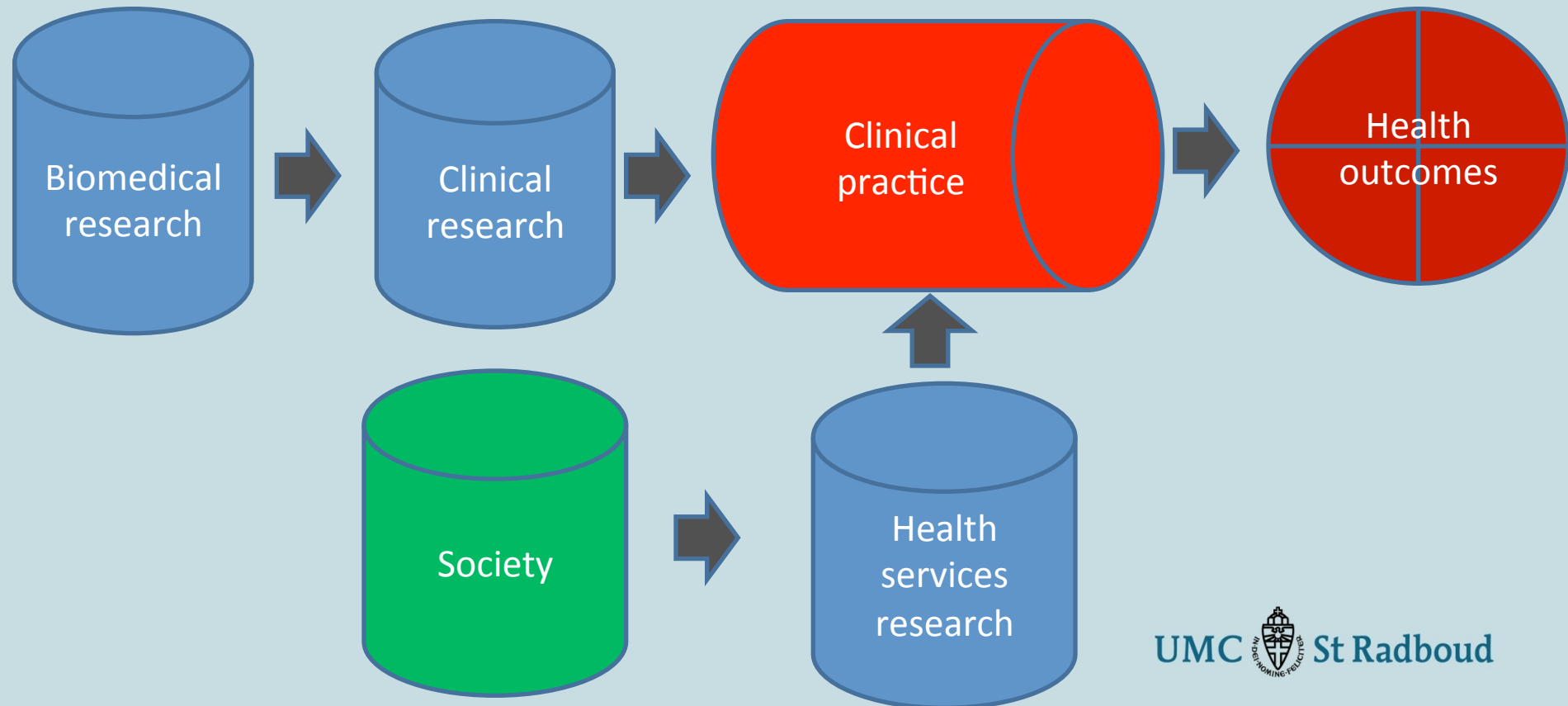
# Knowledge users' perspective: Information overload



# A simple model of the impact of research on decisions



# A complex model of the flow of knowledge from research to outcomes



# Types of knowledge that can be provided by (health services) research

## 1. Instrumental knowledge:

- Identification of problems in healthcare
- Evaluations of programs, policies, interventions
- New effective interventions

## 2. Conceptual knowledge:

- Ideas on the nature of problems
- Options for their management or solution

## 3. Political “knowledge”:

- Research to justify or postpone policy decisions

# Options for organizing health services research in a country

1. In the Ministry of Health, regional or local authorities, etc.
2. Independent research institutes, which get projects in competition
3. At medical university centres, linked to clinical research
4. At other university centres, e.g. business schools



# Everything needs nurturing

Wensing et al. *Implementation Science* 2012, **7**:10  
<http://www.implementationscience.com/content/7/1/10>



## EDITORIAL

## Open Access

# Does the world need a scientific society for research on how to improve healthcare?

Michel Wensing<sup>1\*</sup>, Jeremy M Grimshaw<sup>2</sup> and Martin P Eccles<sup>3</sup>

### Abstract

In this editorial, we reflect on the arguments for starting a scientific society focused on research on how to improve healthcare. This society would take an inclusive approach to what constitutes healthcare. For instance, it should include mental health healthcare, treatment for substance abuse, the work of allied health professions, and preventive healthcare. The society would be open to researchers from all traditions. Thus, we take an inclusive approach to what constitutes scientific research, as long as it uses rigorous methods, is focused on improving healthcare, and aims at knowledge that can be transferred across settings. The society would primarily target scientific researchers but would invite others with an interest in this area of research, regardless of their discipline, position, field of application, or group affiliation (e.g., improvement science, behavioral medicine, knowledge translation). A society would need fruitful collaboration with related societies and organizations, which may include having combined meetings. Special links may be developed with one or more journals. A website to provide information on relevant resources, events, and training opportunities is another key activity. It would also provide a voice for the field at funding agencies, political arenas, and similar institutions. An organizational structure and financial resources are required to develop and run these activities. Our aim is to start an international debate, to discover if we can establish a shared vision across academics and stakeholders engaged with creating scientific knowledge on how to improve healthcare. We invite readers to express their views in the online questionnaire accessed by following the URL link provided at the end of the editorial.

# Conclusions

- Health services research has a lot to offer to decision makers in healthcare
- It requires nurturing: money, organization, political support, acceptance by healthcare providers and other stakeholders

# Improving Patient Care

THE IMPLEMENTATION OF  
CHANGE IN HEALTH CARE

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Michel Wensing  
Martin Eccles  
David Davis

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