

Strategies to Improve Patient-Centred Care in European Hospitals: Baseline Assessment and Tool Development

Oliver Gröne

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Directors:

Prof. Dr. Niek Klazinga

Department of Social Medicine, University of Amsterdam

Prof. Dr. Jordi Alonso Caballero

Department of Experimental and Health Sciences, University of
Pompeu Fabra

Dipòsit Legal:
ISBN:

To Oana and Luna

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Summary

English

Substantial research has been carried out on evaluating the physician-patient interaction and on launching policy initiatives to improve patient-centred care. However, the organizational uptake of strategies to improve patient-centredness has received less attention in research and practice. Against this background, this thesis pursues the question whether strategies to improve patient centred care are associated with, and can be facilitated by quality improvement in European hospitals. The findings suggest that strategies to improve patient-centredness and hospital quality improvement systems are to some extent associated; however, hospital's quality improvement systems are not sufficient in ensuring organization-wide implementation of patient-centred care. Gaps between strategic level and ward level implementation and confounding factors suggest that additional factors facilitate or exert pressure on hospitals to adapt a patient-centred approach. Tools addressing selected domains of patient information, education and health promotion can be embedded into existing quality improvement systems in order to facilitate implementation.

Catalan

Nombrosos estudis han avaluat la interacció metge-pacient en l'atenció sanitària i es van iniciar múltiples accions de la política de salut per millora l'atenció centrada en el pacient. No obstant això, la implantació d'estratègies per millorar l'atenció centrada al pacient a nivell organitzacional va rebre menys atenció en recerca i en la pràctica. En aquest context aquest estudi pretén avaluar si les estratègies per la millora de l'atenció centrada al pacient estan associades i/o facilitades pels sistemes de la millora de la qualitat en hospitals Europeus. Les troballes d'aquest treball suggereixen que les estratègies de l'atenció centrada al pacient i els sistemes de millora de la qualitat estiguin parcialment associades però, els últims no són suficients per garantir la implantació de les estratègies de l'atenció centrada al pacient per tota la organització hospitalària. Diferències entre la implantació al nivell estratègic i al nivell del departament apunten a altres factors facilitadors o factors externs que potencialment influeixen l'adaptació d'un enfocament centrada

al pacient. L'ús d'eines pràctiques per a la millora de la informació, educació i promoció de salut del pacient pot completar els sistemes de millora de la qualitat assistencial existents.

Spanish

Números estudios han evaluado la interacción médico-paciente en la atención sanitaria y se iniciaron múltiples acciones de la política de salud para mejorar la atención centrada al paciente. No obstante, la implantación de estrategias para mejorar la atención centrada al paciente al nivel organizacional recibió menos atención en investigación y la práctica. En este contexto, este estudio pretende evaluar si las estrategias para la mejora de la atención centrada al paciente están asociadas y/o facilitadas por los sistemas de la mejora de la calidad en hospitales Europeos. Los hallazgos del presente trabajo sugieren que las estrategias de la atención centrada al paciente y los sistemas para la mejora de la calidad asistencial están parcialmente asociadas, sin embargo, los últimos no son suficientes para garantizar la implantación de las estrategias de la atención centrada al paciente por toda la organización hospitalaria. Diferencias entre la implantación al nivel estratégica y al nivel del departamento apuntan a otros factores facilitadores o factores externos que potencialmente influyen la adaptación de un enfoque centrada en el paciente. El uso de herramientas prácticas para la mejora de la información, educación y promoció de salud del paciente puede complementar los sistemas de la mejora de la calidad asistencial existentes.

German

Umfangreiche Studien haben die Arzt-Patienten Kommunikation im Gesundheitswesen untersucht und gesundheitspolitische Massnahmen zur Verbesserung der Patientenorientierung sind weit verbreitet. Die Implementierung von Strategien zur Verbesserung der Patientenorientierung auf organisationaler Ebene indes hat weniger Berücksichtigung in Forschung und Praxis gefunden. Vor diesem Hintergrund untersucht die vorliegende Arbeit in wie fern solche Strategien mit bestehenden Qualitätsmanagementsystemen in Europäischen Krankenhäusern assoziiert sind oder durch solche unterstützt werden. Die Ergebnisse der Untersuchung belegen statistisch die Assoziation von Patientenorientierung und Qualitätsmanagement; letztere sind aber nicht hinreichend um die

Patientenorientierung zu gewährleisten. Die Variabilität in der Implementierung von Massnahmen auf Management- und Abteilungsebene legt eher nahe, dass weitere Faktoren die Patientenorientierung unterstützen oder extern regulieren. Praktische Instrumente zur Verbesserung von Massnahmen zur Patienteninformation, Gesundheitserziehung oder Gesundheitsförderung können existierende Qualitätsmanagementsysteme ergänzen um somit die Patientenorientierung zu verbessern.

Preface

The work presented in this thesis was carried out in the context of two projects. The initial idea was conceived during my work at the World Health Organization on the Health Promoting Hospitals Project. The coordination of 700 hospitals in more than 25 countries required a more standardized assessment and evaluation and led to the basis of the work presented here. Endless debates with colleagues at international conference and workshops then addressed the meaning of health promotion and its theoretical foundations. These debates, often pursued with both passion and academic rigour, were intellectually very stimulating, but left me wondering if we were missing something: if a room full of experts needed one day to agree on a simple term, how can we expect health professionals in their busy practice to change their work? Thus, these debates let me think of the need to identify clear arguments for the work I was pursuing, and direct them at professionals and decision-makers in hospital organizations.

But as the work continued, more questions arose: Why are some hospitals doing better? Which factors shape the uptake of health promotion activities by hospitals? How are such activities linked to and facilitated by internal quality improvement? I followed these questions by exploring links between health promotion and quality improvement. The change of my place of work towards the Avedis Donabedian Institute and the participation in the MARQuIS project allowed a more in-depth analysis of the links, both conceptually and empirically. It also led me to embed health promotion in a broader perspective of patient-centredness and reinforced my ambition to make this work comprehensible to those that are eventually planning and delivering such interventions in their daily work.

The work presented in this thesis thus has a conceptual and empirical basis based on which some practical tools were developed. I hope that the former are sufficient in advancing scientific debate on the research questions presented here, and that the latter ones, while not presented in this thesis, support decision-makers to make the hospital a little bit safer, more effective and more pleasant place to be.

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Abbreviations

AHA	American Hospital Association
AHRQ	Agency for Health Care Research and Quality
AMI	Acute myocardial infarction
CI	Confidence Interval
DUQuE	Deepening Our Understanding of Quality Improvement in Europe (EU funded research project)
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
HPH	Health Promoting Hospitals
IHI	Institute for Health Care Improvement
IOM	Institute of Medicine
MARQuIS	Methods of Assessing Response to Quality Improvement Strategies (EU funded research project)
MC	Maturity Classification
NCD	Non-communicable diseases
OECD	Organization for Economic Development and Cooperation
OR	Odds ratio
PRICES-HPH	Retrospective, internationally comparative evaluation study on the International Network of Health Promoting Hospitals and Health Services
SD	Standard deviation
SSP	Scientific support to policy
WHO	World Health Organization

“Patients and families bring an abundance of skills and knowledge to [quality] improvement work. They open our eyes to the real experience of the system. They help us prioritize by telling us what is most important to them. They give us energy and a sense of urgency by telling us how our work affects their lives. And they roll up their sleeves to help make care better for their own families and for everyone else’s.”

Institute for Health Care Improvement, 2009

1. INTRODUCTION

Improving patient-centredness of health care services is one of the six aims of the Institute's of Medicines Health Care Quality Initiative according to which health care should be safe, effective, patient-centred, timely, efficient, and equitable (Institute of Medicine 2001). Patient-centredness is a term that embraces a range of constructs such as privacy, respect, shared decision-making and patient education. This widely used term has received a lot of attention in the scientific literature, in policy debate and at the care provision level (Coulter 2008; IAPO 2007). In fact, depending on professional, clinical or policy context, patient centredness refers to a multitude of definitions, approaches, theories and objectives. The scope of the debate is thus comprehensive and difficult to tackle, and the differences in emphasis at different organizational level involved with the topic – government policy, hospital policy, and clinical practice – do not facilitate implementation of a patient-centred approach. Hence, the main motivation of this work is that, while substantial work has been carried out in this field in particular with regard to clinical settings and professional-patient interaction (Little et al. 2001; Roter 1983; Stewart et al. 2003), research still suggests major shortcomings and perhaps insufficient attention focusing on the role of hospital management in implementing strategies to improve patient-centredness (Groene and Jorgensen 2005; Johnson and Baum 2001; Lewin et al. 2001).

This thesis focuses on the assessment and implementation of strategies to improve patient-centredness strategies at hospital level: In this context, 'patient centredness' is understood as an umbrella term to denote activities of patient's rights, information, education, shared-decision making and assessment of patient perception of hospital care; 'assessment and implementation' deal with identifying current practice and tool development, and 'hospitals' defines and limits the setting under consideration.

In the following sections I start by briefly outlining the challenges for hospital management to adjust to a changing health care environment. A review of these challenges is necessary as they justify the need for a patient-centred approach in health care. In the

subsequent section a brief review is presented of approaches to conceptualize patient centredness in health care which are then summarized in three perspectives relevant for hospital management: normative perspective, health gain perspective and organizational learning perspective.

1.1 Drivers for patient-centred care: why does it matter?

Hospitals, due to the care delivered, the risks of care provided, the costs and the research and teaching function are at the centre of modern health systems (McKee 2002; Rechel 2009). As such they are exposed to a range of demand side pressures like changing patterns of diseases, demographic trends and rising expectations.

First, a main driver for the increased need for patient centredness are the changing patterns of morbidity and rising proportion of complex chronic disorders. Chronic diseases such as ischemic heart disease, cerebrovascular disease, mental illness, diabetes mellitus and cancer are large contributors to the burden of disease and reflect a substantial proportion of the causes of death in the WHO European Region (WHO 2005). Three of ten Europeans suffer from a chronic disease or long-standing health problem (Coulter 2008). Cardiovascular diseases, neuropsychiatric disorders and cancers are responsible for 54% of the burden of disease as measured in disability-adjusted life years and contribute to 74% of deaths in the WHO European Region (WHO 2006). At the same time, according to WHO data, seven common risk factors contribute to the burden of disease: high blood pressure, tobacco, alcohol, high blood cholesterol, overweight, low fruit and vegetable intake, and physical inactivity.

In order to reduce the disease burden and mortality associated with these conditions, in addition to primary prevention strategies, health care services need to address the nature of disease and incorporate secondary and tertiary prevention and health promotion strategies (Florin and Dasham 2000; WHO 1986b, 2006). This entails amplifying the patient's role for two reasons: first, since chronic diseases are often long-lasting or even life-long conditions, the patient needs to be aware of and contribute to its management in the context of his socio-economic position, beliefs, expectations, and

family support. Secondly, in addition to medical management, chronic conditions require informational, educational, prevention and health promotion components to address behavioural changes and support sustainable self-management (Epping-Jordan et al. 2004; McKee and Nolte 2008; Ogden 2000). A great proportion of hospital admissions are already related to treatment and follow up care for chronic diseases and estimates suggest a growing burden of chronic disease (Murray and Lopez 1996; WHO 2008). In contrast, health services are still strongly oriented towards the medical management of the condition and fail short to address the patients' preferences in choosing treatment options and to incorporate informational and educational components in the care plan (Audet et al. 2006; Frampton 2009; Frampton and Charmel 2009; Institute of Medicine 2001).

A *second* demand side factor, intrinsically linked to the first, is the aging of the population and its consequences on the burden of chronic diseases. With increasing age, through accumulated lifetime exposure to risk factors, chronic diseases tend to cluster on individuals, that is people present multi-morbidities and suffer from a range of chronic conditions, such as high blood pressure, diabetes, and high level of blood lipids (WHO 2006). Projections of life expectancy until 2060 based on EUROPOP2008 suggest substantial increases in life expectancy from 15 to 10 years in men and 12 to 4 years in woman, respectively (EC 2009). A typical fourth-stage scenario of epidemiological transition as prevalent in many European and other developed countries foresees a shifting of distribution from degenerative diseases towards older age (Olshansky and Ault 1986; Omran 1971). Whether the additional years of life will result in additional years of health (compression of morbidity) or additional years with functional decline (expansion of morbidity) is unresolved.

A *third* factor, in addition to the epidemiological transition and demographic trends, are the rising individual expectations of patients and citizens, which are directly linked to patient-centredness in health care. Chronically-ill patients today expect to be more strongly involved in decision-making than previously, and receive information in order to improve their self-management of the condition, which they consider a patient right. This and other patients' rights such as privacy, confidentiality and the right to

complain have been addressed at European level for more than a decade (WHO 1986a) and have been summarized in the European Charter on Patients' Rights identifying 14 basic patients' rights (Active Citizen Network 2002).

Patients are becoming better informed through the Internet and other sources, and are more confident and emancipated, acknowledging their rights and demanding better services. Access to the Internet potentially leads to better informed health-related choices, shared-decision making, complementing and augmenting physician information and online support (Wald et al. 2007). A recent literature review demonstrated that the majority of health-related Internet searches are carried out for specific medical conditions, either before the doctor's visit in order to increase understanding of the condition or decide whether professional help is required, or after the doctor's visit in order to reassure or amplify the information received (McMullan 2006). And in a recent survey among 154 patients, 58% reported using the Internet for health information, most of which (46%) made changes to their health behaviour, asked more questions during the visit with the doctor (66%), followed the doctor's advice more closely (54%) and made self-directed dietary changes (54%) (Iverson et al. 2008).

The changing information seeking behaviour impacts on the traditional role patterns in health care. In a European survey conducted among 8119 citizens in Switzerland, the UK, Spain, Sweden, Italy, Slovenia, Germany and Poland, the majority (51%) of respondents thought that decisions about the treatment should be done by doctor and patient together. A total of 5% and 18% of respondents, respectively, thought that the patient alone should decide, or that the patient should decide after consulting his doctor (Coulter and Magee 2003). At the same time, the same survey yielded that the communication with health professionals shows shortcomings. For example, only 55% said their doctor would always listen carefully, would always allow time for questions (54%) and would always give clear explanations (57%).

Nevertheless, rather than strengthening these skills among their patients, reports in the literature and anecdotal evidence suggests that hospitals frequently disempower their patients by coercing them to comply with the routines of hospital organization, which

are often based on professional requirements and not those of the patients, as manifested for example in shift-changes, visiting hours, and hospital design (Frampton and Charmel 2009). Given the shortcomings in meeting demands and expectations of (chronically-ill) patients, improving patient-centredness has been considered a key issue for the health care reform in Europe (Coulter and Magee 2003; WHO 2006).

1.2. Conceptualizing patient-centredness: what does it mean?

The origins of patient-centredness in health care can be traced back to the Hippocratic oath and to the social hygiene movement in the late 19th century (Ackerknecht 1967). However, it was not until the 1950s that the concept of patient-centred care gained importance in medicine and health services research. At that time the excessive focus of medical care on disease processes as compared to illness experience raised a lot of concerns and Balint, drawing on the social hygiene movement and in line with the bio-psycho-social model of Engel (Engel 1977), introduced the concept of patient-centred care, which suggests that people need to be seen in their bio-psychosocial entirety. This was presented as opposing the predominant biomedical model according to which

“patients’ reports of illness are taken to indicate the existence of disease processes. This dictates a clinical method focused on identifying and treating standard disease entities. To this end, the patient’s illness is reduced to a set of signs and symptoms which are investigated and interpreted within a positivist biomedical framework. Accurate diagnosis of the pathology permits selection of appropriate therapy which restores the diseased processes to (or near to) ‘normal’, this curing (or improving) the patient’s illness” (Neighbour 1987).

Since the mid-1960 the concept of patient-centred medicine or patient-centred care has developed substantially, triggered by advocates from both within and outside the medical profession. There is now relatively broad agreement on the need for a patient-centred approach considering patient/citizen expectations and the

implications of the fourth epidemiological transition (late onset of disease, chronic conditions, and importance of lifestyle factors).

Nevertheless, an internationally agreed definition on what constitutes patient centredness does not exist, rather a multitude of slightly different definitions and concepts are used, often interchangeably. In addition, related terms such as patient-activation, patient involvement, shared-decision making, health education and health promotion substantially overlap in their conceptualization. The following table presents some of the most commonly used definitions of patient-centredness (Table 1, next page). Common to these definitions is the focus on constructs such as education and shared knowledge, involvement of family and friends, collaboration and team management, holistic approach to care, respect for patient's needs and wants and free flow/accessibility of information (Chronin 2004).

Conceptualizations of patient-centredness in the survey literature usually refer to a broader understanding not only of the involvement in the decision-making process, rights and support, but also of the wider evaluation by the patient of structural health care characteristics such as cleanliness of the environment, hotel services, waiting times, transport and parking place etc (Arah 2005). These constructs are also reflected in the well-known PICKER dimensions of patient-centred care, which embrace the following:

- respect for patients' values, preferences and expressed needs;
- coordination and integration of care;
- information communication and education;
- physical comfort;
- emotional support and alleviation of fear and anxiety;
- involvement of family and friends; continuity and transition; and
- access to care (Gerteis et al. 1993).

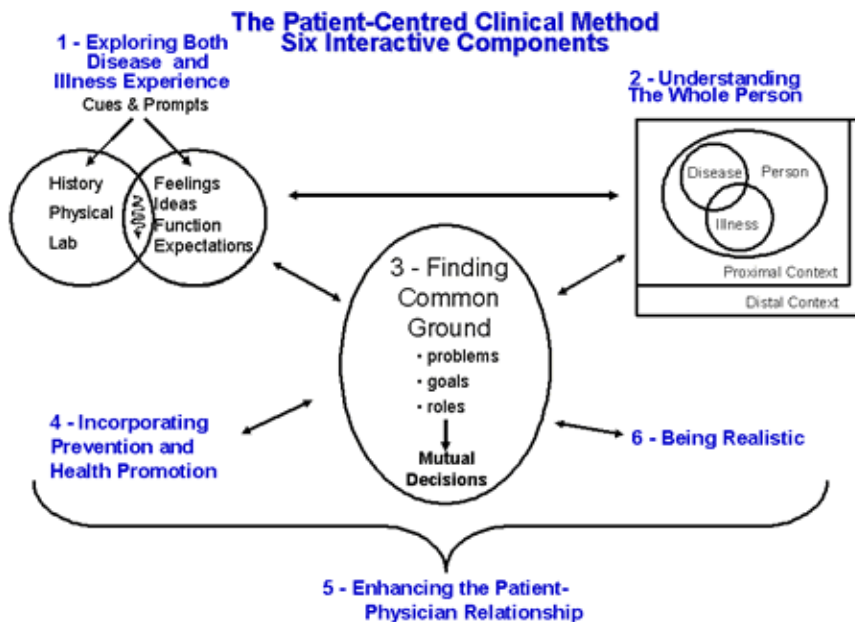
The lack of agreement on defining patient-centredness poses problems for research and practice as also addressed in a systematic review on interventions to improve patient-centredness prepared by the Cochrane Collaboration that highlighted that "*patient-centred care is a widely used phrase but a complex and contested concept*" (Lewin et al. 2001).

Table 1: Definitions on patient-centredness

Definition (author, year)
<i>"Understanding the patient as a unique human-being" (Balint 1969)</i>
<i>"Style of consultation where the doctor uses patient's knowledge and experience to guide interaction" (Long et al. 1976)</i>
<i>"Design of patient care wherein institutional resources and personnel are organized around patients rather than around specialized departments" (PUBMED Medical Subject Heading 1995)</i>
<i>"A collaborative effort consisting of patients, patients' families, friends, the doctors and other health professionals.. achieved through a comprehensive system of patient education where patients and the health care professionals collaborate as a team, share knowledge and work toward the common goals of optimum health and recovery" (Grin 1994)</i>
<i>"Health care that is closely congruent with and responsive to patients' wants, needs, and preferences" (Laine and Davidoff 1996)</i>
<i>"Placing patients at the center of the system of care and developing good services that revolve around them" (Mallet 1996)</i>
<i>"A construct that advocates simplifying the care at the bedside in the acute care setting by focusing on the expected outcomes for the patient rather than the multiplicity of tasks of each department" (Johnston & Cooper 1997)</i>
<i>"This perspective [of adopting a patient's perspective] can be characterized around dimensions such as respect for patient's values, preferences and expressed needs in regard to coordination and integration of care, information, communication and education, physical comfort, emotional support and alleviation of fear and anxiety, involvement of family and friends, transition and continuity" (WHO 2009)</i>
<i>"Care, which a) explores the patients' main reason for the visit, concerns and the need for information; b) seeks an integrated understanding of the patients' world – that is, their whole person, emotional needs, and life issues; c) finds common ground on what the problem is and mutually agrees on management and d) enhance the continuing relationship between the patient and the doctor" (Stewart 2001)</i>
<i>"Health care that establishes a partnership among practitioners, patients, and their families (when appropriate) to ensure that decisions respect patients' wants, needs, and the preferences and that patients have the education and support they need to make decisions and participate in their own care" (Institute of Medicine 2001)</i>
<i>"There are at least three important and distinct domains of patient centredness: communication, partnership, and health promotion" (Little et al. 2001)</i>
<i>Patient-centred care involves "informing and involving patients, eliciting and respecting their preferences, responding quickly, effectively and safely to patients' needs and wishes, ensuring that patients are treated in a signified and supportive manner and delivering well coordinated and integrated care" (Coulter 2006)</i>
<i>"The experience (to the extent the informed, individual patient desires it) of transparency, individualization, recognition, dignity, and choice in all matters, without exception, related to one's person, circumstances, and relationships in health care" (Berwick 2009)</i>

Stewart, motivated by supporting physicians in improving patient-centredness, integrated the different domains of patient-centredness into a conceptual model which addresses the following elements: disease and illness focus, exploring the whole person, finding common ground, incorporating prevention and health promotion, patient-physician relationship and realistic goals (Stewart et al. 2003).

Figure 1: The Patient-Centred Clinical Method



The conceptual model illustrated above integrates some of the main domains of patient-centredness as also identified by other authors, such as holistic care, shared-decision making, integrating disease prevention and health promotion and enhancing the patient-physician relationship, although explicit reference to patients rights are missing. Moreover, according to her model, the concepts of patient-centredness and health promotion are closely intertwined.

Health promotion in relation to patient centredness

Health promotion is broad concept that partly overlaps with the concept of patient-centredness. Health promotion, as defined by WHO as “*the process of enabling people to increase control over,*

and to improve their health” (WHO 1998) can be distinguished from health education, defined in the same source as “*consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, including improving knowledge and developing life skills which are conducive to individual and community health*”. The World Health Organization developed a range of projects based on the settings approach such as cities, hospitals and schools. These led not only to health education interventions but addressed the broader organizational and social environments of settings, acknowledging that lifestyle and health status are mediated by the organizational constraints and opportunities (Naidoo 2000; Rootman et al. 2001).

Disease prevention, on the other hand, is defined more narrowly by WHO as “*measures not only to prevent the occurrence of disease, such as risk factor reduction, but also to arrest its progress and reduce its consequences once established*”. A distinction is often made for three levels of prevention: primary prevention (mostly population based measures aiming at avoiding the development of disease), secondary prevention (aiming at early disease detection and preventing disease progression) and tertiary prevention (aiming at reducing the impact of a disease by restoring function and reducing disease-related complications) (Beaglehole et al. 2001).

According to Little et al and Stewart, both health promotion and disease prevention are integral concepts of patient-centredness (Little et al. 2001; Stewart et al. 2003; Stewart 2001). Patient-centredness cannot be achieved without incorporating health promotion interventions, and health promotion cannot be realized without exploring disease and illness, understanding the whole person and strengthening the patients’ role in decision-making. Given the nature of chronic diseases, and in particular of cardiovascular disease, chronic respiratory disease, cancer and diabetes, health promotion interventions have become in fact an integral component of the clinical intervention (Table 2).

Table 2: Health promotion in clinical settings

Issue	Screening	Health education and counselling	Specific intervention
Stop smoking	Ask if patients smokes	Advise to quit, provide behavioural counselling, follow-up	Assist with nicotine replacement or bupropion
Healthy foods	Taking food history	Fat no more than 30% of total calories	Omega-3 fatty acids, found in fish, low-fat foods, whole grains, fruits and vegetables.
Physical activity	Comprehensive clinical judgement, especially in case of cardiovascular disease	Promote in all age groups	30 minutes 5 days a week to 60-75% of maximum heart rate
Overweight	Body mass index => 30kg/m ²	Weight reduction through diet and physical activity	Consider chemotherapy and surgery only for morbid obesity
Blood pressure	>140/90mmHg	Ensure adherence to therapy, physical exercise, diet, stop smoking	Antihypertensive drug therapy to achieve < 140/90mmHg
Blood lipids	Assess total cardiovascular risk	Strict diet, physical activity, stop smoking	Statin therapy to lower total cholesterol to < 175 mg/, and low density lipoprotein cholesterol to < 100mg/dll
Diabetes	Fasting blood glucose > 110mg/dl, haemoglobin A1c > 6.1%	Lifestyle: exercise, diet and blood glucose control	Insulin, oral hypoglycaemic drugs
Alcohol abuse	Drinking history, alcohol related medical problem, family, legal or employment problems	Interventions based on the severity of the alcohol problem and the patients' readiness to change risk behaviour	Non-directive counselling, referral, laboratory testing, family therapy

Adapted from (De Backer et al. 2003)

1.3. Patient-centred hospital care: the role of management?

According to the Institute of Medicine, patient-centredness is an integral component of health care quality and is gaining importance, given the demand-side changes in the health system (changing patterns of morbidity, demographic trends and rising expectations) (Institute of Medicine 2001). As such, patient-centredness should be improved alongside other dimensions of quality, using well-established quality improvement strategies and methods. In this sense, patient-centredness needs to be addressed not only at micro-level (in the clinical encounter) but also at meso-level (in terms of organizational policies). Thus, management and quality improvement have to integrate the different professional approaches towards patient centred care referred to in the previous sections. This can be summarized from the perspective of hospital management as normative issues, health gain perspective and organizational learning. These three perspectives define also the scope of this thesis.

The normative perspective: an end in itself

The normative perspective of patient-centred care embraces political and ethical arguments, irrespective of their consequence for health outcomes. According to the political argument (patient autonomy) a stronger involvement of patients is justified in the sense of democratic emancipation with regard to stronger actors in providers in health care (Straub 1993). A paternalistic relationship between physician and patient would contradict the normative view of democratic societies as well as the viewpoint of those patients that do no longer want to accept the subordination in health care and that want to participate in those decisions that may impact on their lives or lifestyle (Blum 1997).

The ethical argument is closely associated with the traditional view of medicine whose primary purpose is of humanitarian nature and whose aim is to restore individual health and well-being (Ackerknecht 1967). Since individual health and well-being and success of medical interventions depend on subjective views, the orientation on the demands and wishes of patients should be part of the basis for professional work (Blum 1997; Straub 1993). This

orientation; however, is hindered by central characteristics of hospital systems such as differentiation and mechanization (Glouberman and Mintzberg 2001a, b; Mayntz 1988; Strauss et al. 1985). Differentiation embraces the expansion of medical and other health profession' knowledge leading to a separation of occupational groups, differentiation in functional areas and high division of labour, which are perceived by patients as fragmentation of care delivery and which pose for the organization problems of coordination and handovers. Mechanization refers to the high degree of diagnostic and medical-therapeutic options that dominate the interaction-intensive services and thus creates a tension between the humanistic values of care and the realities of the health care production process (Badura et al. 1993; Plochg et al. 2009).

The ethical argument also embraces the implementation of patients' rights in hospitals to confidentiality, informed consent and information about treatment and care. These basic rights, as demonstrated by a major study commissioned by the Commonwealth fund, are not always fully implemented. Schoen and colleagues assessed the experiences of patients with health problems in Australia, New Zealand, United Kingdom, United States, Canada and Germany, and assessed among other issues the implementation of basic patients rights (whether risks were explained), the patient perceived involvement in the decision-making process and the discharge preparation (being aware of the symptoms to watch for after discharge) (Schoen et al. 2005). According to the study, considerable proportions of patients reported problems with information and education issues, emotional support during hospitalization, lack of respect for patients' preferences and involvement of family and friends. Substantial problems also appear to be related to continuity of care and transitions between levels of care.

In a detailed assessment, Schoen et colleagues demonstrated that more than a third of patients assert that risks of treatments or procedures were not or were only partly explained. In consistency with other studies, about one fifth of the patients claim that they were not involved as much as they wanted in decisions about their care and at discharge, more than one fifth of the patients had not received clear instructions about what symptoms to watch for (Table 3).

Table 3: Hospital experiences among sicker adults

Item	AUS	CAN	NZ	UK	US	GER
Base: hospitalized in past 2 years (N)	351	328	389	711	674	752
Before hospital treatment or procedure, the risks were explained						
Completely	65%	57%	61%	62%	66%	65%
To some extent	10	11	13	14	15	20
Not at all	18	21	17	16	14	12
Hospital staff did everything they could to control your pain						
Always	82	79	76	77	74	81
Sometimes, rarely, or never	17	19	21	21	26	18
Communication failures: reports when doctors or nurses						
Failed to communicate about your care to you	16	13	17	17	17	12
Failed to communication information about your care to you	12	15	20	15	17	17
Experienced either communication failure	22	19	26	22	25	23
Doctors or nurses DID NOT involve you as much as you wanted in decisions about your care	22	27	19	22	16	21
Discharge experiences: when discharged						
Did not receive clear instructions about symptoms to watch for	18	17	14	26	11	23
Did not know whom to contact for questions about treatment	9	12	9	12	8	12
Hospital did not make arrangements for follow up doctor visits	23	30	23	19	27	50
Any poor discharge coordination	36	41	33	37	33	60

Similar results were reported in a cross-European study by Coulter and Jenkinson in their assessment of patients' views on the responsiveness of health systems and health care providers (Coulter and Jenkinson 2005; Jenkinson et al. 2002). The study, carried out in Spain, Switzerland, United Kingdom, Germany, Italy and Poland, assessed whether patients perceived that the doctor listened carefully, whether the doctor gave time for questions and explained in a way the patient could understand, as well as the perceived

involvement according to the wishes of the patient in the decision-making process. The study yielded mostly moderate assessments; however, surprisingly, patients continued to rate the overall communication as good. As with previous studies some variation can be observed between countries; nevertheless, the trends and ratings are remarkably consistent across countries.

In addition to the survey literature, a lot of qualitative research has been carried out on normative notions of patients-centredness, in particular on issues of respect and communication issues (Gerteis et al. 1993; Roter and Larson 2002; Strauss et al. 1985). For example, in a study of physician-patient interaction, an analysis of audio-recordings of the encounter during visits to general internal medicine specialists, physicians listened “to patients concerns for an average of about 18 seconds before interrupting” (Beckman and Frankel 1984). While these results reflect lack of consideration for the patient’s rights to information, these issues are also relevant from the health gain perspective.

The health gain perspective: improving outcomes

In contrast to the above portrayed rationales for patient-centredness through the normative (political and ethical) perspective, the health gain perspective emphasizes the concrete implications of patient-centred care on recovery, health outcomes and patient behavior (Blum 1997). Patient centredness has demonstratively been associated with satisfaction, compliance, recovery, health outcomes and utilization (Institute for Health Care Improvement 2009). The orientation of health care provision towards the needs and expectations of patients is thus an important component of health care quality (Donabedian 1992; Hibbard 2003).

In a landmark study in the US, Elisabeth McGlynn evaluated the quality of care delivered to adults (McGlynn et al. 2003). The study, based on a representative phone survey with subsequent audit of medical files of patients, compared for a broad range of interventions and medical processes the care received to the care that is recommended in gold-standard medical practice guidelines. She found, for example, that history taking was complete in only 43.4% (95% CI 42.4 – 44.3) of the cases and that counselling or education according to guidelines was provided in only 18.3% (95% CI 16.7 – 20.0) of the cases. Another landmark study, the

international adult inpatient survey carried out in Germany, Sweden, Switzerland, the United Kingdom and the United States of America by the Picker Institute (Jenkinson et al. 2002), indicated a significant proportion of problem ratings of patients' inpatient experience with regard to key dimensions of patient centred care, such as information and education, emotional support, coordination of care, and continuity of transition (Table 4).

Table 4: Problem ratings on specific aspects of hospital care

Dimension of care	GER	SWE	CH	UK	US
Information and education	20.4%	23.4%	16.7%	28.7%	25.2%
Coordination of care	17.2	NA	13.1	21.9	21.7
Physical comfort	6.7	4.0	2.6	8.3	10.1
Emotional support	21.9	26.0	14.7	27.1	26.8
Respect for patients' preferences	17.9	21.2	15.6	30.7	19.9
Involvement of family and friends	16.6	14.6	11.5	27.5	19.3
Continuity and transition	40.6	40.2	30.0	45.1	28.4

While these results are of concern from the normative (ethical) perspective along, they are even more relevant from the health gain perspective given the research evidence indicating that increased patient centredness is positively associated health outcomes. For example, patient-centredness is associated with better *compliance* (the willingness of the patient to cooperate based on physicians' recommendations for medication, therapy and behavioural modification) and patient satisfaction (Horne et al. 2005), better *recovery and health outcomes* through increased confidence and trust in the treatment and recovery process, augmentation of tolerance for stress and pain levels, reduced illness-related anxiety and insecurity, and boosted coping potentials (Lazarus 1992, 2000), and *appropriateness of utilization*, especially reduced readmission rates and better seeking of follow up care (Jack et al. 2009).

The richness of the literature on the effect of patient-centredness on health outcomes was summarized by Coulter and colleagues (Coulter and Ellins 2007) who carried out a review of systematic reviews on three topics central to patient-centred care: interventions to improve health literacy, interventions to improve clinical decision-making and interventions to improve self-management of chronic diseases. All reviews were evaluated whether they

contribute to improving knowledge, better experience of care, decreased use of resources and improved health behavior and health status. The majority of reviews yielded positive results, except some reviews on evaluating the impact on health behavior and health status which also yielded negative results, probably partly due to methodological problems and the long-time gap between intervention and outcome measurement (Table 5).

Table 5: Strategies to inform, educate and involve patients

Topic	Total number of reviews found	Effect on patients' knowledge	Effect on patients' experience	Effects on use of health services	Effect on health behaviour and health status
<i>Improving health literacy</i>	25	Reported in 13 reviews: 10 positive, 2 mixed, 1 negative	Reported in 16 reviews: 10 positive, 5 mixed, 1 negative	Reported in 14 reviews: 9 positive, 3 mixed, 2 negative	Reported in 13 reviews: 4 positive, 6 mixed, 3 negative
<i>Improving clinical decision making</i>	22	Reported in 10 reviews: 8 positive, 2 mixed	Reported in 19 reviews: 12 positive, 6 mixed, 1 negative	Reported in 10 reviews: 6 positive, 4 mixed	Reported in 8 reviews: 2 positive, 1 mixed, 5 negative
<i>Improving self-management of chronic diseases</i>	67	Reported in 19 reviews: all positive	Reported in 40 reviews: 24 positive, 11 mixed, 5 negative	Reported in 25 reviews: 14 positive, 9 mixed, 2 negative	Reported in 50 reviews: 39 positive, 15 mixed, 6 negative

The rationales for patient centredness from the normative perspective (political, ethical, patient autonomy) as depicted above may not directly be related to health outcomes, however, the health gain perspective described here is closely aligned with the principle objective of the health care professions. This argument is also postulated in the WHO European Strategy for the Control of Non-Communicable Diseases (WHO 2006) which called for a

“fundamental shift in emphasis within health systems, away from a medical, curative model of health care that might provide only reactive, unplanned and episodic care, towards one more structured for patients with long-term chronic conditions. A more effective systematic approach is needed that matches care to need, in partnership with those with chronic or long-term conditions. Such tailored care would take place within the context of a health-supporting environment that promotes health opportunities”.

The organizational learning perspective: learning from patients

The organizational learning perspective focuses on the data, information and knowledge used to organize structures and processes (Weick 1996). Organizational learning theories have their origin in the shift of developed societies from industrial to service, information and knowledge societies (Bell 1976; Etzioni 1971; Reich 1991). In this type of society, knowledge takes on an equally important role as production factor as capital, terrain and workforce in the industrial society. For organizations this means that products and services result from its knowledge base, which is constantly being revised and expanded. Health care is a good example of the knowledge society since new scientific discoveries result in new treatments which are then recommended in clinical guidelines to which existing work processes need to be adapted. For organizational learning to occur, tacit knowledge (personal, context-specific knowledge that is difficult to be written down or shared) has to be transferred into explicit knowledge (codified, systematic and formal knowledge) (Nonaka and Takeuchi 1995; Polanyi 1967). Interestingly, in hospitals the patients’ knowledge has traditionally been ignored as a “production factor”, ignoring the potential contributions to assessing, improving and implementing work processes. Nevertheless, patients have an “expert-lay knowledge” that is very valuable in order to improve hospital processes and increase health outcomes (Fox 2005; Lorig et al. 2008; Lorig et al. 2001). Moreover, many tools have already been developed to gather the patients’ views which can thus be analyzed for the contribution to organizational learning.

Research suggests that patients can contribute significantly to health care improvements, in particular through their assessment of non-

clinical aspects of care, their assessment of the care environment and their observations and experience with the care process (AHA 2005; Gerteis et al. 1993; Institute for Health Care Improvement 2009). However, this information is not always gathered systematically thus hospitals are ignoring relevant information for improvement projects. For example, while many hospitals nowadays carry out routine surveys on patient satisfaction and patient experience, little is known to what extent hospitals utilize this information for systematic improvement work. Boyer et al show in a study of a large French teaching hospital that most staff (94%) had a positive view of the patient satisfaction surveys carried out and that patients were able to assess the quality of care, in particular its relational, organizational, and environmental dimensions. However, the ward specific results were less known than the overall hospital results (60% vs 76% of respondents) and results were formally discussed and used for quality improvement by only 40% of respondents (Boyer et al. 2006).

There are a number of reasons why patient survey data is not systematically used in quality improvement efforts. Based on qualitative interviews with senior health professionals, Davies and Cleary identified three types of barriers: First, *organizational* barriers, such as competing priorities, lack of supporting values or lack of quality improvement infrastructure; secondly, *professional* barriers, such as scepticism, resistance to change and lack of staff selection, training and support and thirdly, *data* related barriers, such as lack of expertise with survey methods, lack of timely feedback, lack of specificity and discrimination or uncertainty over effective interventions (Davies and Cleary 2005). Notwithstanding these barriers, without continuous organizational learning based on patient views, a systematic implementation of patient-centredness seems unlikely (Pfaff 2004).

1.4. Scope of research and justification

The previous sections identified the main drivers for hospitals to adopt strategies to improve the patient-centredness of their services. On the demand side, these drivers include the increasing burden of chronic diseases, the ageing of the population and rising citizen and patient expectations. Drawing on the work of Stewart, patient-centredness is conceptualized here as aiming at a holistic understanding of the patient's disease and illness experience, striving to involve patients in decision-making according to their wishes, incorporating health promotion interventions where necessary and using data on patient views in order to further improve patient services. This chapter also identified three overarching roles of hospital management in addressing these drivers, which were grouped in the normative, health gain and organizational learning perspective. These perspectives allow linking the implementation of patient-centredness to existing quality improvement efforts in order to ensure that patient-centredness becomes a *system* characteristic (Blum 1997; Pfaff 2004; WHO 2006). This approach can be justified as follows.

Substantial research has been carried out on studying patient-centredness from a theoretical perspective, from a measurement perspective and with regard to professional-patient interaction. The latter includes in particular research at the *micro-level* (the clinical encounter) such as research on patient-health professional communication (Little et al. 2001; Stewart et al. 2003), self-management (Bauman et al. 2003), and adherence and compliance (Horne et al. 2005). Considerable literature also addresses patient-centredness at *macro-level*, i.e. the involvement of patients in public policy (Thompson 2004). However, less research actually addresses the *meso-level*: implementing patient-centredness at organizational (hospital) level. This thesis will focus at this level: the organization's (hospital management role) in implementing patient-centredness. This focus is relevant given that while research has addressed meaning and assessment of patient satisfaction and patient experience, less research has in fact focused on the factors hindering or facilitating a patient-centred organization of care. Moreover, there is a paucity of tools to facilitate patient centredness as a part of the organization's quality improvement system.

While patient-centredness has been acknowledged by the IOM (Institute of Medicine 2001) and the Institute for Health Care Improvement (Institute for Health Care Improvement 2009) as an integral aim and dimension of health care quality, it is often not treated as such. As compared to quality dimensions of patient safety (Longo et al. 2005; Sunol et al. 2009b) or clinical effectiveness (McGlynn et al. 2003), little research has addressed organization's uptake of strategies to improve patient-centredness. Furthermore, existing quality improvement systems do not capitalize on the quality dimension of patient-centredness and in most cases rather emphasize general organizational issues or specific issues such as medication safety. Organizations wanting to strengthen patient-centredness hence have to rely on separate sets of tools and implement patient-centredness in parallel to quality improvement systems. In fact, little is known to what extent existing quality improvement systems are sufficient to implement elements of patient-centredness.

Finally, strategies to improve patient-centredness are often restricted to organizational procedures such as policies, mission statements etc. Research suggests that these policies do not unfold automatically into organizational practice thus limiting implementation efforts (Bart and Tabone 1999; Desmidt and Heene 2007; Forbes and Seena 2006). Given the importance of patient-centred care to address current and future health care challenges, this thesis addresses aims at exploring the links between patient-centredness including health promotion strategies and potential associations with quality improvement systems, which may help accelerating organization's adaptation of strategies to improve patient-centredness.

1.5. Research question and objectives

The overall *research question* pursued in this thesis is the following:

“To what extent are strategies to improve patient centred care associated with and facilitated by quality improvement strategies in European hospitals?”

Specific *objectives* related to this research question will be addressed in the various studies presented in this thesis:

1. *To identify and assess the current implementation of strategies to improve patient centredness in European hospitals.*
2. *To assess whether the implementation of strategies to improve patient-centredness is related to existing hospital quality improvement systems:*
 - 2a. *To assess associations between the implementation of strategies to improve patient-centredness and the development of hospital quality improvement systems.*
 - 2b. *To compare the uptake of health promotion interventions and quality assurance mechanisms in hospitals.*
3. *To develop and validate a tool for the self-assessment of hospitals with regard to the implementation of health promotion activities as a complement to existing quality improvement systems.*
4. *To develop a management tool that allows the integration of health promotion and patient centredness measures in the overall organizations' quality improvement system.*

2. MATERIAL AND METHODS

The studies presented in the following were carried out in the context of two major projects: The EU funded Research Project on “*Methods of Assessing Response to Quality Improvement Strategies (MARQuIS)*” and the Health Promoting Hospitals (HPH) Network, coordinated by World Health Organization.

The *MARQuIS Project* was funded as a scientific support to policies (SSP) activity within the Sixth Framework Programme of the EU, DG Research. It aimed at assessing the value of different quality strategies implemented in European hospitals, providing information on developing quality strategies to improve cross-border care and providing information on cross-border care contracting. Based on the identification of quality improvement strategies in EU countries and specific quality requirements for cross-border care, a field test was performed using a cross-sectional study to assess the uptake and impact of quality improvement strategies. This field test involved data collection in eight European countries Belgium, Czech Republic, France, Ireland, Poland, Spain, the Netherlands, and the UK (Sunol et al. 2009a).

A web-based questionnaire was developed based on the review of quality strategies and specific quality requirements for acute myocardial infarction, acute appendicitis and deliveries. These conditions were chosen to cover the scope of hospital services, including emergency surgical and medical services, and maternal and neonatal services (Lombarts et al. 2009). Questionnaires were translated into five languages using a protocol for forward-backward translation. Hospital recruitment was performed randomly (except in the smaller countries) and based on the following criteria: a minimum of 100 acute care beds, and offering care for at least two out of the three conditions selected for study (acute myocardial infarction, appendicitis and deliveries), ownership status and potential cross-border care provision.

The questionnaire consisted of four sections answered by different respondents within the hospital. The first section addressed quality improvement strategies at hospital-wide level, the remaining sections address quality improvement strategies for the three

conditions assessed in this study. Two transversal quality perspectives were assessed in more depth: patient safety and patient centredness. Subsequent to the cross-sectional self-assessment, an audit was carried out in a sample of participating hospitals to assess reliability of self-assessment and gather additional information on the implementation and impact of quality improvement strategies.

The MARQuIS data was used to address the research question 1 and 2a regarding the implementation of strategies to improve patient-centredness and their association with the quality improvement system. The first article presented in this thesis:

Groene O., Lombarts K, Klazinga N, Alonso J, Thompson A. Is patient-centredness in European hospitals related to existing quality improvement strategies: analysis of a cross-sectional survey (MARQuIS Project). Quality & Safety in Health Care 2009;18;i44-i50)

summarizes the findings based on the cross-sectional survey among 389 European hospital managers and health professionals and assessed the following domains: patients' rights, patient information and empowerment, patient involvement in quality management, learning from patients and patient hotel services at hospital and at ward level. Using binary logistic regression we test the hypothesis that the implementation of strategies to improve patient-centredness is associated with hospital characteristics, including the development of the hospital's quality management system.

The second project in the context of which data collection was performed is the *Health Promoting Hospitals Network* of the World Health Organization. The project goes back to the Ottawa Charter for Health Promotion which stipulated the "reorientation of health services" as one of the five key action areas to make health care better meeting the growing expectations for a new public health movement, proposing that "the role of the health sector must move increasingly in a health promotion direction, beyond its responsibility for providing clinical and curative services." [WHO 1986]. In response to this, WHO launched the Health Promoting Hospitals strategy which aimed at fostering the implementation of health promotion activities and realizing cultural changes towards promoting patient-centred care. In addition, the strategy recognized that hospitals should put stronger attention on working conditions

for staff and take into consideration the community impact of its work.

After a European pilot project with 20 hospitals in 1993, national and regional networks were launched to disseminate and implement the findings. This has grown into a global movement with more than 700 partner hospitals in Australia, Austria, Belgium, Brasil, Bulgaria, Canada, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Japan, Latvia, Lithuania, Northern Ireland, Norway, Poland, Russian Federation, Scotland, Serbia, Singapore, Slovakia, Spain, Sweden, Switzerland, Taiwan, and the USA. Although it is assumed that hospitals participating in the Health Promoting Hospitals project are more oriented towards patient-centredness than other hospitals, so far no systematic evaluation has addressed this hypothesis [Whitehead 2004, Groene 2005, Pelikan 2009]. The lack of systematic evaluation on Health Promoting Hospitals provided the context for research on question 2 to 4.

Research question 2b regarding the differences in the uptake of health promotion and quality assurance mechanisms was studied in:

Polluste K., Alop J., Groene O. Härm T., Merisalu E., Suurorg L. Health Promoting Hospitals Network in Estonia: are they doing differently? Health Promotion International 2007 Dec;22(4):327-36

and describes the uptake of health promotion and quality improvement activities in Estonian hospitals and compares differences in implementation between hospitals belonging to the WHO Health Promoting Hospitals network and hospitals that do not belong to that network. A postal questionnaire survey was conducted among the top managers (chief executive officers) of all Estonian hospitals (n=54). Of those hospitals, 20 were members of the HPH network. The questionnaire was developed on the basis of the statutory regulation and the standards for HPH hospitals (WHO, 2006). To explain the differences in update of health promotion and quality assurance mechanisms between the hospitals, hospitals are divided into two groups: hospitals that had joined the HPH network (HPH hospitals), and those that had not joined the HPH network (non-HPH hospitals), and statistical group comparisons are performed.

The following two papers address research question three regarding the development of a valid and meaningful self-assessment tool for health promotion in hospitals as a complement to existing quality improvement systems. The article:

Groene, O., Jorgensen, S.J., Fugleholm, AM, Moeller, L, Garcia-Barbero, M. Results of a pilot test of standards for health promotion in nine European countries. In: International Journal for Quality Assurance in Health Care 18 (4), 2005, 300-307

describes the process and results of the first standards for health promotion in hospitals. It is based on the following steps recognising the recommendations from the International Society for Quality in Health Care's Alpha Programme: literature reviews, review of existing accreditation standards, identification of domains and standards through expert groups and pilot testing. The standards' 35 criteria were distributed to a convenience sample of 36 hospitals in nine European countries and assessed in terms of feasibility and fulfilment. The next article:

Groene O., Alonso J & Klazinga N. Development and validation of the WHO Self-assessment tool for health promotion in hospitals. [submitted]

builds on the standards for health promotion established previously. It describes the development and testing of a self-assessment tool to facilitate their implementation. We recruited a convenience sample of 38 hospitals from 8 countries to participate in a study to test the tool in practice. Hospitals collected data during a six month period and responded to a questionnaire at the end of the study period. We assess self-reported compliance with the health promotion standards, comprehension and applicability of measurable elements, selection and perceived importance of indicators, and general experience with the self-assessment tool. In order to test the validity of the tool we assess associations of self-reported compliance with hospital characteristics, such as size, ownership, accreditation status and being member of the WHO HPH network.

The final research question regarding the implementation of strategies to improve patient-centredness and health promotion

throughout the hospital units in a health care delivery network will be addressed in article five:

Groene O, Möller J, Schmidt W, Brandt E. The Balanced Scorecard of acute settings: development process, definition of 20 strategic objectives and implementation. International Journal for Quality in Health Care 2009 Aug; 21(4):259-71.

It describes a conceptual approach of integrating health promotion measures into the overall organizations' business plan. Using the Balanced Scorecard, it illustrates how strategic directions on improving patient-centredness and health promotion can be broken down into measurable elements. The article draws on a bundle of qualitative and quantitative methods that were used, including in-depth interviews, standardized organization-wide surveys on organizational values, staff satisfaction and patient experience. Data collection took place in three acute care hospitals in four different locations belonging to a German health care delivery organization. As results, a generic framework for strategy implementation, a strategy map and a Balanced Scorecard incorporating twenty strategic objectives are presented.

The following table gives an overview on the research objectives, and the articles that address each objective (Table 6).

Table 6: Research objectives and articles

	Research objective	Article
1.	<i>To identify and assess the current implementation of strategies to improve patient centredness in European hospitals.</i>	Groene O , Lombarts K, Klazinga N, Alonso J, Thompson A. Is patient-centredness in European hospitals related to existing quality improvement strategies: analysis of a cross-sectional survey (MARQuIS Project). <i>Quality & Safety in Health Care</i> 2009; 18; i44-i50
2a.	<i>To assess associations between the implementation of strategies to improve patient-centredness with organizational factors and the development of hospital quality improvement systems.</i>	Polluste K., Alop J., Groene O . Härm T., Merisalu E., Suurorg L. Health Promoting Hospitals Network in Estonia: are they doing differently? <i>Health Promotion International</i> 2007; 22(4):327-36
2b.	<i>To compare the uptake of health promotion interventions and quality assurance mechanisms in hospitals.</i>	Groene O , Jorgensen SJ, Fugleholm AM, Moeller L, Garcia-Barbero M. Results of a pilot test of standards for health promotion in nine European countries. In: <i>International Journal for Quality Assurance in Health Care</i> 18 (4), 2005, 300-307
3.	<i>To develop and validate a tool for the self-assessment of hospitals with regard to the implementation of health promotion activities as a complement to existing quality improvement systems.</i>	Groene O , Alonso J & Klazinga N. Development and validation of the WHO Self-assessment tool for health promotion in hospitals [under review]
4.	<i>To develop a management tool that allows the integration of health promotion and patient centredness measures in the overall organizations' quality improvement system.</i>	Groene O , Möller J, Schmidt W, Brandt E. The Balanced Scorecard of acute settings: development process, definition of 20 strategic objectives and implementation. <i>International Journal for Quality in Health Care</i> 2009 Aug; 21(4):259-71.

3. RESULTS

3.1. Patient-centredness in European hospitals

Groene O, Lombarts MJ, Klazinga N, Alonso J, Thompson A, Suñol R.

[Is patient-centredness in European hospitals related to existing quality improvement strategies? Analysis of a cross-sectional survey \(MARQuIS study\).](#)

Qual Saf Health Care. 2009 Feb;18 Suppl 1:i44-50.

Avedis Donabedian University Institute, Autonomous University of Barcelona, CIBER Epidemiology and Public Health (CIBERESP), Barcelona, Spain. ogroene@fadq.org

BACKGROUND: There is growing recognition of patients' contributions to setting objectives for their own care, improving health outcomes and evaluating care. **OBJECTIVE:** To quantify the extent to which European hospitals have implemented strategies to promote a patient-centred approach, and to assess whether these strategies are associated with hospital characteristics and the development of the hospital's quality improvement system. **DESIGN:** Cross-sectional survey of 351 European hospital managers and professionals. **MAIN OUTCOME MEASURES:** Patients' rights, patient information and empowerment, patient involvement in quality management, learning from patients, and patient hotel services at the hospital and ward level were assessed. The hypothesis that the implementation of strategies to improve patient-centredness is associated with hospital characteristics, including maturity of the hospital's quality management system, was tested using binary logistic regression. **RESULTS:** In general, hospitals reported high implementation of policies for patients' rights (85.5%) and informed consent (93%), whereas strategies to involve patients (71%) and learn from their experience (66%) were less frequently implemented. For 13 out of 18 hospital strategies, institutions with a more developed quality improvement system consistently reported better results (percentage differences within maturity classification ranged from 12.4% to 46.6%). The strength of association between implementation of patient-centredness strategies and the quality improvement system, however, seemed lower at the ward than at the hospital level. Some associations (OR 2.1 to 5.1) disappeared or were weaker after adjustment for potential confounding variables (OR 2.2 to 3.7). **CONCLUSIONS:** Although quality improvement systems seem to be effective with regard to the implementation of selected patient-centredness strategies, they seem to be insufficient to ensure widespread implementation of patient-centredness throughout the organisation.

PMID: 19188461 [PubMed - indexed for MEDLINE]

3.2. Health Promoting Hospitals in Estonia

Pölluste K, Alop J, Groene O, Härm T, Merisalu E, Suurorg L.

[Health-promoting hospitals in Estonia: what are they doing differently?](#)

Health Promot Int. 2007 Dec;22(4):327-36.

Department of Internal Medicine, University of Tartu, L. Puusepa 6, Tartu 51014, Estonia. kaja.polluste@ut.ee

The health-promoting hospitals (HPH) movement in Estonia was initiated in 1999. This study aimed to compare the implementation of health-promoting and quality-related activities in HPH and those which have not joined the HPH network (non-HPH). In the beginning of 2005, a postal survey was conducted among the top managers of 54 Estonian hospitals. The questionnaire was based on the WHO standards for HPH and on the set of the national quality assurance (QA) requirements for health services. The study demonstrated some significant differences in the uptake of health promotion and QA activities between HPH and non-HPH. For example, regular patient satisfaction studies were conducted in 83% of HPH and 46% of non-HPH ($P < 0.03$) and 65% of HPH and 46% of non-HPH cooperated with various patient organizations ($P < 0.03$). Systems for reporting and analysis of complications were implemented in 71% of HPH and 33% of non-HPH ($P < 0.03$); also, the implementation of various guidelines was more developed in HPH. All HPH have carried out a risk analysis on the workplace and staff job satisfaction studies were conducted in 89% of HPH and 41% non-HPH ($P < 0.05$). This study indicates that the concepts of HPH and QA are closely related. Making progress in health promotion is accompanied with QA and vice versa. Implementation of healthpromoting activities in hospitals will promote the well-being and health of patients and hospital staff, and creates a supportive environment to provide safe and high-quality health services.

PMID: 17986485 [PubMed - indexed for MEDLINE]

3.3. Results of a pilot test of standards

Groene O, Jorgensen SJ, Fugleholm AM, Møller L, Garcia-Barbero M.

[Standards for health promotion in hospitals: development and pilot test in nine European countries.](#)

Int J Health Care Qual Assur Inc Leadersh Health Serv. 2005;18(4-5):300-7.

WHO European Office for Integrated Health Care Services, Barcelona, Spain.

PURPOSE: To describe the process of development of standards for health promotion in hospitals, including pilot study, method and results.

DESIGN/METHODOLOGY/APPROACH: A set of standards for health promotion in hospitals was developed by a task force of the International Network of Health Promoting Hospitals, following the recommendations of the ALPHA programme. The standards were pilot tested and assessed qualitatively and quantitatively in 36 hospitals in nine European countries. Subsequently, standards were reviewed by representatives from the piloting hospitals. A selfassessment tool was produced to evaluate whether hospital managers and professionals perceive the standards to be relevant and applicable and whether they are currently met. Participants provided comments from their national health system perspective and rated the standards. **FINDINGS:** General comments and specific comments were provided for each standard regarding its relevance, applicability and current level of compliance. A total of 35 standards' criteria were assessed and 86 per cent (30/35) were rated > 80 per cent relevant and applicable, while 14 per cent (5/35) were rated > 60 per cent relevant. The degree of current fulfilment of the criteria, however, was low.

RESEARCH LIMITATIONS/IMPLICATIONS: While the standards should be applicable to other regions (South America, Africa, Asia) additional testing may be required to adapt them to prevailing health care challenges. **PRACTICAL IMPLICATIONS:** The pilot test revealed that the standards are applicable and were considered relevant, and showed that current compliance is low. It also showed that there is a clear need to facilitate continuous monitoring and improvement of compliance. The standards are regarded as being public domain, are applicable to other organisations and can be incorporated into existing quality systems. **ORIGINALITY/VALUE:** Standards are a common tool for quality assurance in health care, but so far have considered health promotion activities only partly, if at all. The standards for health promotion in hospitals developed by WHO fill this important gap.

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3.4. Self-assessment tool development and validation

Groene O, Alonso J, Klazinga N. Development and testing of the WHO self-assessment tool for health promotion in hospitals: results of a study in 38 hospitals in 8 countries [under review]

Background:

Despite a strong tradition in the literature on the patient information, education and involvement, there are few practical tools available to support hospitals in implementing such strategies. Based on the WHO Health Promoting Hospitals (HPH) Strategy we developed a self-assessment tool for health promotion in hospitals.

Methods:

We describe the development process and validity testing of the tool in a convenience sample of 38 hospitals from 8 countries. We computed an overall compliance score, assessed internal consistency and tested associations of self-reported compliance with hospital characteristics, such as accreditation status and being member of the WHO HPH network.

Results:

The mean compliance with the tool, which assigns a possible score from 0 to 136, was 71.8 (SD 25.0). Floor effects were observed for standard 4 and 5 only (10.5%; 15.8%), but not for the overall score. Cronbach's alpha for the five scales in the tool ranged from 0.77 to 0.88. Being accredited or being a member of the WHO network was significantly associated with higher overall compliance (score 86.9 vs 64.2, $p=0.012$ and 79.3 vs 51.9, $p=0.003$, respectively).

Conclusions:

We developed and established preliminary validity of a self-assessment tool for health promotion in hospitals. The revised has been translated into Chinese, Estonian, French, German, Italian, Slovak and Spanish. Hospitals and accrediting organizations interested in strengthening the health promotion component in their quality management systems are invited to use the tool; however, further research on its validity is strongly warranted if the tool is to be used for other purposes than self-assessment.

Development and testing of the WHO self-assessment tool for health promotion in hospitals: results of a study in 38 hospitals in 8 countries

Authors:

Groene, Oliver: Programme Manager Quality of Health Systems & Services, WHO Regional Office for Europe, Copenhagen, Denmark; Director of Research & Education, Avedis Donabedian Research Institute, Autonomous University of Barcelona, Spain; CIBER en Epidemiología y Salud Pública (CIBERESP), Spain

Alonso, Jordi: Head, Health Services Research Unit (IMIM-Hospital del Mar) CIBER en Epidemiología y Salud Pública (CIBERESP), Spain

Klazinga, Niek: Professor of Social Medicine, University of Amsterdam, The Netherlands

Corresponding author:

Oliver Groene
Director of Research & Education

Avedis Donabedian Research Institute
Autonomous University of Barcelona
C/ Provenza, 293, pral.
08037 Barcelona
Tel: +34 932 076 608
Fax: +34 934 593 864
email: ogroene@fadq.org

Keywords:

Patient involvement, health promotion, WHO, standards

Abstract

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Background

Hospitals provide an important setting for health promotion interventions. Although their primary role is diagnosis, treatment and care and other settings such as primary care or community settings are more easily associated with health promotion interventions, hospitals offer an advantage over other settings: due to their illness experience patients and their families are more sensitive to accepting advice and counselling or contemplating behavioural change while in the hospital (Florin & Basham, 2000; Pelikan et al, 2001). Health promotion is often defined as the *“process of enabling people to increase control over, and to improve their health”* and represents actions not only directed at skills and capabilities of individuals, but also towards the context in which actions take place (WHO, 1998). Applied to the hospital setting this implies according to the WHO definition *“going beyond providing high quality comprehensive medical and nursing services and developing a corporate identity that embraces participatory roles for patients and staff, seeks active links to cooperate with the community, and creates supportive environments for sustainable ecological development”* (WHO, 2008).

This is a broad and ambitious mission to which the more than 700 hospitals participating in the WHO Health Promoting Hospitals (HPH) Network commit. The network conducts projects in line with the WHO mission, however, the majority of activities could be more appropriately characterized by a health education approach involving communication and individual learning in order to improve knowledge on a particular disease or condition, improving health literacy and/or developing life skills related to health behaviour (Groene and Jorgensen, 2005). There is indeed a substantial evidence-base underlining the effectiveness of patient information, education and health promotion services in hospitals (Coulter and Ellins, 2007; Moller et al 2002; Tonnesen et al 2005; Tonnesen et al 1999, McPherson et al 2001, Boychuk et al 2006). Despite the growing evidence-base; however, patients frequently do not receive important information on their condition and options for self-management or receive timely lifestyle counselling (Schoen et al 2005), partly because hospitals have adapted the implementation of health promotion/education services only slowly or in a non-systematic manner and/or have not integrated it into their quality management (Johnson and Baum, 2001; Hibbard 2003).

In a previous study we reported on the development of standards for health promotion in hospitals (Groene et al 2005). The rationale for that study was the lack of consideration of health promotion issues in common quality assessment systems, as well as the lack of explicit criteria for the assessment of hospitals that form part of the growing Health Promoting Hospitals Network. Following the recommendations of the ALPHA programme from the International Society for Quality in Health Care, a literature review on existing standards and evidence for health promotion in hospitals was carried out on the basis of which a first draft of standards was prepared. An expert panel reviewed the standards and recommended their pilot testing. Subsequent to the pilot test, the standards were revised and their wider use was recommended. The standards take into consideration the health potential of individuals and stress the importance of activating them through information, motivation, counselling, training or other activities to realize their health potential. Since information, education and advice only result in sustained behavioural change if supported by prevailing norms, rules and cultures, health promotion interventions in organizations have to address these underlying factors. Centred on the philosophy of the Health Promoting Hospitals network and the evidence-base for health promotion activities in hospitals, the standards not only address patient care but also health of staff, links of the hospital to the community and organizational development.

Based on these standards we developed a self-assessment tool to facilitate the implementation of health promotion services in hospitals (WHO, 2004a). In order to establish the robustness of the

tool we assessed floor and ceiling effects in self-reported compliance and assessed ratings of measurable elements in terms of comprehension, applicability and importance. We further assessed internal consistency and tested construct validity by assessing associations between self-reported compliance and ratings with hospital characteristics.

Methods

Description of the self-assessment tool

The standards for health promotion in hospitals address five domains (WHO, 2004b): 1. management policy, 2. patient assessment, 3. patient information and intervention, 4. promoting a healthy workplace and 5. improving continuity and cooperation, according to the WHO definition of Health Promoting Hospitals. Since we aimed at identifying evidence-based health promotion issues which could be realistically integrated with existing hospital quality management systems, we excluded the broader notions associated with health promotion such as community involvement and environmental issues (WHO, 2002). An expert panel was set up to develop measurable elements and indicators for the sub-standards against which compliance can be assessed as fully compliant, partly compliant or non-compliant. While different theoretical schools behind the use of the terms health promotion and health education are acknowledged, the self-assessment tool defines health promotion activities to cover both concrete actions (such as assessing patients for risk factors and providing information) and complex interventions (such as empowering the patient to play an active role in the management of his/her condition). Table 1 gives an overview on the content and structure of the tool (Table 1, next page).

Study participants and settings

Participants for the pilot test were selected by convenience sample through national and regional coordinators of the HPH Network. Hospitals being member of the network commit to the principles and develop health promotion activities as expressed in WHO recommendations. In order to compare the experience and assess the validity of the tool, participants with a history of HPH memberships and hospitals without previous exposure to the WHO network were included. Overall, 38 hospitals from 8 countries (Czech Republic, Germany, Ireland, Italy, Lithuania, Slovenia, Sweden, and South Africa) joined the study.

Data collection

We used a cross-sectional survey of representatives of the participating hospitals that responded to two instruments:

First, participants were given six months time in the first half of 2005 to establish a multidisciplinary working group, gather data based on management audit, audit of patient records and using routine data from the hospital information systems to fill in the self-assessment forms for health promotion in hospitals. Secondly, by the end of the six month period, an evaluation questionnaire was sent to collect data on hospital characteristics, compliance, perception of comprehensibility, applicability and importance of measurable elements, the burden of data collection and the general experience with the self-assessment process.

Members of the multidisciplinary steering group in charge for data collection in each hospital jointly evaluated both self-assessment forms and evaluation questionnaires on the basis of the data collected. Instructions were provided to ensure consensus in responding to the instruments, recommending setting up a multidisciplinary group including a senior nurse, senior doctor, junior doctor, manager, representative of human resources, member of allied professions.

TABLE 1: Domains of the self-assessment tool

Domain*	Description of the domain	Number of:		
		Sub-standards**	Measurable elements [§]	Indicators ^{&}
1. Management policy	The organizations' commitment to implement patient involvement and health promotion as part of the overall organizations' quality improvement system (includes for example identifying responsibilities, resources and monitoring).	6	17	3
2. Patient assessment	Obligations of health professionals to systematically assess information and health promotion needs in partnership with the patient (includes for example using guidelines to assess needs and document them in the patients' record).	5	8	3
3. Patient information and intervention	Informing patients about planned activities, empowering patients for an active partnership and facilitating the integration of health promotion activities in patient pathways (includes for example providing general and disease specific information in a language the patient can understand).	5	8	3
4. Promoting a healthy workplace	Establishing conditions for the development of the hospital as a healthy workplace and environment (includes for example including health promotion issues in the induction programme for new staff and maintain staff awareness on health issues through regular surveys).	4	16	9
5. Continuity and cooperation	The organization's planned approach to collaborate with other health service providers and other institutions and sectors , including patients' handover (includes for example improving the discharge process by providing patients with understandable information, and inform other health and social care providers about the discharge and follow up actions).	4	19	4
	Total	24	68	21

* 'Domain' denotes the five main areas of assessment which are formulated as generic standards

** 'Substandards' denote, within each domain, the specific thematic areas that need to be assessed

[§] 'Measurable elements' are those items against which actual performance is assessed

[&] 'Indicators' refer to measures locally available and relevant to complement to assessment against measurable elements. Due to different local contexts and definitions, these measures were not reported for analysis.

Data analysis

We computed an overall compliance score by rating full non-compliance (0 points), partial compliance (1 point) and full compliance (2 points) and calculated the overall and domain-specific total scores as the sum across the items in the domain. We assessed distribution for floor

and ceiling effects as the proportion of responses in the lowest and highest score. For each of the 68 measurable elements, we assessed the perceived comprehensibility, applicability and importance using a five-point Likert Scale and used this information to identify possible improvements in structuring, wording and exclusion of measurable elements. We defined a priori that, in order to keep the measurable element, at least 75% of respondents should fully agree or agree on comprehension, applicability and importance.

For each of the scales we tested internal consistency using Cronbach's alpha. In order to assess construct validity we tested associations between overall compliance, rating of measurable elements and hospital characteristics using t-tests. These characteristics were chosen as they are likely to be related to compliance:

- members of the WHO network, due to their engagement and the commitment to meeting WHO criteria, are expected to perform better on the standards than other hospitals;
- accredited hospitals have gone through similar assessment processes before in accreditation surveys and are likely to have benefited from some degree of overlap with standards in existing accreditation systems,
- non-for profit hospitals, in particular hospitals owned by religious groups, have been described in the literature as being more oriented towards holistic patient care and community orientation and (Alexander et al, 2006)
- bigger hospitals benefit from economies of scale in the development and implementation of health promotion structures and activities.

Finally, we evaluated the participants' general experience with the self-assessment process.

Results

Overall, 38 hospitals from 8 countries (Sweden, Czech Republic, Germany, Ireland, Italy, Slovenia, Lithuania and South Africa) completed the self-assessment process and returned the evaluation questionnaire. Table 2 (next page) shows the distribution of hospital characteristics.

Resources applied for the self-assessment varied substantially, depending on the number of departments involved (median 3), the number of scheduled meetings of the working group (median 6) and whether assessment of measurable elements related to patients records could be retrieved electronically or via audit (median 50).

We assessed the level of compliance with the measurable elements of the standards as reported by the hospitals participating in the study (Table 3, next page). Distribution of responses and floor and ceiling distributions are added to assess the response characteristics. In terms of the theoretical range and observed mean compliance, we observe a good distribution of compliance with the five standards in the sense that they appear to be neither too simple nor too difficult to achieve. For standards 4 and 5; however, we observe a minor floor effect, i.e. hospitals appear to perform worse on these standards.

TABLE 2: Characteristics of participating hospitals, and resource use

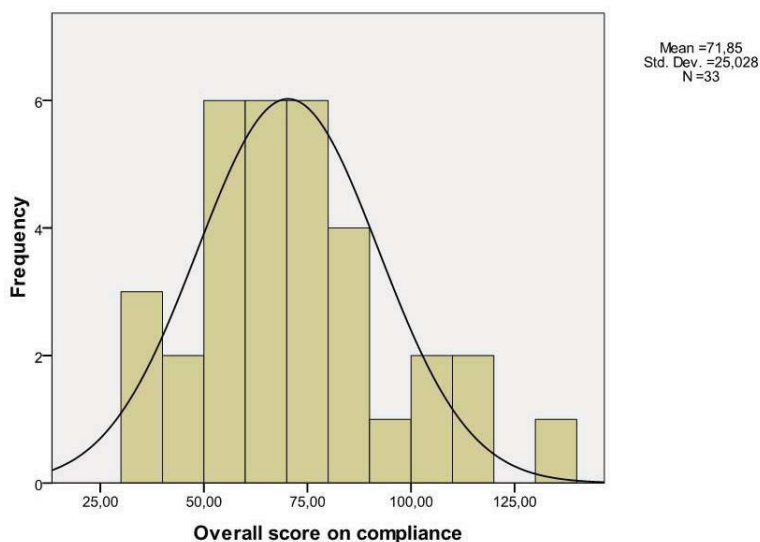
Characteristics of participating hospitals		
	Frequency (%)	Total (%)
HPH Membership		38 (100%)
<i>HPH</i>	28 (73.3%)	
<i>Non-HPH</i>	10 (26.3%)	
Status		38 (100%)
<i>Public</i>	32 (84.2%)	
<i>Private not for profit</i>	4 (10.5%)	
<i>For profit</i>	2 (5.3%)	
Type of hospital		38 (100%)
<i>Community hospital</i>	21 (55.3%)	
<i>Large general with teaching</i>	7 (18.4%)	
<i>University hospital</i>	4 (10.5%)	
<i>Specialized hospital</i>	6 (15.8%)	
Catchment area		38 (100%)
<i>Rural</i>	3 (7.9%)	
<i>Urban</i>	8 (21.1%)	
<i>Mixed</i>	27 (71.1%)	
Number of beds		38 (100%)
< 200	5 (13.2%)	
200-399	11 (28.9%)	
400-599	9 (23.7%)	
> 599	13 (34.2%)	
Accredited		37 (97.4%)
Yes	14 (36.8%)	
No	23 (60.5%)	

TABLE 3: Compliance with standards: distribution, floor and ceiling effects

	Management policy	Patient assessment	Patient information & intervention	Promoting a healthy workplace	Continuity & cooperation	Overall compliance
Theoretical range in the compliance score	0-34	0-16	0-16	0-32	0-38	0-136
Hospitals (%) with lowest score	1 (2.6%)	0	3 (7.9%)	4 (10.5%)	6 (15.8%)	0
Hospitals (%) with highest score	1 (2.6%)	1 (2.6%)	2 (5.3%)	1 (2.6%)	1 (2.6)	1 (2.6%)
Skewness	0.003	-0.212	-0.0467	-0.708	-0.299	0.597
Kurtosis	-0.487	-0.893	-0.152	0.007	-0.702	0.243
Observed mean (SD) compliance score	16.8 (8.2)	10.4 (3.3)	9.2 (4.4)	17.5 (8.7)	18.0 (11.4)	71.9 (25.0)

Figure 1 (next page) shows the distribution for the overall compliance score, indicating that most hospitals are able to meet some of the standards and only a few hospitals fail to comply with all or are fully compliant, respectively. Most hospitals complied only partly with the health promotion standards indicating significant development potential.

FIGURE 1: Distribution of overall compliance score



We assessed measurable elements for comprehension, applicability and importance. We identified 9 (13%) measurable elements, which appeared to be insufficiently clear in their description, 26 (38%) that were assessed as less applicable to the hospitals' context and 7 (10%) that were rated as less important. These ratings were not independent, i.e. measurable elements that were not clearly understood were also rated low in terms of applicability and importance. Two measurable elements (3%) received low ratings in all three categories: 'carrying out an annual staff survey to develop and maintain staff awareness on health issues' and 'have a written rationale for the selection of partners for community related health and social partnerships'. The ratings of hospitals on the comprehension, applicability and importance were used during the revision of the self-assessment tool to improve wording and reduce number of measurable elements.

We tested internal consistency of the five scales used in the instruments using Cronbach's Alpha (Table 4). The analysis reveals a high internal consistency ranging from 0.77 (for patient assessment) to 0.88 (for continuity and cooperation), even if some of the Cronbach's alpha correlations may be inflated by the restricted range of response (0 to 2) to each item.

Table 4: Internal consistency of the measurement scales related to the five standards

Standard	Items	Cronbach's alpha
Management policy	17	0.879
Patient assessment	8	0.766
Patient information & intervention	8	0.808
Promoting a healthy workplace	16	0.811
Continuity and cooperation	19	0.881

For the self-assessment tool to be valid we hypothesized that hospitals being members of the WHO network and accredited hospitals should report the highest compliance with the health promotion standards and should report the highest level of applicability and perceived importance of measurable elements. We further hypothesized that HPH member hospitals were able to use the tool for specific quality improvement actions since this has been a considerable thematic focus in the WHO Health Promotion Hospitals Network. The results of testing these hypotheses are summarized in Table 5 (Table 5, next page).

Hospital type was not significantly associated with either compliance or assessment of measurable elements. Bigger hospitals (more than 400 beds) as compared to smaller hospitals gave higher ratings regarding the applicability (145.9 vs. 100.7; $p=0.008$) and importance (115.9 vs. 87.3; $p=0.022$) of measurable elements. Moreover, we detected a statistically significant association between the variables member of the WHO HPH network (79.3 vs. 51.9; $p=0.003$) and accreditation (86.9 vs. 64.2; $p=0.012$), respectively, and reported compliance. We found similar results for the assessment of measurable elements, which are not associated with any of the hospital characteristics. Members of the WHO network and accredited hospitals appear to perform better on the self-reported compliance and rate applicability and importance of the measurable elements higher.

TABLE 5 ABOUT HERE: Hospital characteristics, compliance and ratings

Hospital characteristics	Mean(SD) self-reported level of compliance with standards*	Mean (SD) assessment of measurable elements**		Mean (SD) identification of quality improvement potentials**
		Applicability	Importance	
Hospital type				
Community hospital	73.8 (22.2)	120.6 (39.3)	100.1 (29.8)	1.71 (0.64)
Teaching, specialized or university hospital	69.2 (29.1)	138.7 (57.6)	109.1 (39.5)	1.59 (0.51)
	P = 0.612	P=0.315	P=0.499	P=0.515
Hospital size				
< 400 beds	74.7 (28.0)	100.7 (32.3)	87.3 (27.7)	1.69 (0.60)
> 400 beds	69.5 (22.8)	145.9 (47.9)	115.9 (32.9)	1.64 (0.58)
	p = 0.563	P=0.008	P=0.022	P=0.793
Accredited				
No	64.2 (15.9)	120.9 (47.7)	97.1 (33.3)	1.57 (0.66)
Yes	86.9 (33.1)	137.8 (43.9)	109.1 (32.7)	1.79 (0.43)
	p = 0.012	0.443	0.364	P=0.274
Member of the HPH network				
No	51.9 (17.5)	85.3 (21.0)	82.0 (13.7)	1.1 (0.32)
Yes	79.3 (23.5)	140.8 (45.7)	110.9 (35.2)	1.86 (0.53)
	p = 0.003	P=0.005	P=0.046	P<0.001

* based on self-assessment of compliance with standards

** based on evaluation questionnaire

Discussion

We developed and evaluated a self-assessment tool for health promotion in hospitals. The assessment of internal consistency, floor and ceiling effects and construct validity suggests robustness of the tool. The self-assessment tool may be very useful for hospital managers or accreditation agencies that want to assess and/or improve health promotion activities in hospitals.

However, there are also a number of limitations to the study which deserve discussion. Hospitals participating in this study were selected on a convenience basis (without information available on non-responders) and the sample size does not allow generalization of the findings. Data analysed in this study was reported by hospitals based on their self-assessment, which may be biased given strong incentives for either positive or negative results (Bose et al, 2001). However, since we emphasised for this project that we will not report on the performance of individual hospitals and that the main aim is to identify new potentials for internal quality improvement, we believe that the data does not suffer from underreporting; given the convenience sample some hospitals may have rather taken a more self-critical approach (Edmondson, 1996). Since the level of analysis is the hospital, a substantial effort is required to gather a large number of organizations in order to carry out additional testing of the tool. Such testing, which we were not able to perform on the basis of the data currently available, should include additional tests for reliability (such as test-retest or inter-rater reliability) or validity (such as concurrent or predictive validity). Given the widespread use of the tool, such data may become available in the future.

Nevertheless, the analysis to assess construct validity confirmed that membership in the WHO network and accreditation status, as previously hypothesized, are significantly associated with reported compliance and assessment of comprehension, applicability and importance of measurable elements and we observed considerable differences in mean scores. As for accreditation, it is likely that information systems and procedures put in place during the accreditation process facilitate assessment against the health promotion standards. In addition, some of the health promotion standards are related to patients' rights, patient information and patient education which are partly addressed by some accreditation systems. As for HPH membership status, a higher level of compliance may reflect that the hospital has actually implemented the issues reflected in the standards to a higher extent (some hospitals have been members for many years). For the same reason, HPH member hospitals may rate the measurable elements higher in terms of applicability and importance. Bigger hospitals may have better possibilities to implement the health promotion standards than smaller hospitals, in particular when it comes to the provision of a wide range of health promotion services and activities, for which economies of scale exist. The higher assessment of HPH member hospitals on the identification of quality improvement potentials is likely to reflect the previous exposure to this topic in the HPH network.

Most of the hospitals were able to meet some of the standards and only a few achieved the highest possible scores. We observed a higher agreement on comprehension, applicability and importance and compliance with the first three standards (management policy, patient assessment and patient information & intervention) while agreement and compliance with the remaining standards (promoting a healthy workplace and continuity & cooperation) were lower. This could be explained by the phrasing of some of the measurable elements, which might have been too specific to some national/regional contexts. In the revised self-assessment tool, these measurable elements were eliminated or reworded. This led to a reduction of items from initially 68 items to 40 items in the final version. A decision to remove an item was based on assessing the hospitals' responses to the criteria comprehension, applicability and importance, which were evaluated by a panel.

The revised tool (WHO, 2006) has been translated into Chinese, Estonian, German, French, Italian, Slovak and Spanish and further translations are underway. Some country networks of the WHO Health Promoting Hospitals Network have decided to make a self-assessment against the standards and entry requirements for joining the network (e.g. Germany), while other countries are in the process of integrating the standards into their national hospital accreditation systems (e.g. Ireland and Denmark).

As there is currently little information on the actual activities of the hospitals in the HPH network (Whitehead, 2004), the self-assessment tool could be used for research in this area, such as gathering data on current health promotion strategies or identifying the factors affecting their implementation. In view of increasing accountability of WHO in documenting resource use and impact of its activities, such a research agenda seems to be highly justified. Further research should address the limitations of the validation study and aim at improving reliability and validity in a more representative sample of hospitals.

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3.5. Developing the *Balanced Scorecard* of acute settings

Groene O, Brandt E, Schmidt W, Moeller J.

[The Balanced Scorecard of acute settings: development process, definition of 20 strategic objectives and implementation.](#)

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Avedis Donabedian Research Institute, Autonomous University of Barcelona, CIBER Epidemiology and Public Health, Barcelona, Spain. ogroene@fadq.org

CONTEXT: Strategy development and implementation in acute care settings is often restricted by competing challenges, the pace of policy reform and the existence of parallel hierarchies. OBJECTIVE: To describe a generic approach to strategy development, illustrate the use of the Balanced Scorecard as a tool to facilitate strategy implementation and demonstrate how to break down strategic goals into measurable elements. DESIGN: Multi-method approach using three different conceptual models: Health Promoting Hospitals Standards and Strategies, the European Foundation for Quality Management (EFQM) Model and the Balanced Scorecard. A bundle of qualitative and quantitative methods were used including in-depth interviews, standardized organization-wide surveys on organizational values, staff satisfaction and patient experience. SETTING: Three acute care hospitals in four different locations belonging to a German holding group. PARTICIPANTS: Chief executive officer, senior medical officers, working group leaders and hospital staff. INTERVENTION(S): Development and implementation of the Balanced Scorecard. MAIN OUTCOME MEASURE(S): Twenty strategic objectives with corresponding Balanced Scorecard measures. RESULTS: A stepped approach from strategy development to implementation is presented to identify key themes for strategy development, drafting a strategy map and developing strategic objectives and measures. CONCLUSIONS: The Balanced Scorecard, in combination with the EFQM model, is a useful tool to guide strategy development and implementation in health care organizations. As for other quality improvement and management tools not specifically developed for health care organizations, some adaptations are required to improve acceptability among professionals. The step-wise approach of strategy development and implementation presented here may support similar processes in comparable organizations.

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4. DISCUSSION

It was the aim of this thesis to study the implementation of patient-centred care at hospital level and assess related factors, in particular the development of the hospital's quality management system. To this end, a baseline assessment of patient-centred care in a sample of European hospitals was carried out and associations with hospital characteristics were assessed, a comparison of the uptake of health promotion and quality improvement strategies was carried out, a self-assessment tool for health promotion strategies in hospitals was developed, and a strategy implementation tool to promote patient-centred care and health promotion was devised.

The following sections will discuss and contextualize the main results, identify overarching methodological considerations not discussed in the individual articles, and pinpoint to future issues for research, policy and practice. Throughout, the three analytical hospital management perspectives for patient-centredness strategies presented in the introduction section (normative, health gain and organizational learning) will be used to describe and discuss the results.

4.1. Main findings and contextualization

4.1.1. Baseline assessment of patient-centred care strategies

The first research question was related to the identification of strategies to improve patient-centredness in hospitals and their implementation in a large sample of European hospitals. It might have been expected that the three management perspectives (normative, health gain and organizational learning) were implemented in different ways. For example, normative notions of patient-centredness (including patients rights, informed consent, confidentiality and respect), given the longer history and widespread recognition, might be well established. The health gain perspective might have gained importance in the last ten years, and only advanced health care organizations might have made use of patient-data for organizational learning.

The baseline assessment of patient-centred care strategies yielded the following results. In terms of the *normative perspective*, at strategic level hospitals implement at large strategies to enforce basic patient rights and informed consent. According to our study, 85.5% of the hospitals in the study (n= 351) had patients' rights posted, 97.1% of hospitals state that consultation and treatment rooms allow privacy and written procedures for informed consent were established in 93%. With regard to policies relevant for the *health gain perspective* such as establishing policies for patient involvement or designating responsibilities for health promotion, results were lower (70.6% and 59.9%, respectively). In the *organizational learning perspective* the use of surveys to gather patient views for quality improvement has been taken up by about two thirds of the hospitals (65.5%) and analysis of patients' complaints in the context of quality improvement is even more widespread (86.3%). Finally, the involvement of patients in quality management itself is rather low and ranged from 19.3 % for patient involvement in the design of protocols to 39.6% for participation of patients in improvement projects.

Our findings are in line with Makai et al. who assessed the implementation of patient involvement strategies as part of the overall implementation of quality improvement systems in three countries, the Netherlands, Hungary and Finland (Makai et al. 2009). Using a similar scale, they assess the proportion of hospitals involving patients in the evaluation of quality goals, the development of quality criteria, patient's participation in committees and improvement projects and the development of guidelines. The results are at the same level as those presented in our work, except for patient participation in developing quality criteria, for which Makai et al. obtain rates higher than ours. Moreover, there is little variation between countries, except, again for the criterion patient participation in committee and improvement projects, where the responses in Finland are much lower than those in the Netherlands and Hungary (Table 7). Surprisingly, even in countries where legislation exists to facilitate patient's participation in quality improvement work, implementation is low. For example, legislation requires Dutch hospitals to establish a client council, but only 63% of hospitals had established this (Makai et al. 2009).

Table 7: Patient participation in quality improvement

Quality improvement activity	The Netherlands (N=101)	Hungary (N=116)	Finland (N=59)
Patient participation in evaluating quality goals	22%	20%	22%
Patient participation in developing quality criteria	39%	38%	14%
Patient participation in committee and improvement projects	28%	20%	20%
Patient participation in developing guidelines	22%	18%	19%

A question that was not addressed in our cross-sectional survey was whether patient-centredness has changed over time. An assumption would be that considering societal developments regarding the doctor–patient relationship normative notions of patient involvement have evolved. For example, in many countries informed consent procedures are legalized and there is also European guidance on the topic (EMEA 2002). In the Netherland a study demonstrated that patient involvement by doctors as assessed in terms of doctor’s affection, information giving, asking for opinions did increase; however, not all aspects of patient involvement increased similarly, especially in older patients (van den Brink-Muinen et al. 2006).

Longitudinal changes in the development of hospital quality management systems in the Netherlands were evaluated by Duckers et al. (Duckers et al. 2009). With regard to patient-centredness, they describe hospital’s quality management systems in 4 stages: orientation and awareness (stage 0: patient is not involved), preparation (stage 1: patients are involved in the evaluation of quality goals), experimentation and implementation (stage 2: patients involved in the development of criteria) and integration into normal business operations (stage 3: patients are part of committees and improvement projects). For the dimension of patient participation, continued improvements from lower stages to higher stages could be observed. From the first survey in 1995 (n=112) to the latest survey in 2007 (n=62), the mean score for this dimension increased from 1.53 (SD 1.06, Range 0 to 3) to 1.94 (SD 1.05, Range 0 to 3) (Duckers et al. 2009).

However, while progress is made, patients continue to rate hospital care as average with regard to information, communication, continuity of care, as demonstrated by survey findings (Coulter and Jenkinson 2005; Schoen et al. 2005). Moreover, despite progress in assessing strategies to improve patient-centredness, the relation to quality improvement systems and the impact of these strategies on patient level outcomes is not sufficiently demonstrated. This brings us to the next research question.

4.1.2. Patient-centred care strategies and quality improvement

Here we examined whether the implementation of strategies to improve patient-centredness is also associated with the overall development of the quality improvement system. That is, the question pursued was, are hospitals that are doing well in developing their quality improvement system are also doing well in adapting strategies to improve patient centred care, and vice versa?

We found that the items to assess patient-centredness at strategic hospital level are highly associated with the hospital's quality improvement system. For example, written policies for confidentiality were present in 85% of all hospitals; however, 96.5% of the hospitals in the highest maturity classification group compared to 70.6% of hospitals in the lowest group, established such policies ($p < 0.001$). Overall, comparing from highest, over intermediate to lowest group, the differences of implementation of policies assessed by linear-by-linear association for assessment of rank were significant for 13 of 18 strategies. At ward level, however, differences in strategy implementation were significant for only 4 of 8 strategies. Moreover, after adjusting the data for possible confounding factors (type of hospital, ownership, size, and country) the associations detected are further weakened or disappear.

It thus appears that quality improvement systems alone are not sufficient in fostering a patient-centred care approach, even though patient-centredness is widely referred to as a quality dimension, and considering that some well-known quality management systems, such as the EFQM model and chapters in current accreditation systems, include specific assessment dimensions to address

dimensions of patient-centredness (EFQM 2009; HAS 2009; Joint Commission 2009). Consequently, the view that existing quality improvement systems cover patient-centred care can be partly challenged on the basis of the study that indicates that some patient-centred care strategies are associated with existing quality improvement systems; however, this association is more apparent at executive level while at ward level associations are weaker.

The study comparing the uptake of health promotion and quality assurance activities in Estonian hospitals also related to this research question: are there differences in the way hospitals that joined the Health Promoting Hospitals Network implement patient-centredness strategies and quality assurance measures, compared to the remainder of hospitals? In fact, we did identify differences in the uptake of quality assurance and health promotion activities. For example, regular patient satisfaction studies were conducted in 83% of HPH and 46% of non-HPH ($P < 0.03$) and 65% of HPH and 46% of non-HPH cooperated with various patient organizations ($P < 0.03$). With regard to strategies in the realm of quality assurance, systems for reporting and analysis of complications were implemented in 71% of HPH and 33% of non-HPH ($P < 0.03$); also, the implementation of various guidelines was more developed in HPH. Surprisingly, we were not able to detect any differences in implementing core health promotion strategies, such as providing information about healthy lifestyles or offering and consultation on diet and smoking cessation, except for strategies related to the prevention of chronic diseases, which were more common among Health Promoting Hospitals ($p=0.020$). In general, hospitals being members of the HPH network were more advanced in implementing both patient-centredness strategies and quality assurance mechanisms. However, it needs to be taken into consideration that the study design as a cross-sectional survey does not allow assuming any causality of the findings, and it is possible that self-selection of hospitals to join an international initiative or other external factors, such as the type of hospitals, confounds this association.

4.1.3. Tool development for self-assessment and implementation

The next set of research questions addressed the question whether health promotion strategies could be integrated into a practical tool and linked to the hospital's quality improvement system, and whether such a tool is acceptable to users and fulfils with basic psychometric principles.

The pilot testing of the self-assessment tool for health promotion in hospitals demonstrated an overall good understanding of users of the measurable elements and also high ratings of their importance, but a substantial number of measurable elements were also rated low in terms of applicability, especially those items related to the implementations of national regulations. We identified these items and reworded or removed them in the revision of the tool. Nevertheless, according to the psychometric criteria such as distribution of scores, floor and ceiling responses and internal consistency the tools rates appropriate. Moreover, in the validation study the tool hospitals with an established quality improvement system and those that are part of the WHO Network of Health Promoting Hospitals obtained substantially higher scores. This can probably be explained through that fact that HPH hospitals have been systematically exposed to the content of the standards previously and have management support in implementing related strategies. Accredited hospitals on the other hand benefit from overlap in content of accreditation standards with the self-assessment tool and more generically, from the information collection and assessment procedures already established.

Despite some limitations in the validation study, the wide acceptability as reflected in translations, adaptations and implementation in different countries, reflects face validity of the tool. For example, the original English self-assessment tool has been translated into Chinese, Estonian, German, French, Italian, Slovak and Spanish and it has been widely used for self-assessment procedures throughout the 700 hospitals pertaining to the HPH network. Moreover, research is in process to develop an online registration programme based on the self-assessment and some networks are assessing the possibility to develop the self-assessment

procedure into a programme for hospital certification and admittance to the network.

Based on the validation study, the use as a self-assessment tool for internal quality improvement can be considered appropriate. It can thus enhance involvement of teams, accelerates changes and can lead to improved processes and outcomes with regard to patient centredness and health promotion (Berwick et al. 2003; Bose et al. 2001; Schmidt et al. 2005). Internal assessments; however, might also be prone to a number of limiting factors, such as that it is taken up predominantly by those already performing well and does not provide sufficient incentives for those more in need to engage (Edmondson 1996b). Due to lack of standardized assessment procedures the results may not be comparable for benchmarking purposes. Therefore, before wider adaptation, substantial work is required on adapting the measurable elements to nationally and locally relevant contexts and benchmarking should be limited to comparable institutions and contexts.

4.1.4. Facilitating strategy implementation

The final research question was related to the question whether the standards for health promotion and a comprehensive patient-centred approach could be integrated into an internal quality management system and used as a strategy implementation tool throughout a health care delivery network. The strategy development tool was developed integrating the core health promoting hospitals strategies into the internal (quality) management system using a combination of the Balanced Scorecard and the European Foundation for Quality Management Model. The project demonstrated that it was possible to integrate the broad vision of the Health Promoting Hospitals Initiative into a managerial tool to facilitate and monitor the implementation across a group of hospitals. The project adds three strands of discussion to the literature. First, the use of a strategy framework, while obvious, is an important pre-requisite for implementation of a patient-centred care approach. As illustrated in the literature, mission statements of many health care organizations make references to notions of patient-centredness; however, there is no systematic approach for the deployment of the mission throughout the organization. Secondly, the strategy map and balanced scorecard provide a tool to visualize and make operational

the broad vision, accessible to staff within the hospitals pertaining to the holding. Last, but not least, this strategy map integrates the guiding principles for health promotion as reflected in the five standards of the self-assessment tool into a single instrument.

The use and abuse of mission statements has in fact been well established in the literature. From a managerial theory perspective mission statements can have a positive impact on staff moral and attitude (Forbes and Seena 2006). Moreover, a relationship between mission statement and performance indicators has been established (Bart and Tabone 1999). Using content analysis to assess existence and frequency of words, Bolon examined hospital mission statements from for-profit or non-profit organizations are identified that they differed slightly (Bolon 2005). Survey data further suggests that managers have a more positive attitude towards the mission statement than employees (Desmidt and Heene 2007); one author even denominates this the “mission statement perception gap”. Calls have finally been made to make statements more specific to the characteristics of the organization, rather than broad and generic statements (Bart 2000).

The strategy map of the health care delivery network integrates the five standards for health promotion into the framework of the Balanced Scorecard and serves thus as an efficient and widely used tool throughout the network to break down the broad mission and vision of the Health Promoting Hospitals Initiative into operational objectives. An open question remains whether in fact the broad implementation is associated with improvements in patient centredness. To this end various surveys were embedded into the strategy implementation one of which being the Picker survey on patient experience, which was administered to a representative sample of inpatients in 2006, 2008 and will be reissued in 2010, in the three hospitals of the health care delivery network. The survey data will be investigated in further research.

4.2. Methodological considerations

The studies presented here are original in the sense of linking three different concepts that were previously often studied in isolation: patient-centredness, health promotion and quality improvement. These concepts were studied using theoretical frameworks and

empirical data. Two of the research questions were addressed using a large sample of European hospitals; the remaining research questions were addressed in the context of the Health Promoting Hospitals project of the World Health Organization. The richness of the material; however, also poses several methodological limitations that should be taken into consideration.

First, data was collected using observational methods (cross-sectional and case-studies) and there are inherent limitations to these study designs. These are particularly obvious when the objective of the research is to demonstrate causality, such as the effect of new drug, for which, unless there are other reasons (such as that experimentation is unnecessary, inappropriate, impossible or inadequate) a randomized study should be applied (Black 1996). However, for the research questions pursued in this thesis a randomized study was not necessary and the thesis is prepared within a framework of “pragmatic science” as suggested by Nolan and Berwick (Berwick 2005), rather than in a framework of evaluative clinical sciences. Given that interventions to improve patient-centredness are often multi-faceted and highly context specific this framework proves to be more appropriate (Berwick 2008). In addition, an evaluation of the effect of introducing strategies to improve patient-centredness would require a longitudinal approach, a substantial sample size if the unit of analysis is the hospital, and a long term perspective to evaluate the effect. Such a design in turn would be hampered by changing provider status, for example through mergers & acquisitions, (Duckers et al. 2009) or changes in ownership (Pfaff et al. 2009).

Secondly, while the sampling of the hospitals participating in the MARQuIS study was guided by a random approach, the sampling strategy used for the development and evaluation of the self-assessment tool for health promotion in hospitals was not. It was based on a *convenience* sample to carry out the evaluation in a number of hospitals belonging to the HPH network and a *purposeful* sample to match these hospitals with hospitals that do not belong to the network. The latter group was added in order to compare the current compliance with the health promotion standards between these two groups. The sampling for this study might have incurred some selection bias which poses threats to internal validity since

volunteering and actual performance might have been affected by the sampling strategy.

A third limitation is that a lot of the data analysis in this thesis is based on self-reported data and there are difficulties with self-reported data, in particular when incentives and threats exist regarding the results of the data reported (Edmondson 1996a). Moreover, self-reported data is a particular concern when the direction of reporting error is unknown. In the MARQuIS study it is possible that the results of the evaluation at strategic hospital level might be slightly inflated due to social-desirability bias (of having the strategies under evaluation in place). This would explain some of the differences that appear when comparing implementation rates at strategic level with those at ward level, which are consistently lower and consistent across the three wards. Nevertheless, in an audit of a sub-sample various, tests for reliability yielded reasonable agreement between self-reported data and observed or locally evaluated data (Thompson et al. 2007). The validation study of the self-assessment tool is based on self-reported data, too, however, the study required to assess some of the standards through management and record audit and the final evaluation of compliance was to be discussed and consented among the members of the multi-disciplinary group in charge of the self-assessment. The responses to the questionnaire in terms of the number of persons and professions participating in the group suggest that this procedure was followed, thus reducing the possibility for individuals to alter the assessment.

A limitation of the study on the self-assessment tool is that further psychometric validations are still pending. The tool was developed using consensus group techniques, analysis of floor and ceiling effects, internal consistency and assessing construct validity. Based on additional data on comprehension, applicability and importance of each item, an expert panel decided the reduction of the 68 item version to a 40 item instrument. In addition to tests for test-retest reliability and criterion and predictive validity which are frequent tests applied in the development of questionnaires, the item reduction could have been guided more robustly by further psychometric testing on the dimensional structure of both tools and the application of item-response analysis to assess the relative contribution of items to total score. However, this would have

required time and resources for a follow up assessment and a substantial sample size, which given that the unit of analysis is the hospital, was not feasible within the scope of this thesis.

A more generic limitation of the work presented here is the lack of consensus on the conceptualization of patient centredness. Therefore, here a managerial perspective was used to address normative issues, health gain impact and organizational learning based on patient views. Finally, the studies presented here do not use patient-reported or clinical outcome data. This is not a limitation per se since the focus is on managerial strategies to improve patient-centredness; nevertheless, additional outcome data would have helped assessing the impact of these strategies. However, even if patient level data had been available it is not sure whether given the distance between exposure (implementation of strategy) and effect (such as mortality). Thus, in this field of research, the assessment of strategies and outputs is appropriate.

In conclusion, various strategies were embedded in the design to overcome some of the methodological limitations inherent to the approaches chosen.

4.3. Implications for future research, policy and practice

The following sections deal with the implications of the findings and consequences for future research, policy and practice. Two main issues are discussed, the first one being related to approaches on *assessing* patient-centredness at hospital and at patient level. The second strand of issues relates to some of the limitations in *improving* patient centredness. This includes in particular the roles and responsibilities of the hospital in improving patient-centredness and providing health promotion interventions, addressing the paradox that those least in need often benefit most, and investigating the impact of quality improvement systems on patient level outcomes.

4.3.1. Assessing patient centred care

The findings presented earlier describe to what extent elements of patient-centred care are implemented in European hospitals. Moreover, the development process, validity and acceptability of a

self-assessment tool for health promotion in hospitals were discussed as a complement to existing quality improvement systems. Since the work on this thesis started, other self-assessment tools on strategies to improve patient-centredness have been developed. These are briefly discussed in the following. Subsequently, tools to assess patient-perceived patient-centredness are reviewed.

4.3.1.1. At hospital level

A number of tools have been published on assessing patient-centred care in the last couple of years. However, none of the tools mentioned in the following have been subject to standard tests for validity and reliability, although some partly depart from validated measures (Rudd and Andersen 2005). A review of their content is informative in order to identify dimensions currently not addressed in the self-assessment tool for health promotion in hospitals, and guide further improvement and revisions. The following table identifies the main dimensions of the tools developed by the Institute for Healthcare Improvement, American Hospital Association, Harvard School of Public Health, and the Planetree Group (Table 8, next page).

The review of the four tools and their comparison to the self-assessment tool for health promotion in hospitals suggests considerable overlap in the main dimensions assessed. In this sense, it can be considered as a comprehensive assessment tool. Dimensions currently not addressed in the self-assessment tool are the following: oral exchange, communication with patient and family, human interaction, personalization of care, patterns of care, using patients and families as advisors, improving the care environment, using IT support, the role of spirituality, the nurturing aspects of food and nutrition, massage and human touch, art in the healing process, integrative medicine, and caring for the community.

Future revisions or developments of tools to assess patient-centredness in hospitals, in addition to taking into account the methodological limitations portrayed in the previous sections, may target those dimensions of patient-centredness currently not covered. Also, existing quality improvement systems might be

reviewed according to the extent to which they address those dimensions of patient-centredness.

Table 8: Hospital assessment tools for patient-centred care

	IHI ¹	AMA ²	HLEA ³	Plane-tree ⁴	HPH SAT ⁵
Leadership	+	+			+
Mission and definition of quality		+	+		+
Charting and documentation		+			+
Print communication (health literacy)			+		+
Oral exchange (health literacy)					
Communication with patient and family	+	+		+	
Human interaction				+	
Personalization of care	+				
Continuity of care	+				+
Access to information	+				+
Family involvement	+				+
Patient and family support		+			+
Quality improvement		+			+
Patients and families as advisors		+			
Environment of care	+	+	+	+	
IT support			+		
Spirituality	+			+	
Nurturing aspects of food and nutrition				+	
Massage and human touch				+	
Art in the healing process				+	
Integrative medicine	+			+	
Caring for the community	+				
Health partnerships					+
Care for caregivers	+				+
Staff qualifications		+			+

¹(Institute for Health Care Improvement 2009)

²(AHA 2005)

³(Rudd and Andersen 2005)

⁴(Groene 2007)

Research using these tools for additional descriptive and analytical studies is highly needed, especially among the members of the Health Promoting Hospitals Network. In fact, the motivation, type, quantity, quality of health promoting activities in the hospitals of the International HPH network is not systematically assessed. Hospitals becoming members of the International Network comply

with rather soft criteria such as endorsing WHO principles and visions and complying with some administrative criteria (Groene and Jorgensen 2005). After various calls for research criticizing the lack of descriptive, comparative and analytical data on Health Promoting Hospitals, an evaluation of the Health Promoting Hospitals Network is now being planned in order to produce a better evidence-base to support decision makers in hospitals and policy to incorporate health promotion measures (Groene and Garcia-Barbero 2005; Whitehead 2004).

This evaluation, the PRICES Project, aims at collecting data on Health Promoting Hospitals at two levels: networks (evaluation in more than 30 countries worldwide) and hospitals (potentially up to 700 hospitals members of the HPH network). Key research questions of the project are a baseline assessment of health promotion structures and activities in the HPH network, the association between external environment and uptake of HPH, and the association between institutionalization of structures and provision of HPH activities. As part of the study the association of HPH structure and HPH activities on the one hand and the hospitals' quality improvement system on the other hand will be assessed. This research will provide further insight into the extent, functioning, barriers and facilitating factors of health promotion and patient-centredness.

4.3.1.2. At patient level

This thesis focused on organizational strategies to improve patient-centredness from the management perspective. It thus aimed at assessing organizational procedures, protocols and strategies supporting this end. However, questions regarding the effectiveness of these strategies and their impact on patient level outcomes remain open and require an assessment of patient perceptions or experience of the patient-centredness of care.

Patient views of patient-centredness are usually assessed using standardized questionnaires (even though qualitative research such as in-depth interviews and focus groups are also used to explore patient views). Generic measures of patient-centredness, such as the Hospital Consumer Assessment of Healthcare Providers and System (Giordano et al. 2009) or Picker surveys (Jenkinson et al. 2002) can be distinguished from specific measures such as the Patient

Activation Scale (Hibbard et al. 2005), the Patient Self-Advocacy Scale (Brashers et al. 1999) or the Health Care Transition Scale (Coleman et al. 2006; Coleman et al. 2002). The advantage of generic measures is their global assessment across various dimensions of patient-centredness, while specific measures provide a more in-depth assessment of one or more dimensions.

A major limitation to assess and improve patient-centredness is the lack of a gold standard measure (Lewin et al. 2001). This is partly due to the conceptually broad nature of the construct. In addition, from a theoretical and psychometric point of view three general types of measures can be distinguished: a) factual measures of patient experience with care received, which usually score the frequency of occurrence of an event (typically answers: “often” to “never”), b) affective measures of patient satisfaction or patient judgement which rate the degree of satisfaction (typical answers: “very poor” to “excellent”) and c) gap between explicit expectations and realities of the service receive (van Campen et al. 1995).

Measures can further be distinguished, based on the theoretical and conceptual basis, regarding the timing of their administration. Some measures require administration before a contact with the health care provider in order to elicit certain preferences for, say, shared decision-making. Other measures are administered while in the hospital, or after discharge. In addition, disease specific measures exist, such as the Diabetes empowerment scale (Anderson et al. 2003) or the Patient perception of involvement in AMI care scale (Arnetz et al. 2007).

Assessing patient-centredness at patient level needs to take into consideration the different conceptual bases of the measurement strategies available. A classification of measures to assess patient-centredness taking into consideration the attributes and distinctions made above, is presented in the following table (Table 9).

Table 9: Groups of patient-level measures (Groene 2009)

Administration	Type of measure	Example
PRE - admission	Preferences for decision making role (assessing patient preferences from passive to active involvement) / patients current decision-making style	<ul style="list-style-type: none"> - Control preferences scale - Decision involvement questionnaire - Problem-solving decision-making scale - Role and information preferences - Locus of authority scale - Information styles questionnaire
PROCESS	Elements of informed decision making / observing patient involvement in decision making	<ul style="list-style-type: none"> - Observing patient involvement in decision making Scale - Decision support analysis tool - Elements of informed decision making - Rochester participatory decision-making scale
POST - discharge	Measures assessing patients perception of involvement	<ul style="list-style-type: none"> - Satisfaction with decision making process, Participatory decision-making style - Patients perceived involvement in care scale
	Measures to assess preparation for chronic disease self-management	<ul style="list-style-type: none"> - Patient activation scale - Health Care transition measure
	Generic measures to assess patient experience	<ul style="list-style-type: none"> - HCAHPS © - PICKER ©
	Generic measures to assess patient satisfaction	<ul style="list-style-type: none"> - Press Ganey Associates - Ware's patient satisfaction questionnaire

Considering the patients characteristics as an input into the hospital work process, a patient-centred approach cannot be implemented without considering the patient's ability to understand and process the information that is exchanged between professional and patient. While some generic measures of patient-centredness include questions regarding professional's oral expression and listening skills, the actual level of health literacy of the patient is frequently not assessed. Without prior information on the patient's health literacy level, information and education strategies employed in hospitals settings may have a limited effect. Health literacy should thus be assessed as a potential confounder in quantitative assessments of patient-perceived patient centredness.

Considering the differences in approaches, administration, timing and conceptual basis, the use of measures to assess patient-centredness should be driven by the information required to improve practice, and also with regard to the extent to which they support management in improving patient centredness.

4.3.2. Further improving patient centredness

4.3.2.1. Role and responsibilities at the hospital level

The role of the hospital in improving patient-centredness and delivering health promotion interventions has been questioned. Yet, in many ways it is a unique setting. First, the normative perspective of patient-centredness is valid irrespective of the setting where a service is provided, that it, confidentially, informed consent and other patients rights (respect, trust, affection) should be ensured throughout the health system. Acknowledging the normative perspective gives validity to the organizational learning perspective, since any data generated from patients may help to improve patient's rights. However, the role of the health gain perspective needs further justification.

Research suggests that hospitals are important settings for health promotion interventions, even though the basic function of hospitals is diagnosis, treatment and care for acute situations and other sectors such as primary care and community settings may contribute more to reducing disease burden. The reason is that patients admitted or visiting the outpatient department of the hospital are often at increased risk of disease or mortality, increased awareness

of risk factors and symptoms, and due to their illness experience more sensitive to accepting advice and counselling or contemplating behavioural change while in the hospital (Florin and Dasham 2000; Pelikan et al. 2001). There is indeed a substantial evidence-base underlining the effectiveness of patient information, education and health promotion services in hospitals (Boychuk et al. 2006; Coulter and Ellins 2007; McPherson et al. 2001; Moller and Tonnesen 2001; Moller et al. 2002; Tonnesen et al. 1999). Despite the growing evidence-base; however, patients frequently do not receive important information on their condition and options for self-management or receive timely lifestyle counselling (Schoen et al. 2005), partly because hospitals have adapted the implementation of health promotion/education services only slowly or in a non-systematic manner and/or have not integrated it into their quality management (Hibbard 2003; Johnson and Baum 2001), thus supporting the demand for a better health gain orientation of hospitals.

The decreasing length of stay in hospitals often put forward as an argument against investing in patient-centredness and health promotion might be rejected based on the potential benefits of health gain. Moreover, even though decreased length of stay is a reality, the role of the hospital as a knowledge centre in the management of complex chronic conditions is gaining more importance and increasing outpatient visits offer new opportunities for health promotion initiation and follow up. Thus, while the hospital may not be the single most important contributor to health promotion initiatives, it does have a crucial role in initiating reflections, behaviours and coordinating with other health and social institutions. Lack of taking that role may disadvantage health outcomes (in terms of complications, readmission and poorer recovery) (Coulter and Ellins 2007; Rudd 2007; Rudd et al. 2009; Tonnesen et al. 1999).

The studies presented in this thesis suggest that the dimensions of patient-centredness related to normative issues and organizational learning are addressed at hospital level, but the health gain perspective receives less attention. This conjures up a missed opportunity since patients and families in contact with hospital services are more sensitive to consider advice and change behaviour. The World Health Organization's Health Promoting

Hospitals Project, based on the Ottawa Charter for Health Promotion, addresses this mismatch and further work is needed to strengthen hospitals in this respect (WHO 1986b).

4.3.2.2. Using health promotion theory

Although there is broad literature on patient-centred care, the evidence-base on which interventions are most effective in improving health gain needs further strengthening, partly because of the lack of clear conceptual models and lack of gold-standard measures of what constitutes patient-centredness. More importantly, from a health education perspective many of the interventions to improve patients' self-management of chronic diseases appear to be restricted to providing health-related information.

The underlying behavioural theory thus relies on the effectiveness of a rational-choice theory approach in which behaviour is conditioned by cognition, which can be modified by information leaflets, educational interventions, financial incentives or patient decision aids. Health education literature demonstrates the limitations of this paradigm and suggests alternative behavioural strategies such as social cognitive theory (Bandura 2001, 2004), in which social marketing and peer modelling are key strategies to modify behaviour, or Prochaska's trans-theoretical model of change, that recognizes that behavioural change requires passing different stages from pre-contemplation to action, which, in addition, is not a linear, but can be a circular process (Prochaska and DiClemente 1983).

Thus, the underlying theoretical model should guide actual interventions to improve patient-centredness. Most of the strategies to improve patient-centredness; however, are based on rational choice model which compared to other models requires information and cognitive skills, and result in interventions to decrease the information asymmetry between patient and provider. Compared to other models, this model is less effective as it has been demonstrated that the influence of peer groups and social support network are significant predictors to changing and maintaining lifestyle or following doctor's recommendations. Limited effectiveness is perhaps not surprising either considering the

important confounding factors, patients' health literacy, is often not adjusted for in either design or analysis.

In general, health promotion theory suggests that structure, context and environment are more significant contributors to behavioural change as compared to individual cognitive processes modified by information and education (Kickbusch 2007; Naidoo 2000). Thus, in order to improve the health gain potential of hospital services, future assessments of patient-centredness should draw on health promotion theory and (in addition to the strategies to improve patient-centredness described in previous sections) assess the contextual factors that determine behaviour. This is also reflected in recent approaches on healthy hospital design (Rechel 2009).

4.3.2.3. Reaching those most in need

Improving health gain further requires addressing a paradox: Often, those who are more educated get involved most, understand most, ask more questions, but are those least in need.

In fact, not everybody wants to be involved and in general, less educated patients tend to prefer less involvement than better educated patients. In a survey among 152 patients in an Irish teaching hospital, two thirds of the patients (66%) sought very 'extensive or a lot of' information on their condition; however, at the same time 61% of the patients preferred a passive approach to decision-making and would leave all decisions to the doctor (Wilkinson et al. 2008). In a population survey in the USA (Levinson et al. 2005) nearly all respondents (96%) preferred to be offered choices and be asked for opinions; however, more than half (52%) would leave final decisions to their physicians.

While there are many cases where the doctor due to the information asymmetry may be in a better position to make a choice, there are other cases, as for amniocentesis or choosing HIV drugs treatments where complex side effects needs to be balanced, where the patient's knowledge, preferences and views potentially guide such decisions. Another study based on structured interviews with 100 patients about their preferences for participation in decisions regarding bedtimes, medication choice, room transfer and advanced directives, identified higher levels of education and greater

confidence about the worth of input as main predictors for active decision making were (Funk 2004).

It is often further assumed that patients have the desire and capacity to being proactive in asking factual (such as “when can I get back to normal”) or challenging questions (such as “did you wash your hands”) to health care staff regarding safety practices. In line with previous research, Davies and colleagues demonstrated in a survey using the ‘the Patient Willingness to Ask Safety Questions Survey’ in a study of 80 surgical patients that challenging health care staff is less likely among patients, men, less educated and unemployed (Davis et al. 2008), thus reinforcing social gaps through higher involvement of middle class patients.

Finally, those most in need may be least equipped to understanding written or oral communication (AHRQ 2004). Even though normative notions are address, strategies to ensure informed consent and patients’ rights do not necessarily translate easily into practice. For example, a recent evaluation of informed consent forms for cataract surgery in 11 Catalonian hospitals using the INFLESZ score demonstrated that a college level education is required to understand the forms (Groene and Rudd 2009). In addition, even though forms are comprehensible, they are often administered in awkward situation, under patient emotional stress, and, though legally sufficient, do not fully support patient involvement in care decisions.

Developers and evaluators of strategies to improve patient-centredness should reflect on these findings and address the health promotion paradox that those that are most in need probably benefit least.

4.3.2.4. Patient involvement in quality improvement

One strategy to increase patient-centredness taken up by many hospitals recognized for their leadership in this field, is the involvement of patients or patient representatives in formal quality functions (such as setting standards, targets, discussing results). As the baseline assessment presented in this thesis described, the current level of formal patient involvement is low in European countries. Nevertheless, some countries follow a strong policy agenda for patient involvement in quality improvement. This, linked

to the argument of reaching those most in need presented above, may have some un-intentioned consequences. Those patients or patient-representatives involved in such functions are often middle-class citizens, such as retired teachers, lawyers or members of other professions. Clear selection criteria and targeted training is required for patient-representatives to make sure that they truly represent the needs of patients, in particular of those most in need: socially, culturally or otherwise disadvantaged groups of patients (Conway 2008). Such training material is available (Institute for Family Centred Care 2009) and its use should be assessed in further explorations of patient involvement in quality improvement.

While good examples for involving patients in hospital quality work exists, it is unclear whether they justify the broad implementation as demanded by policy. For example, the examples from Dana Faber Institute and the Children's Hospital in Boston in the USA provide evidence that patients make valuable contributions to quality management work. However, most hospitals with advanced patient involvement strategies correspond to the profile of the two institutions mentioned above, cancer or children/paediatric care. Such hospitals differ from general hospitals and the success of patient involvement may depend largely on being able to recruit patients with the right experience and their ability to express their views constructively.

Thus, despite the strong policy agenda in some countries to increase patient involvement in quality improvement functions (such as quality improvement committees, quality circles, board meeting) further assessments of patient-centredness should examine its effectiveness in terms of the type of patients performing the functions, the criteria used for their selection, the training they received to perform their functions, the contributions they make to quality improvement and the consequences of their contributions in care design. Further research should also address patients views on these functions and how patient involvement in quality improvement might affect the professional-patient trust relationship.

4.3.2.5. Quality improvement systems and their impact on patient outcomes

In addition to the contribution that patients can make towards defining content and actions of quality improvement, which, as referred to above has been assessed only in a limited way, the impact of quality improvement on patient involvement as an outcome has not been sufficiently evaluated either. This is an important issue given the research questions pursued in this thesis that address the association between patient-centredness and quality improvement systems. The studies presented here suggest that hospitals with a well developed quality improvement do not necessarily also engage substantially in improving patient-centredness. For example, do hospitals with an implemented quality improvement system perform better in terms of patient centredness than other hospitals? And if yes, which components of the quality improvement system are related with these outcomes? Research addressing this link is relevant given the importance the concept of patient-centredness is gaining in the quality field and considering that some existing quality improvements systems already partly address components of patient-centredness.

There is some evidence from the accreditation research programme in Australia that indicates that accredited hospitals perform better, which, given that many accreditation standards are related to patients' rights and informed consent procedures which are assessed during accreditation, should not be surprising (Braithwaite et al. 2006; Greenfield and Braithwaite 2008). Nevertheless, the way patient-centredness is conceptualized in accreditation systems often refers narrowly to its normative notions such as rights, informed consent and basic information. Considering the arguments put forward above on the need to address the health gain perspective, existing quality improvement systems should broaden their scope and address remaining domains of patient centredness, in particular, contributions of patients to self-management and using patient knowledge to improve health care processes to better meet patients needs.

Work in the USA that addressed the impact of organisational quality improvement strategies on clinical quality outcomes supported the proposition that the scope of quality improvement

implementation in hospitals is significantly associated with hospital-level quality indicators. The authors concluded that the successful clinical application of quality improvement actions depends largely on a supportive regulatory and competitive environment, its alignment with financial incentives, and with an organizational leadership that is committed to integrating all aspects of the work (Weiner et al. 2006a; Weiner et al. 2006b). Based on these findings it should be argued that in order for quality improvement systems to be effective in improving patient-centredness, the same contextual factors (regulations, incentives and leadership) need to be met (Tonnesen et al. 2007).

Recently, work started to explore associations between clinical performance and performance on standardized patient-centredness surveys in order to address the question whether hospitals with better clinical outcomes are also rated better in terms of experience. Data from the USA based on the standardized assessment of patient experiences using the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) indicates that hospitals in the highest quartile of patient experience ratings also provided clinical care that was better compared to other hospitals. One of the possible explanatory factors identified is the better of ratio of nurses to patient days in the highest quartile of those hospitals with high HCAHPS ratings (Jha et al. 2008). Thus, it appears that improving patient-centredness may require different resources, in particular when dealing with affectionate interventions or informational and educational activities for patients.

At European level, the MARQuIS sucesor project “Deepening our Understanding of Quality Improvement in Europe (DUQuE)” will explore these links in more detail. Among others, it will address to what extent patient clinical outcomes and perceived involvement are associated with the hospital’s quality improvement systems and organizational cultures, and to what extent the latter ones are influenced by external pressure, including regulations, pressure exerted by consumer groups and the media (DUQuE 2009).

In summary, the causal pathway through which quality improvement affects and/or is associated with patient centredness is complex and vulnerable to a range of confounding factors, such as patient characteristics, organizational culture and within hospital

variations. Thus, many questions remain with regard to improving patient-centredness, for example: Which kind of interventions to promote patient-centred care work best? Do they work equally for different groups of patients with different conditions? How can equal patient access to patient-centred care be ensured (subject to their motivation, aspiration and potentials)? To what extent are the requirements to implement a patient-centred approach compatible with current health care delivery (e.g. resource and time constraints, communication skills of health professionals)? These questions should be subject of further research.

5. CONCLUSIONS

This thesis started with a reference to the Institute's of Medicine six aims of health care, according to which health care should be safe, effective, patient-centred, timely, efficient and equitable (Institute of Medicine 2001). Focusing on the aim of patient-centredness, the objective of this thesis was to study the extent and the factors associated with the implementation of strategies to improve patient-centred care at hospital level, and to develop tools to facilitate implementation.

Recognizing the substantial work carried out on assessing and facilitating professional-patient interactions, this thesis addressed a meso-level, managerial perspective. The research presented here addressed an assessment of (the factors associated with the) current implementation and strategies to improve patient-centredness, the development and validation of a self-assessment tool to facilitate the implementation of health promotion activities and the integration of patient-centredness strategies into a managerial framework in order to make it a core quality objective of the organization alongside other quality goals.

With regard to the baseline assessment, many hospitals appear to address the *normative perspective* of patient centred care and have core policies regarding patients' rights, confidentiality or privacy in place. Strategies addressing the *health gain perspective*, such as patient involvement policies and responsibilities for patient empowerment and health promotion, appear to be less developed. Finally, despite the widespread use of surveys to assess patient satisfaction or experience, from an *organizational learning perspective* it is of concern that this information frequently is not used to adjust and/or improve organizational processes. Moreover, while patient involvement in quality management is high on the policy agenda in some countries, the data presented here suggest that few hospitals actually involve patients in developing standards or objectives, or participate in hospital committees to discuss the quality of care. Nevertheless, there appears to be a gap between policies to be in place by hospital management and the awareness of such policies by professionals in the departments of the hospital.

In terms of the association between patient-centredness and quality improvement strategies, the studies presented here suggest that the implementation of strategies to improve patient-centredness partly overlaps with existing quality improvement systems; however, substantial variability across wards suggests that implementation is not systematic throughout the hospital organization. Moreover, current quality improvement systems do not appear to be sufficient in ensuring organization-wide implementation of core normative notions of patient-centredness across wards. In terms of a comparison of the uptake of health promotion and quality improvement activities between Health Promoting Hospitals and other hospitals, the study presented here suggests differences in general quality improvement activities and health promotion activities related to staff, but not with regard to patient-related activities.

Considering the development of assessment tools, the reliability and construct validity as well as the user evaluation suggest adequacy of the tool. Notwithstanding, the findings from the baseline evaluation and assessment of association with quality improvement system should be used for further research on improving validity and reliability of the tool. Finally, patient-centredness can be assessed and promoted using stand-alone assessment tools; however, they should be linked to existing quality improvement systems and embedded in overall organizational strategy. For such, the Balanced Scorecard provides an effective instrument.

This thesis contributes to answering some of the questions with regard to assessing and improving patient-centredness. Patient-centredness can be conceptualized and measured to address three perspectives relevant to management: normative, health gain and organizational learning. These perspectives need to be further translated into assessment tools and embedded into existing quality improvement systems.

The core conclusions of this thesis is that, if patient-centredness is accepted as one of the key aims or dimensions of quality, than it should also be fostered accordingly through appropriate strategies such as those strategies applied to make health care safe and effective.

6. RECOMMENDATIONS

Based on the work presented in this thesis, the following recommendations can be given to facilitate implementation, policy and research on patient-centredness:

Related to implementation

- Increase efforts to ensure the implementation of strategies related to better information, education and patient empowerment, in particular for chronic patients. At the same time, continue that normative issues are effectively addressed, and not just comply with legislative criteria.
- Strengthen the link between the implementation of strategies to improve patient-centredness and the development of the hospital's quality improvement system.
- Continue using information generated through routine or periodic assessments of patient views to improve organizational and clinical processes and contribute to organizational learning.

Related to research

- Assess the impact of quality improvement strategies on patient-perceived information, communication, empowerment and discharge preparation, on the one hand, and their association with clinical outcomes on the other. Assess the effect of possible confounding factors such as culture, external environment and within hospital variability.
- Identify those organizational strategies most related to patient perceptions of care and clinical outcomes to give guidance to hospitals in developing their systems to improve patient-centredness.
- Identify ways how patients can contribute to organizational quality improvement: assess perceptions of managers, professionals and patients regarding structures (logistics, economics), processes (changes in conducting board meeting) and outcomes (decisions, impact).

Related to policy

- Patient-centredness should be further supported and integrated in the organizational quality improvement management agenda.
- Given the nature of chronic diseases, quality criteria for the information, education, empowerment and discharge preparation should be strengthened.
- Policy initiatives to push patient involvement in quality management should base recommendations on best evidence regarding the patient's role and contribution and separate the rationale of involvement for normative issues, health gain or organizational learning.

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ANNEX

Glossary

Definitions of patient-centredness related terms

Patient activation (in chronic-disease management)

Level of preparedness of the patient to take an active role in the management of his disease/illness. Includes issues such as believing an active role is important, confidence and knowledge to take action, taking action, staying on course under stress (Hibbard 2005).

Patient-centredness

Patient-centredness refers to health care that establishes a partnership among practitioners, patients, and their families (when appropriate) to ensure that decisions respect patients' wants, needs, and the preferences and that patients have the education and support they need to make decisions and participate in their own care (IOM 2001).

Patient involvement

Patient involvement is an umbrella term that is not specifically defined in the medical literature. Shared decision making is more commonly used to denote the "patient involvement" in the care process.

Shared decision making is the collaboration between patients and caregivers to come to an agreement about a healthcare decision. It is especially useful when there is no clear "best" treatment option. In shared decision-making the caregiver offers the patient information that will help him to understand the likely outcomes of various options, to think

about what is personally important about the risks and benefits of each option and to participate in decisions about medical care (Dartmouth centre for shared decision-making, Dy 2007).

While addressing important aspects of professional-patient interaction, shared decision making is usually not meant to include education of chronic disease management and participation of patients in follow up actions.

Patient participation

Patient involvement in the decision-making process in matters pertaining to health.

Year introduced: 1978 (MeSH)

Patient experience

“The definition was developed after extensive research involving patients, the public and NHS staff and appeared in Building on the best: Choice, responsiveness and equity in the NHS (Chapter 2, section 9). We want an NHS that meets not only our physical needs but our emotional ones too. This means:

getting good treatment in a comfortable, caring and safe environment, delivered in a calm and reassuring way

having information to make choices, to feel confident and to feel in control

being talked to and listened to as an equal; being treated with honesty, respect and dignity.”

http://www.dh.gov.uk/en/Policyandguidance/Organisationpolicy/PatientAndPublicinvolvement/DH_078663

Shared decision-making

Shared decision making is the collaboration between patients and caregivers to come to an agreement about a healthcare decision. It is especially useful when there is no clear "best" treatment option.

The caregiver offers the patient information that will help him or her:

Understand the likely outcomes of various options

Think about what is personally important about the risks and benefits of each option

Participate in decisions about medical care

http://www.dhmc.org/webpage.cfm?site_id=2&org_id=108&mo rg_id=0&sec_id=0&gsec_id=39680&item_id=39680

Self-help

In the context of health promotion, actions taken by lay persons (i.e. non health professionals) to mobilize the necessary resources to promote, maintain or restore the health of individuals or communities.

Empowerment

In health promotion, empowerment is a process through which people gain greater control over decisions and actions affecting their health.

Empowerment may be a social, cultural, psychological or political process through which individuals and social groups are able to express their needs, present their concerns, devise strategies for involvement in decision-making, and achieve political, social and cultural action to meet those needs.

Empowerment may be a social, cultural, psychological or political process through which individuals and social groups are able to express their needs, present their concerns, devise strategies for involvement in decision-making, and achieve political, social and cultural action to meet those needs (WHO Health Promotion Glossary).

The ongoing capacity of individuals or groups to act on their own behalf to achieve a greater measure of control over their lives and destinies (Staples L. Powerful ideas about empowerment. Adm Soc Work 1990).

Health promotion

Health promotion is the process of enabling people to increase control over, and to improve their health.

Reference: Ottawa Charter for Health Promotion. WHO, Geneva, 1986

Health promotion represents a comprehensive social and political process, it not only embraces actions directed at strengthening the skills and capabilities of individuals, but also action directed towards changing social, environmental and economic conditions so as to alleviate their impact on public and individual health.

http://www.who.int/hpr/NPH/docs/hp_glossary_en.pdf

Health literacy

Health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good *health*.

Health literacy implies the achievement of a level of knowledge, personal skills and confidence to take action to improve personal and community health by changing personal *lifestyles* and *living conditions*. Thus, health literacy means more than being able to read pamphlets and make appointments. By improving people's access to health information, and their capacity to use it effectively, health

literacy is critical to *empowerment*. Health literacy is itself dependent upon more general levels of literacy. Poor literacy can affect people's *health* directly by limiting their personal, social and cultural development, as well as hindering the development of health literacy (WHO Health Promotion Glossary).

Health education

Health education comprises consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, including improving knowledge, and developing life skills which are conducive to individual and community health.

Health education is not only concerned with the communication of information, but also with fostering the motivation, skills and confidence (self-efficacy) necessary to take action to improve health. Health education includes the communication of information concerning the underlying social, economic and environmental conditions impacting on health, as well as individual risk factors and risk behaviours, and use of the health care system. Thus, health education may involve the communication of information, and development of skills which demonstrates the political feasibility and organizational possibilities of various forms of action to address social, economic and environmental determinants of health (WHO Health Promotion Glossary).

Disease prevention

Disease prevention covers measures not only to prevent the occurrence of disease, such as *risk factor* reduction, but also to arrest its progress and reduce its consequences once established. Reference: adapted from Glossary of Terms used in Health for All series. WHO, Geneva, 1984

Primary prevention is directed towards preventing the initial occurrence of a disorder. Secondary and tertiary prevention seeks to arrest or retard existing disease and its effects through early detection and appropriate treatment; or to reduce the occurrence of

relapses and the establishment of chronic conditions through, for example, effective rehabilitation.

Disease prevention is sometimes used as a complementary term alongside *health promotion*. Although there is frequent overlap between the content and strategies, disease prevention is defined separately. Disease prevention in this context is considered to be action which usually emanates from the *health sector*, dealing with individuals and populations identified as exhibiting identifiable *risk factors*, often associated with different *risk behaviours*.

Definitions related to health care quality

Quality improvement

Improving effectiveness, efficiency and patient-oriented care processes (better quality) in order to reach better outcomes for patients.

Quality improvement system

A set of interacting activities, methods and procedures used to direct, control and improve the quality of care.

Quality strategies

Organizational application of tools and interventions to improve patient care.

Quality management

A systematic process of identifying, assessing and taking action to maintain and improve the quality of care processes.

Curriculum Vitae

Oliver Groene was born on 12 May 1972 in Bad Pyrmont, Germany. After finishing grammar school he pursued studies in Sociology at the University of Bielefeld which he finished with Summa Cum Laude and Distinction. He received a scholarship for postgraduate studies at the London School of Hygiene & Tropical Medicine and was awarded a Master of Science in Public Health. Continuing his studies at doctoral level at the University of Pompeu Fabra in Barcelona he received the Diploma of Advanced Studies with a study on the “Variations in the use of resources for stroke care: impact on outcomes and costs”. In addition, he completed a study programme in business management at the University of Bielefeld, a programme on quality improvement methods at Harvard School of Public Health and various continuing education programmes, such as the Joint Commission Summer Programme on Health Care Accreditation.

His working experience included positions as researcher at the School of Public Health, Department of Social Epidemiology and Health Systems Research at the University of Bielefeld, and various positions at the World Health Organization in Geneva, Copenhagen and Barcelona. In the latest position, he was programme manager for quality of health systems and services at the WHO Regional Office for Europe and responsible for the development and implementation of quality improvement projects with hospital organizations and ministries in Western and Eastern Europe, and Central Asia. Currently, he is employed as Director of Research and Education at the Avedis Donabedian University Institute, Autonomous University of Barcelona.

He is member of the German Society for Quality Management and the German Public Health Association and acts as ad hoc peer reviewer for a number of international journals on health care quality issues, health policy and health promotion.

