

4 Health care organisations and service delivery

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4.1 Introduction

Health care organisations are a crucial component of health care, operating at the meso level between the health care system at the macro level and the interactions between patients and health professionals at the micro level. Within as well as between European countries, health care organisations differ considerably in size and structure, varying from large structures, like general or specialised hospitals to small primary care units or health centres (McKee & Healy, 2002; Grol et al, 2006). A common element is that they are the place where supply and demand meet and interact: users or patients seeking care for a health problem and health care professionals providing health services in response (Delnoij & Groenewegen, 2007). In order to develop evidence-informed policies that can improve the health care sector in Europe, empirical evidence is needed about the structures, care processes and performance of organisations (Donabedian, 1966). For that purpose we set out to contribute to the European research agenda by focusing on two questions:

1. What types of research on health care organisations have been conducted in the past decade or are currently being conducted and does this differ between European regions?
2. How does this research match with future priorities as seen by experts in Europe: which domains have been studied extensively and which are under-researched at a European level?

We focus on health care for *individuals* and exclude public health organisations, concerned with collective disease prevention and health promotion. In addition, our review excludes studies of purchasers/commissioners (sickness funds, insurance companies and governments). Focus is on two sectors that are generally considered key elements of all European health care systems, namely primary care and hospitals. Primary care organisations provide care that is described by the World Health Organization as care that is essential, universally accessible and at an affordable cost (WHO, 1978; 2008). As it is often seen as the linchpin of effective health care delivery, many EU Member States, new and old, emphasise the need to develop their primary care system (Kringos et al, 2010). Hospital care provides specialised care and is the largest component of European health care systems in terms of health care spending: the hospital sector typically absorbs 35–70% of countries' health care budget (Rechel et al, 2009). Especially in a period of economic stagnation, this highlights the need for more evidence on better ways to configure hospital services or change the way hospitals operate.

Moreover, in response to changing patterns of morbidity (increase of long term conditions) and the preferences of patients, both primary and hospital care are in constant development, with new organisational forms developing on the interface between both sectors, ranging from loose cooperation to integrated care chains (Goldsmith, 1994; Saltman & Figueras, 1999; De Blesser et al, 2006). As a result of such developments patients move through organisations in different ways: through referrals (e.g. between less and more specialised hospitals), co-operation (e.g. between day care centres and long-term care institutions) or care chains (to provide integrated care over different episodes).

In the next section we provide a conceptual framework to define the domain of health services research covered in this chapter and go on to describe our study methods. Then, a bibliometric analysis provides an overview of published research, while a review of research projects at European level offers an indication of current or already finished research that may not yet be published. To identify priorities for the future, expert consultations were held on-line, followed by discussions at conferences. These inputs are used for setting an agenda for health services research at the organisational level.

4.2 Framework and Methodology

4.2.1 Conceptual Framework

As research on health care organisations can include a wide variety of issues, a framework is required to classify types of research. Following Lammers (1978) and Delnoij & Groenewegen (2007) we have distinguished between four major areas of research on health care organisations. It provided a structure to guide the literature searches and expert consultations. It is loosely based on Donabedian's (1966) framework, distinguishing between the structure of organisations, the care processes within organisations and their outcomes or performance. The four areas are:

Intra-organisational control

This area focuses primarily on how organisations arrange their work internally, such as by differentiation or specialisation (Sochalski et al, 1997). Topics include workforce and skill- mix (e.g. Sibbald et al, 2004), creation of multidisciplinary teams (Ouwens et al, 2005), and reconfiguring services (Spurgeon et al, 2010). For a complete list of topics, see Box 4.1.

Inter-organisational relations

As organisations relate to their environment and are part of organisational networks, they have to organise their relationships to other organizations. Topics include the continuity of care between organisations (e.g. Haggerty et al, 2003), the transfer from secondary to primary care (Atun, 2004); and the spatial distribution of services, including cross-border health care (Joseph & Philips, 1984; Dussault & Franceschini, 2006).

Patient relations

The performance of organisations can either be understood narrowly as the performance of the clinical process or more widely in the context of patients. An organisation's relationship with patients is considered important as they are connected to the organisation's central goals. It deals with topics such as patient involvement and participation (O'Connor et al, 1999), patient compliance (Van Dulmen et al, 2007), patient delay (Richards et al, 1999) and demand management (Jack & Powers, 2008).

Governance and accountability

Health care organisations have their own governance structures and also function within health systems where they are subject to governance and regulation, for instance on labour conditions, patient safety and their level of autonomy and market exposure. Topics include assessment and improvement of quality and safety (see chapter 6), the relationships between professionals and managers (Dückers et al, 2009), and the regulation of professions or provider organisations (Trubek et al, 2008).

4.2.2 Bibliometric analysis

We provided an overview of European literature on health care organisations published between January 2000 and December 2009 by a search of the scientific databases Pubmed and Embase. Thirty-three countries were selected, all being EU Member States, candidate Member States and members of the European Economic Area (EEA). Relevant keywords were selected from the thesaurus of Medical Subject Headings (MeSH), used in Pubmed. Manually selecting keywords has proven to be a highly sensitive method with a fairly low specificity (Delnoij & Groenewegen, 2007). Therefore the selection of keywords was started with a manual scan of all abstracts between July 2007 and July 2009 (n= 506) of BMC Health Services Research. A selection of articles that could be

considered to describe research on health care organisations led to the identification of relevant MeSH terms which were then tested in the MeSH database on a volume of another journal (Health Affairs, 2008). Next, keywords were added or removed until the search led to a list of articles, which resembled 90% of the articles which were manually selected. The final list of keywords was also translated into a list of relevant keywords for Embase. Further inclusion criteria were that the article needed to address human health and contain an abstract, published in English. All search keywords and criteria are listed in detail in Appendix 3. Results yielded 19,624 articles from Pubmed and 8,806 articles from Embase. Titles, authors, keywords, publication dates and abstracts were downloaded for further analysis. Duplicates (1,426) as well as references on non-European research (in particular “New South Wales” and “New England”) were excluded, which led to 23,617 articles.

To determine how often keywords occur in the bibliometric analyses, each keyword was first analysed, together with all relevant sub-keywords, that sometimes ran in two or three layers. Some keywords were clustered together based on the keywords from two databases and on the topic. For example Patient Education, Participation, Satisfaction (PEPS) is a combination of 6 keywords from the results of two databases (PubMed and Embase), that together form one keyword. In total 27 keywords used from PubMed and Embase were counted. As for country differences in knowledge production, an overview is provided for the total number of references per country. A special case is the United Kingdom, as four countries fall within the UK. To cover this, keywords were combined for references on the UK, England, Scotland, Wales, Northern Ireland, Great Britain and London.

4.2.3 Classification of a sample of studies

As keyword searches only provide limited information about an article's contents, a random sample of 1,010 articles was drawn for further analysis. The sample was stratified per country: from all 33 countries a minimum of 30 articles were included. For countries with less than 30 articles in the databases, all articles were selected. Each article was scanned to determine if it dealt with health care organisations. If so, each article was then classified regarding the following dimensions:

- Domain: Each article was assigned to one or more of the following domains: 1) Intra-organisational control, 2) Inter-organisational control, 3) Patient relations or 4) Governance and accountability;
- Topic: Based on a first scan of the literature a number of topics were identified. Each article was assigned to one or more topics. If the category 'other' contained a frequently occurring theme, it was reclassified into an extra topic. In total 35 topics were distinguished (see Box 4.1).
- Sector: primary care, hospital care or both.
- Type of data collected: 1) 1= Quantitative data, 2) 2= Qualitative data, 3) Administrative data, 4) Documents, 5) Literature review, 6) Clinical data, 7) Combinations/ other.

Box 4.1 Overview of topics used for classification of past and current research and future priorities

<p>Domain 1 Intra-organisational control</p> <ol style="list-style-type: none"> 1. Workforce skill-mix; professional boundaries; training 2. Creation of multidisciplinary teams 3. Increasing scale of health care organisations 4. Continuity of care across professional boundaries 5. Chronic disease management 6. Integrated care 7. Changing services provided by health care organisations 8. Other 	<p>Domain 2 Inter-organisational control</p> <ol style="list-style-type: none"> 9. Shifting from secondary to primary and community care 10. New and (entrepreneurial) health care organisations 11. Continuity of care across organisational boundaries 12. Cross-border health care 13. Scale differences between health care organisations 14. Reconfiguration of services 15. Regionalisation 16. Inequalities and distribution 17. Other
<p>Domain 3 Patient relations</p> <ol style="list-style-type: none"> 18. Demand management (e.g. pre-authorisation) 19. Balancing needs and demands (e.g. evidence-based versus patient-centred care) 20. Patient delay/waiting 21. Patients' reasons for help seeking/lay referral 22. Patient involvement and participation (e.g. expert patient; co-production of health) 23. Use of eHealth (e.g. telemedicine; telehealth) 24. Patient compliance and patient adherence to treatment guidelines 25. Enhancement of public information on the quality of providers for informed choice 26. Other 	<p>Domain 4 Governance and accountability</p> <ol style="list-style-type: none"> 27. Assessment and improvement of quality and safety 28. Balancing efficiency and quality 29. Regulation of professions 30. Regulation of provider organisations 31. Planning/commissioning/purchasing services (e.g. funding methods; reimbursement methods) 32. Treatment guidelines 33. Treatment effectiveness or outcomes 34. Relationships between managers and clinicians 35. Other

Of the 1,010 articles selected, 459 (45%) articles could be considered to deal with research on health care organisations. This low specificity is quite similar to results found by Velasco and Busse (see chapter 3) and Delnoij & Groenewegen (2007).

4.2.4 Inventory of EU-funded projects

Neither form of literature search can give an overview of current or recently finished research that has not yet been published. Subsequently, European research projects were selected in databases of the European Commission, namely the project database of the Executive Agency for Health and Consumers (EAHC), which implements the EU Public Health Programme by the Directorate General for Health and Consumers and the project database of Cordis, the information service on

current and past EU research Framework Programmes. Projects were first selected based on two keywords: 'primary care' and/or 'hospital'. In addition, a manual scan took place of all projects in the pillar "Optimising the delivery of health care to European citizens" within the current Seventh Framework Programme. A first scan limited to currently running EU projects only led to the identification of 29 relevant projects. We therefore extended the search to all projects in the period 2000-2010. We first identified 36 projects in EAHC and 637 projects in Cordis. Next, all project titles were manually scanned to eliminate clinical or biomedical research. Based on this selection, 93 projects were investigated further by evaluating their project descriptions. Two thirds, in total 62 projects, addressed HSR at an organisational level. These projects were then classified based on the same areas used for the sample of articles.

4.2.5 Online stakeholder survey

An online stakeholder survey for the overall HSR in Europe Project was carried out among researchers and decision makers in order to assess views on upcoming HSR priorities and to explore options for improving the translation of HSR into policy and practice. A general description of the survey and its responses is provided in chapter 2. The survey contained a section on health care organisations which was filled in by 82 of all 295 respondents (28%). Of these 82 respondents, 26% could be considered decision makers and 71% researchers (plus 4% had another role). As for geographical coverage, a distinction is made between respondents from the EU's initial 15 Member States (70 %), its new Member States (21%) or from other European countries (10%), mostly from an EEA country. Experts were also invited to answer an open question as to which HSR topic they considered the top priority for the next two to five years and why.¹ Of the 218 responses, 167 (77%) related to health care organisations though some overlap with other domains of HSR covered in other chapters, in particular on health care systems and benchmarking and performance indicators.

4.2.6 Country Experts Consultation

A questionnaire was sent to country consultants in 33 European countries, aimed to identify the activities in HSR in each country and to assess how this research is used to inform policy-making. The questionnaire included open questions relevant for mapping research on health care organisations across Europe, including the priorities as identified by policy makers and/or funders at national level. Details on the selection of country consultants and on the contents of the questionnaire are provided in chapter 2.

4.2.7 Verification of the survey responses

More detailed discussion took place with experts at a working conference of HSR Europe in The Hague (April 2010), organised as part of the project. About 90 participants working in three groups of 30 each discussed research priorities with regard to three topics that had been selected beforehand. Follow up discussions were held at the annual conference of the European Health Management Association (EHMA) (June 2010) and the biannual conference of the European Forum for Primary Care (EFPC) (August 2010), in order to verify the topics identified and to suggest additional topics to be incorporated. The former involved experts in health management and policy at an organisational or national level and the latter provided an opportunity to test findings among experts in primary care. In addition to workshop discussions, the EHMA meeting also incorporated a replication of the online survey, providing additional findings especially among decision makers, 40% of all EHMA respondents belonging to that category.

¹ In a first version of the online survey, respondents were asked to provide a top five of topics. In a later version, experts were invited to select one topic, plus provide an explanation why it was relevant. To compare both, only number one priorities are analysed, unless the number one priority did not address health care organisations but another part of HSR (e.g. HTA). In that case the first relevant organisational topic was selected, if present.

4.3 Results

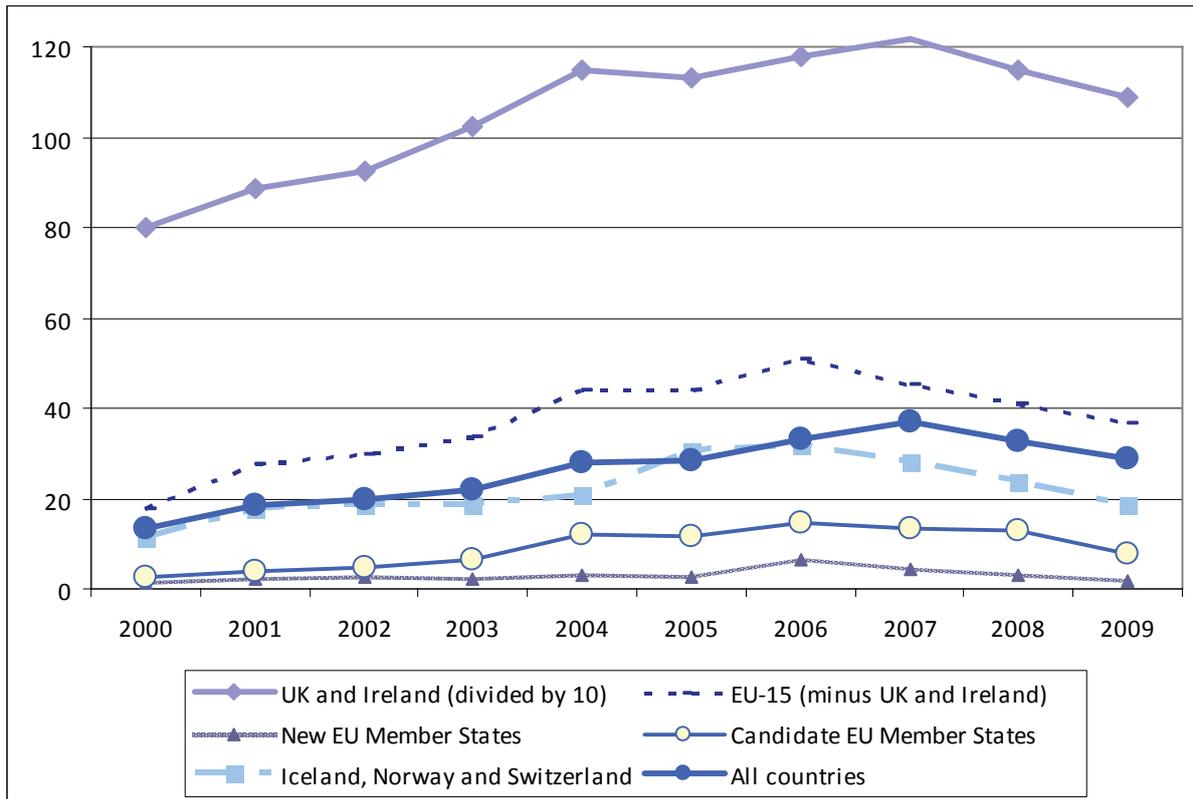
4.3.1 What has been done in the past decade?

Research output in Europe

Bibliometric analyses indicate that over 23,000 publications have been published in the last decade with keywords indicating topics that address health care at the organisational level. Figure 4.1 shows the increase in the number of publications per year in a specific country, summarised for Europe as a whole and for five different clusters of countries: the UK and Ireland, the other EU-15 countries, new EU Member States, EU Candidate Member States and other countries. As the amount of research on the UK and Ireland is far higher than in the other countries, the number of publications for these countries is divided by 10 in order to fit it on the graph.

On average, the number of HSR publications shows a steady increase between 2000 and 2007 for all groups of countries, with an average growth rate of 10% per year. After 2007 this reversed, with an average decline of 11% a year. For 2009 this may be due to the fact that MeSH terms might not yet have been assigned to all articles, but this wouldn't explain the drop in 2008. Indeed, some delay in assigning MeSH terms to articles may play a role as the same count was done at two times: when the count of articles was done in April 2010 instead of November 2010, the number of publications for 2009 was much lower, while those for 2007 and 2008 remained almost unaltered. While this accounts for part of the drop, there still appears to be a reduction in research production, similar to that found in chapter 3, addressing health care systems.

Comparison of regions shows the UK and Ireland have by far the highest production. HSR production on new and Candidate Member States is far lower than in the European region as a whole. In part these differences are caused by language bias in Pubmed and Embase, as not all non-English journals incorporate an English abstract and are included in one of the databases.



*EU-15 = Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden (minus UK and Ireland) ** New EU Member States = Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovenia and Slovakia *** Candidate MS = Croatia, Macedonia, and Turkey

Figure 4.1 Average number of publications per year for all 33 European countries and by cluster of countries

International variation in research output

To get a view of country differences, a distinction is made between countries as a keyword and countries in researchers' addresses. The first provides an overview of studies *on* different European countries, while the second indicates studies *from* each of the countries. The numbers of publications differ considerably between countries (Table 4.1). The United Kingdom is both the biggest producer of research and most often the subject of study. In contrast, new or candidate Member States score much lower, also compared to older Member States. Overall, more research is produced on a country than from a country, reflecting in part that studies address multiple countries. It also indicates the co-authorship of many publications, in part by researchers who move from one country to the other, for example, researchers from 'low research output' countries working in 'high research output' countries. The ratio between the numbers differs between countries: Luxembourg and Slovakia are far more often the subject of studies in other countries than Turkey or the Netherlands, where knowledge is mostly produced domestically.

Table 4.1 Total number of publications on a country (keywords) and from a country (address field), for full table see Appendix 3

	No. of publications on a country	No. of publications from a country	Ratio on / from a country
Macedonia	7	2	3.50
Malta	7	3	2.33
Latvia	12	3	4.00
Luxembourg	12	1	12.00
Cyprus	13	4	3.25
Slovakia	20	2	10.00
Czech Rep.	24	7	3.43
Lithuania	26	14	1.86
Romania	26	8	3.25
Estonia	29	17	1.71
Bulgaria	30	14	2.14
Iceland	30	12	2.50
Slovenia	47	28	1.68
Hungary	48	22	2.18
Portugal	52	17	3.06
Croatia	67	45	1.49
Poland	105	72	1.46
Austria	124	63	1.97
Greece	193	125	1.54
Finland	239	177	1.35
Belgium	240	150	1.60
Turkey	254	216	1.18
Switzerland	315	226	1.39
Norway	316	252	1.25
Denmark	344	260	1.32
Spain	350	226	1.55
Sweden	529	398	1.33
France	543	372	1.46
Italy	544	393	1.38
Germany	728	490	1.49
Netherlands	921	742	1.24
Ireland	1411	678	2.08
UK	19060	9706	1.96
Average	808.1	446.8	1.81
Average excl UK+Ir	199,8	140,7	2,58

Differences in the numbers of publications between countries can reflect in part their population size and their wealth. There is a positive but weak correlation between the number of publications on a country (country as one of the keywords) and its population ($r = 0.34$) and its Gross Domestic

Product (GDP) ($r= 0.44$).² Figure 4.2 provides an overview for the number of publications on a country per 10,000 inhabitants (2000-10) and per \$ 1 billion GDP (in 2008, source: Eurostat). On both dimensions, the UK and Ireland are off the chart, with more than 3 publications per 10,000 inhabitants and more than 7 publications per billion \$. Shown in this manner, it is apparent that it is not so much 'old versus new Europe' that makes the difference. Instead, countries such as Estonia and Croatia are relatively more often the subject of study than some large Member States such as France and Germany, corrected for their GDP per capita.³ This illustrates that language is a strong factor, as the search was limited to papers with an abstract in English. While in absolute numbers France and Germany have high HSR production, the availability of knowledge on these countries in English is relatively low for their size and GDP.

Extent of multi-national research

The international component in HSR is another element that can be distilled from looking at countries' representation. A key element of most research, amounting to 90% of all studies, is that it appears to be based on one country, containing only one country name in the list of keywords (Table 4.2). About 8% include two countries, while the remainder makes a comparison between three or more countries. Studies on six or more countries are rare. At the same time, some articles may address Europe in a more general manner. About 2% of papers use the keyword 'Europe'. In part, this referred to studies addressing two or more countries, but also studies based on one country but considering the wider context of Europe.

² Correlations of both dimensions with numbers of publications being produced on a country, using country as one of the keywords, are almost identical.

³ A similar pattern would emerge if one would take the number of publications produced in a country.

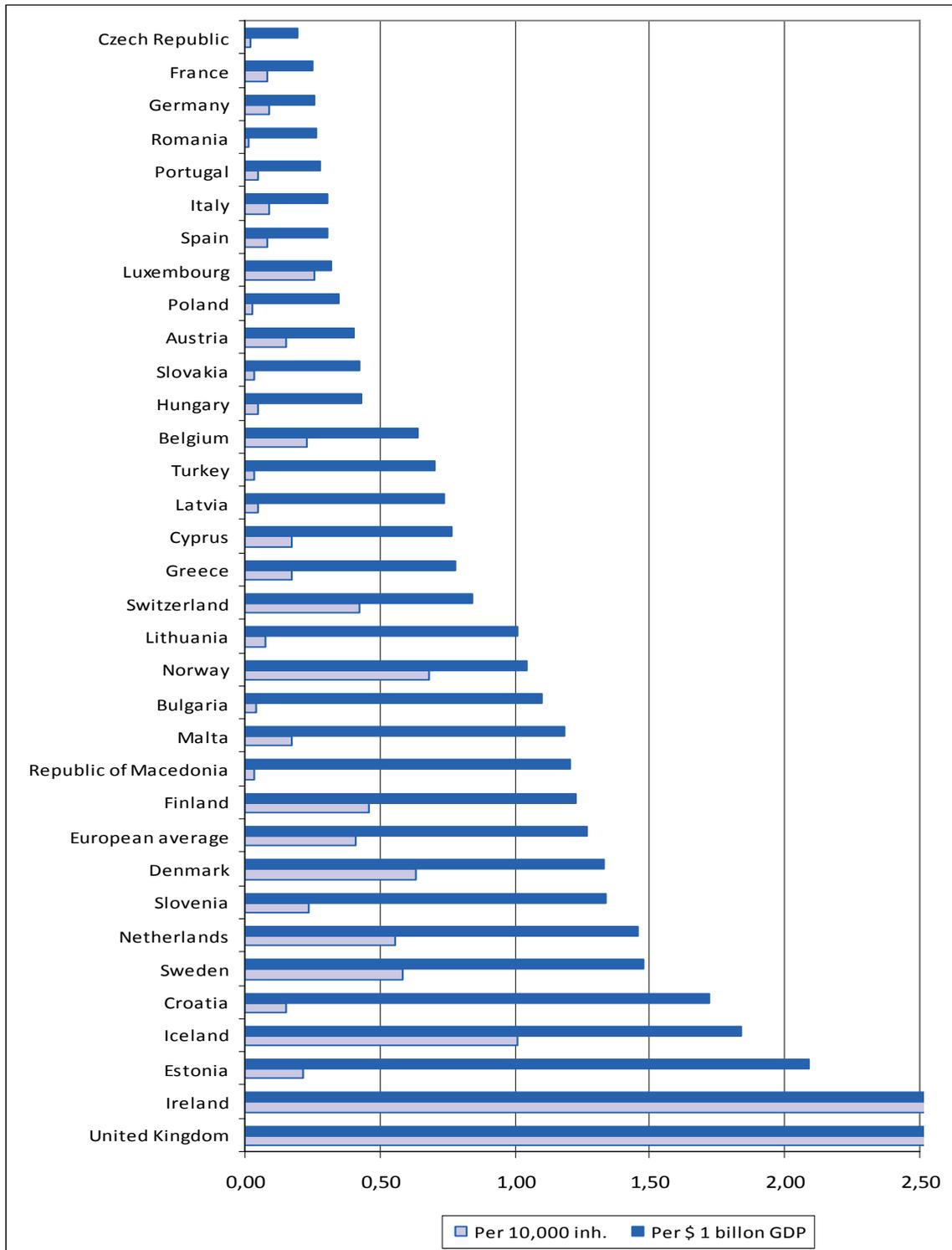


Figure 4.2 Publications per country per 1000 population (average 2000-2010) and per \$ 1 billion GDP (2008, sorted on publications per \$1 billion GDP)

Table 4.2 Numbers of countries (keywords) per publication

Number of countries	Number of publications	Share of publications (%)
One country	21197	89.8%
Two countries	1933	8.2%
Three to five countries	270	1.1%
Six or more countries	78	0.3%
No country listed	139	0.6%
Total	23,617	100%
With keyword 'Europe'	476	2.0%

Main research topics

To give a general view of the types of research topics investigated, an overview is provided of the ten most common keywords (Figure 4.3). An explanation of keywords is provided in Appendix 3. About half of all articles were on 'professional practice', which refers to professional activities and performance of duties for the provision of health care (with keywords such as 'group practice', 'nursing' or 'referral and consultation'). The second most common topic is 'physicians' (30%), indicating the historically strong emphasis on the supply of care rather than the demand for care. Other keywords such as 'patient education, participation and satisfaction' (15%), 'patient care management' (14%) are far less common.

Regions differ somewhat in the topics studied. For example, in studies on EU-15 countries a larger share is related to 'physicians', 'health facilities' and 'guideline adherence' than in candidate member states. In contrast, articles that address these latter countries more often contain keywords on 'professional practice', 'patient care management' and 'patient safety'. Additional results show large differences in the occurrence of specific keywords between individual countries (Appendix 3). For example, research in Macedonia and Malta is completely accounted for by four of the ten selected keywords, while in countries like Ireland, Greece and the UK all ten selected keywords can be identified.⁴

⁴ Such a country comparison also compensates for the fact that overall patterns in keywords are largely dominated by the UK (as 71 percent of all references refer to the UK).

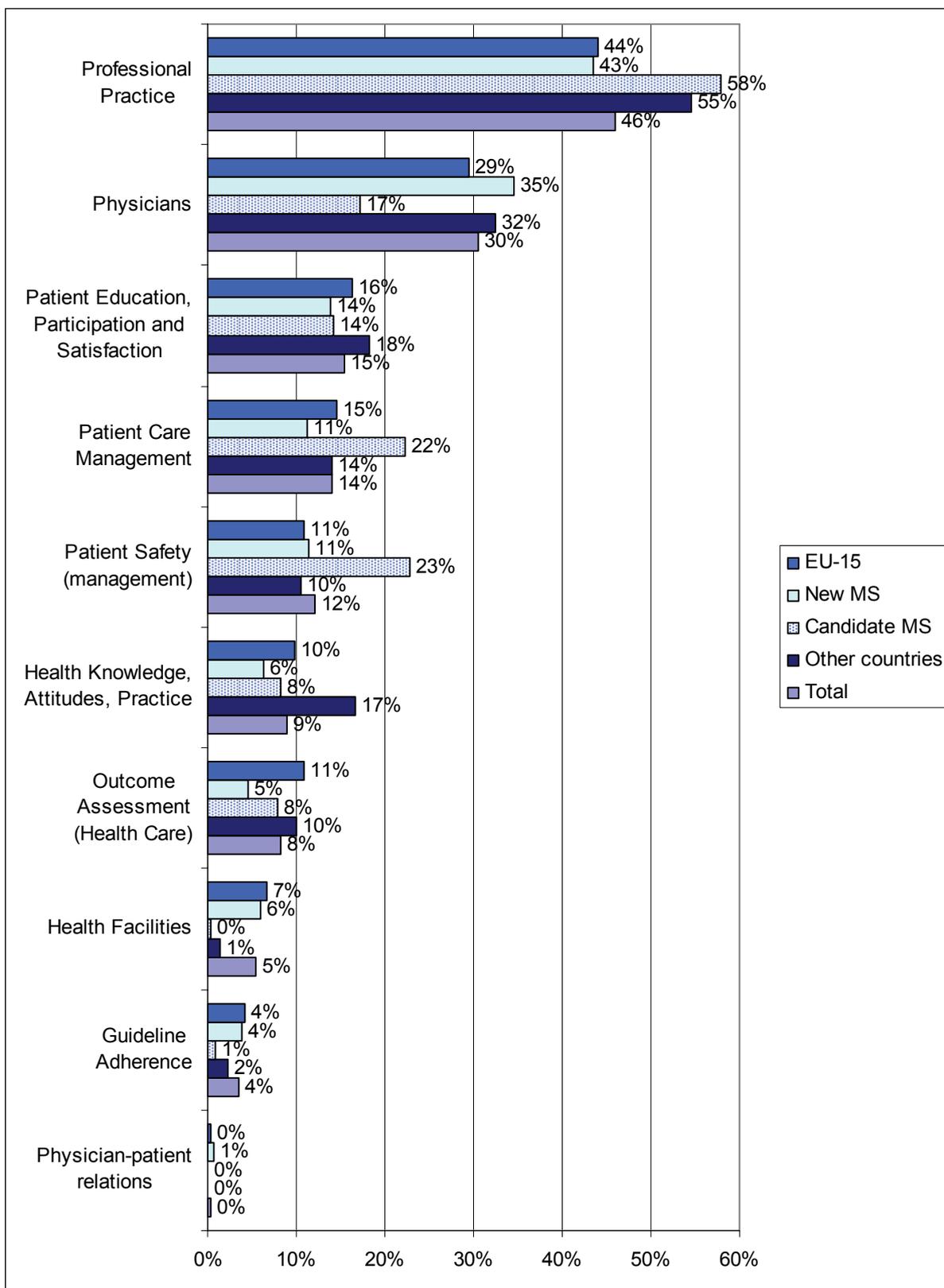


Figure 4.3 Ten most frequently occurring keywords in published research in the period 2000-2009 by cluster of countries (as keywords)

Research areas studied

To provide a better picture of the topics addressed, we reviewed a sample of 1,010 HSR article abstracts, 45% of which dealt with research on health care organisations. Of these selected articles, the largest proportion (41%) addressed the area of governance and accountability, which includes topics such as treatment effectiveness and regulation of professions (Figure 4.4). About a third of articles (31%) were related either to intra-organisational relations (for example the internal workforce or changing service provision) or to patient relations (28%). Only 11% were on inter-organisational relations possibly because it deals with phenomena that are relatively new on the policy agenda, such as continuity of care. Differences between European regions are fairly small.

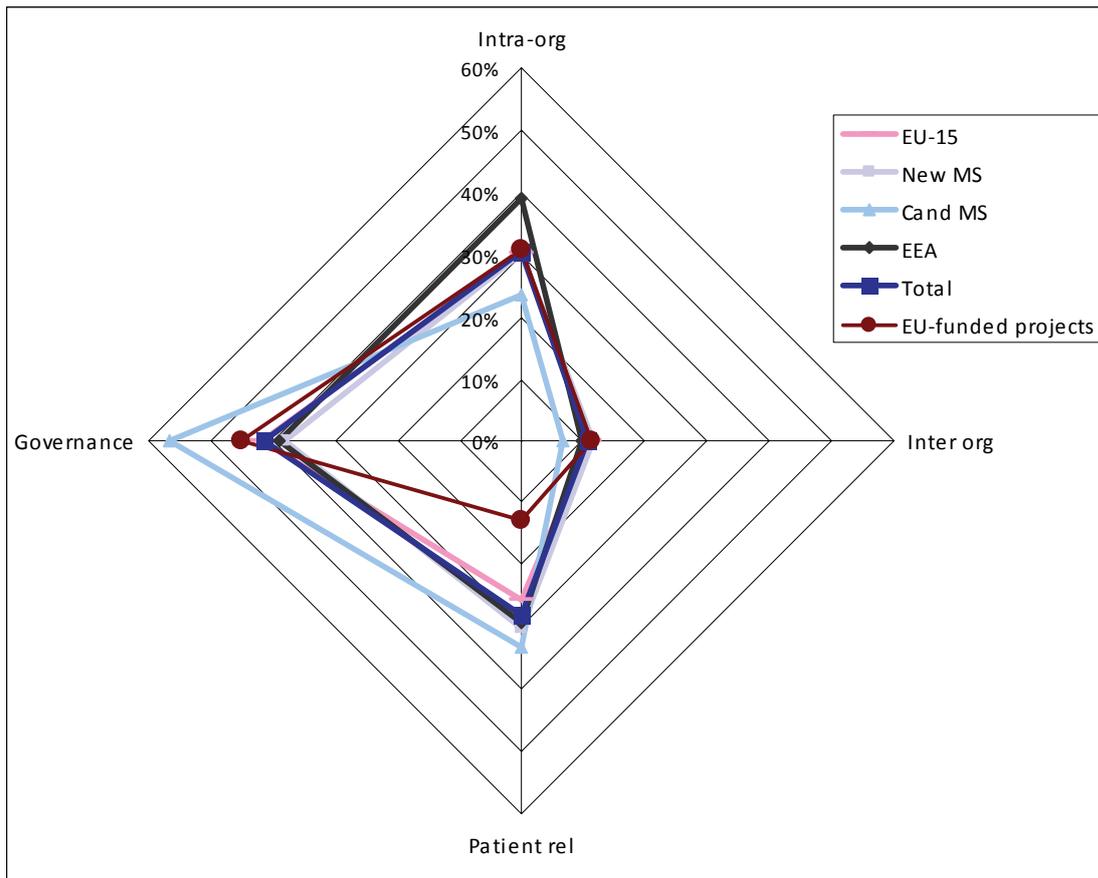


Figure 4.4 Radar chart with share of publications in each of the four research areas by cluster of countries

When it comes to the health care sector addressed, a similar share of articles relate to primary care (32%) as to hospital care (28%). Another 19% deals with both sectors, although in most cases it does not involve studies on the relationship between both sectors but health care in general, such as physician behaviour (Figure 4.5). Regional differences are small: primary care is studied slightly more often in new and candidate Member States, while hospital care is investigated slightly more in EU-15 countries than in other regions.

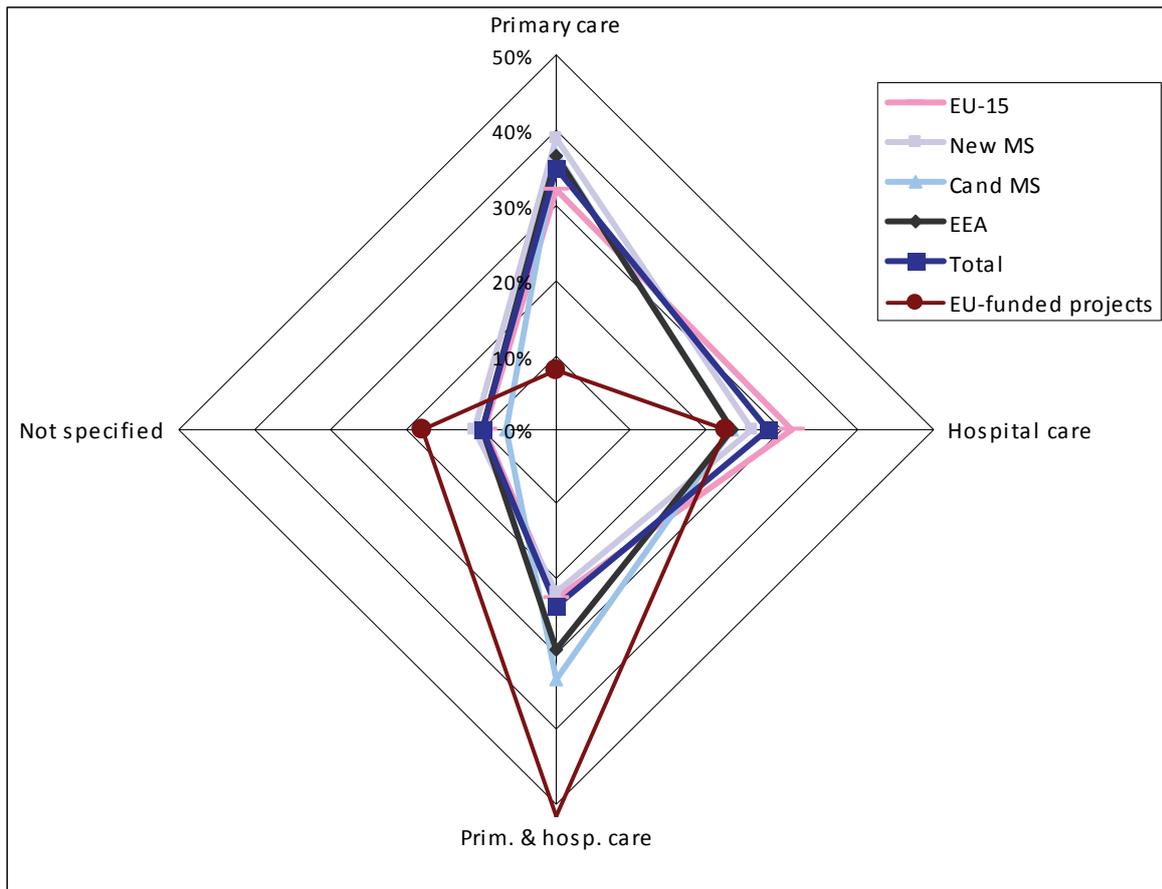


Figure 4.5 Radar chart with share of publications per health care sector by cluster of countries

As it is not so much region per se that explains a country's research focus on primary and/or hospital care, we examined whether the type of health care system relates to the type of studies covered. A distinction was made between National Health Service (NHS) systems versus Social Security Health care systems. While both systems differ mostly in type of funding (general tax versus earmarked), they also differ somewhat in referral, with access to hospital care in NHS-systems often dependent on a referral from a GP (gate-keeping), while in the second system there is often parallel access to primary and specialised care (Van der Zee & Kroneman, 2007). We considered 17 countries, 10 classified as NHS system and 7 as SSH system (Figure 4.6).⁵ On average, in NHS countries, 58% of research addresses primary care and 56% addresses hospital care. In SSH countries, both figures are lower, with 42% on primary care and 43% on hospital care. It is therefore not so much type of health care system that explains differences in focus (t-tests not significant). For articles it was also possible to classify their source of information. A majority of all studies makes use of quantitative data, mostly referring to survey studies. About 15 percent makes use of qualitative data (interviews), documents or previous literature, while 10 percent uses either administrative or clinical data (e.g. patient records).

⁵ Based on Van der Zee and Kroneman (2007) the following distinction was made: NHS systems are Denmark, Finland, Greece, Ireland, Italy, Norway, Portugal, Spain, Sweden and the UK. SSH systems are Austria, Belgium, France, Germany, Luxembourg, the Netherlands and Switzerland.

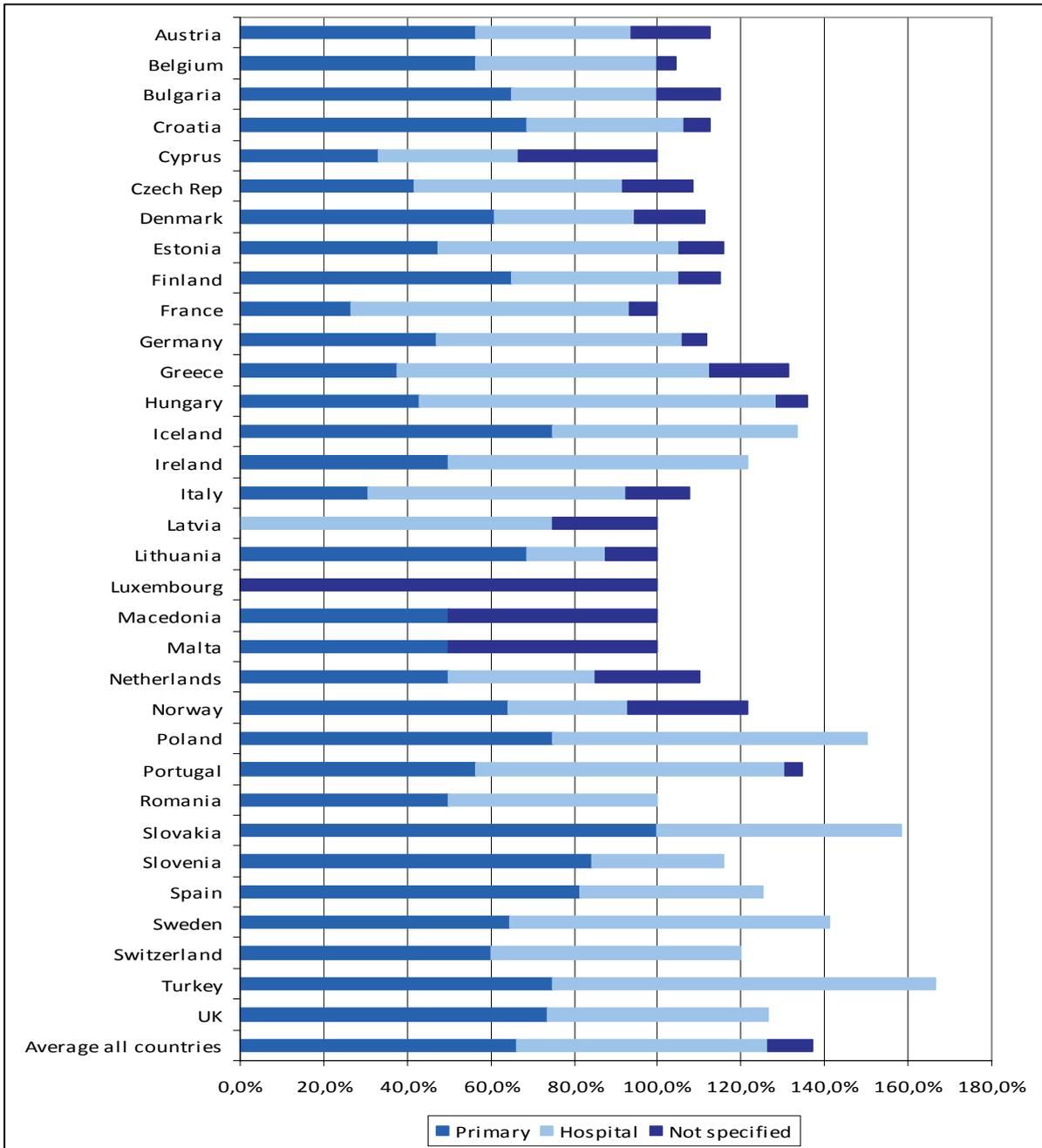


Figure 4.6 Horizontal bar chart with share of publications per health care sector for all countries

4.3.2 What research is being done at European level?

Our search for EU-funded research projects on health care organisations led to the identification of 62 projects. Overall, this current research very closely resembles the topics addressed in the past (Figure 4.4). For example, the largest proportion of EU-funded projects deals with ‘governance and accountability’, while ‘inter-organisational relations’ are covered least often. The largest difference is in ‘patient relations’, being commoner among published research (28%) than in EU-funded projects (13%).

When it comes to which health care sector is addressed (Figure 4.5), EU-funded projects differ from past publications. At European comparative level, research addressing primary care is uncommon (8%), whereas about half of all projects cover both sectors (Appendix 3).

Table 4.3 shows the geographical distribution of EU-funded projects. The right column contains the number of projects in which an institute from a particular country is involved, either as coordinator or as participant. Four countries are involved in more than half of all projects (the UK, Spain, Germany and Italy). The UK is also the country with the highest share of project coordinators: for almost one in four of the 62 projects (23%) the coordinating institute is located in the UK. There are also countries that are hardly involved in EU-funded projects. This refers among others to countries such as Malta, Croatia, Macedonia, Latvia and Iceland. Despite this discrepancy, a clear element of EU-funded projects is that they are internationally comparative in nature. On average, about 8 countries are involved in an EU-funded project. This can refer to both European and non-European countries: about one in five projects (19%) incorporates one or more non-European countries in its project team. It refers to a variety of mostly neighbouring countries, such as Israel, Russia as well as several African countries.

Table 4.3 EU-funded Health Services Research – geographical distribution of 62 projects, sorted based on number of participant and/or coordinator projects

Country	Coordinator		Participant		Coordinator or participant	
	n	%	n	%	n	%
United Kingdom	14	23%	36	58%	50	81%
Spain	4	6%	33	53%	37	60%
Germany	8	13%	27	44%	35	56%
Italy	7	11%	27	44%	34	55%
Greece	3	5%	28	45%	31	50%
Netherlands	8	13%	21	34%	29	47%
France	5	8%	22	35%	27	44%
Belgium	7	11%	17	27%	24	39%
Poland	0	0%	22	35%	22	35%
Sweden	0	0%	20	32%	20	32%
Finland	0	0%	20	32%	20	32%
Austria	2	3%	14	23%	16	26%
Ireland	3	5%	12	19%	15	24%
Denmark	0	0%	14	23%	14	23%
Portugal	0	0%	12	19%	12	19%
Switzerland	0	0%	11	18%	11	18%
Czech Republic	0	0%	8	13%	8	13%
Slovenia	0	0%	7	11%	7	11%
Slovakia	0	0%	7	11%	7	11%
Luxembourg	0	0%	7	11%	7	11%
Lithuania	0	0%	6	10%	6	10%
Estonia	0	0%	6	10%	6	10%
Cyprus	0	0%	6	10%	6	10%
Norway	1	2%	4	6%	5	8%
Hungary	0	0%	5	8%	5	8%
Romania	0	0%	4	6%	4	6%
Bulgaria	0	0%	4	6%	4	6%
Turkey	0	0%	3	5%	3	5%
Malta	0	0%	2	3%	2	3%
Croatia	0	0%	2	3%	2	3%
Macedonia	0	0%	1	2%	1	2%
Latvia	0	0%	1	2%	1	2%
Iceland	0	0%	0	0%	0	0%
Other non-European	0	0%	12	19%	12	19%

4.3.3 What research should be done in the future?

Online stakeholder survey

An online survey among experts in Europe focused on priorities for future research. Of the four main research areas, the one most frequently prioritised was inter-organisational relations (71%) followed by patient relations (50%). The other two areas each attracted 43% support (Figure 4.7). Decision makers tended to be more selective than researchers, prioritising fewer areas. Decision makers often selected only one area as a priority.⁶

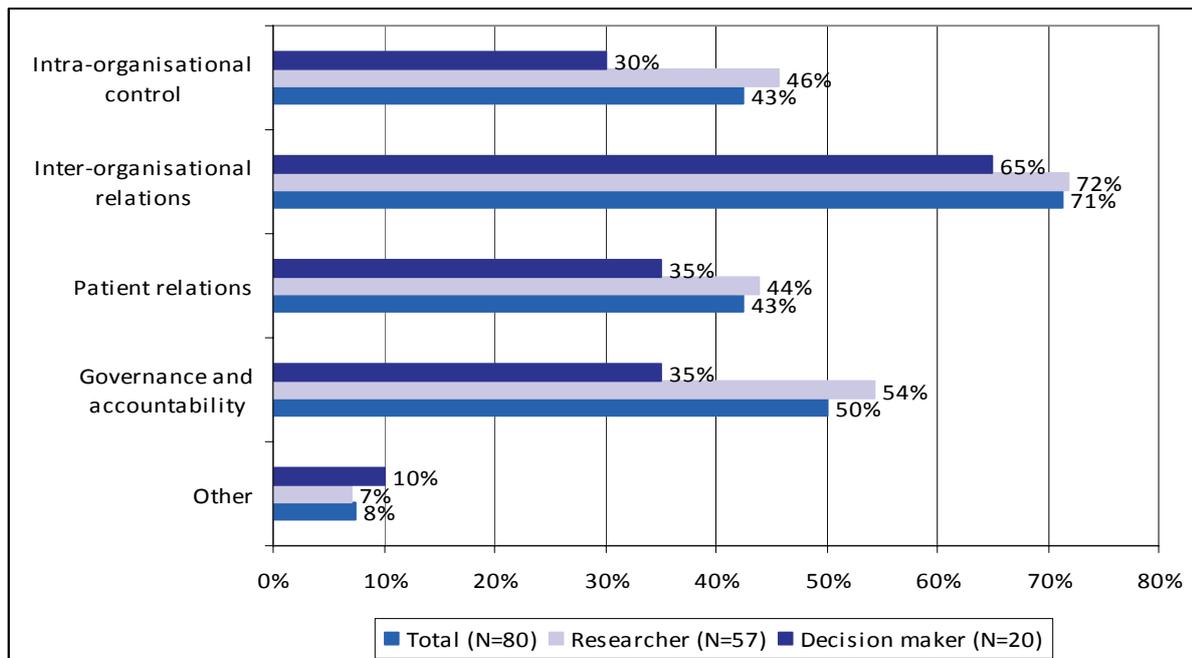


Figure 4.7 Research areas prioritised for the next two to five years by researchers and decision-makers

When looking at regional differences, it is noteworthy that some areas are prioritised in all four regions (inter-organisational and patient relations) while for others there is less agreement. Governance and accountability is considered one of the key topics for new Member States, while other countries (mostly EEA members) regard it as less important (Figure 4.8).

⁶ One in ten experts filled in the category 'other'. This included topics such as "financial flows", "service utilisation", "logistics", "implementation of biomedical and clinical knowledge in routine healthcare delivery" and "developing an understanding of the desperate need for action on Medically Unexplained Symptoms".

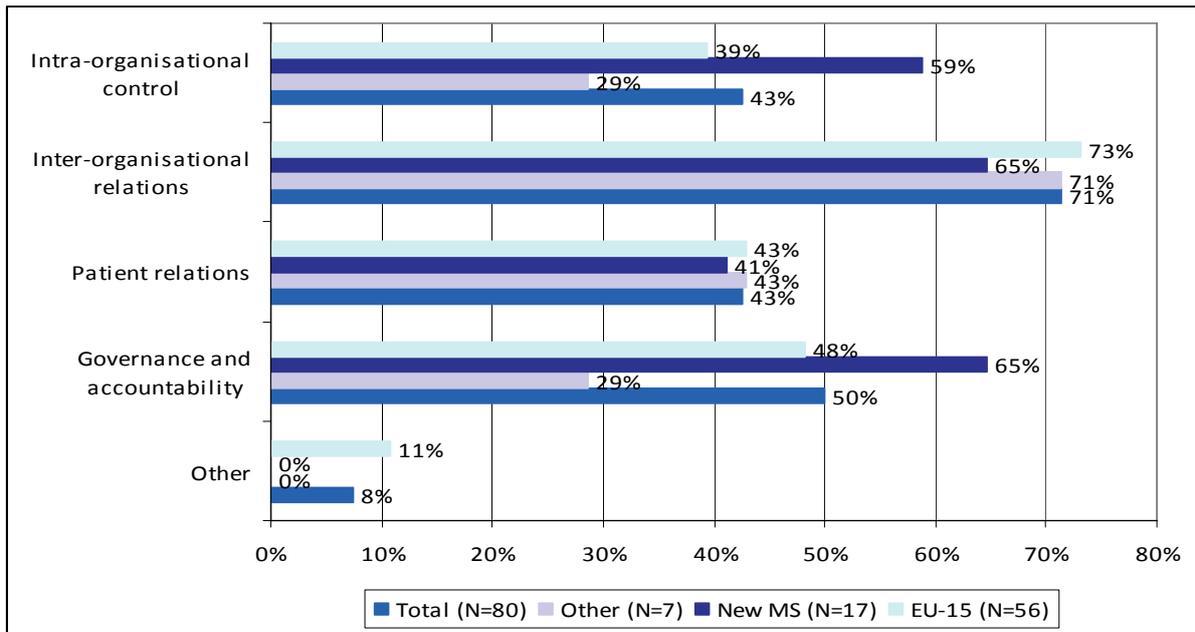
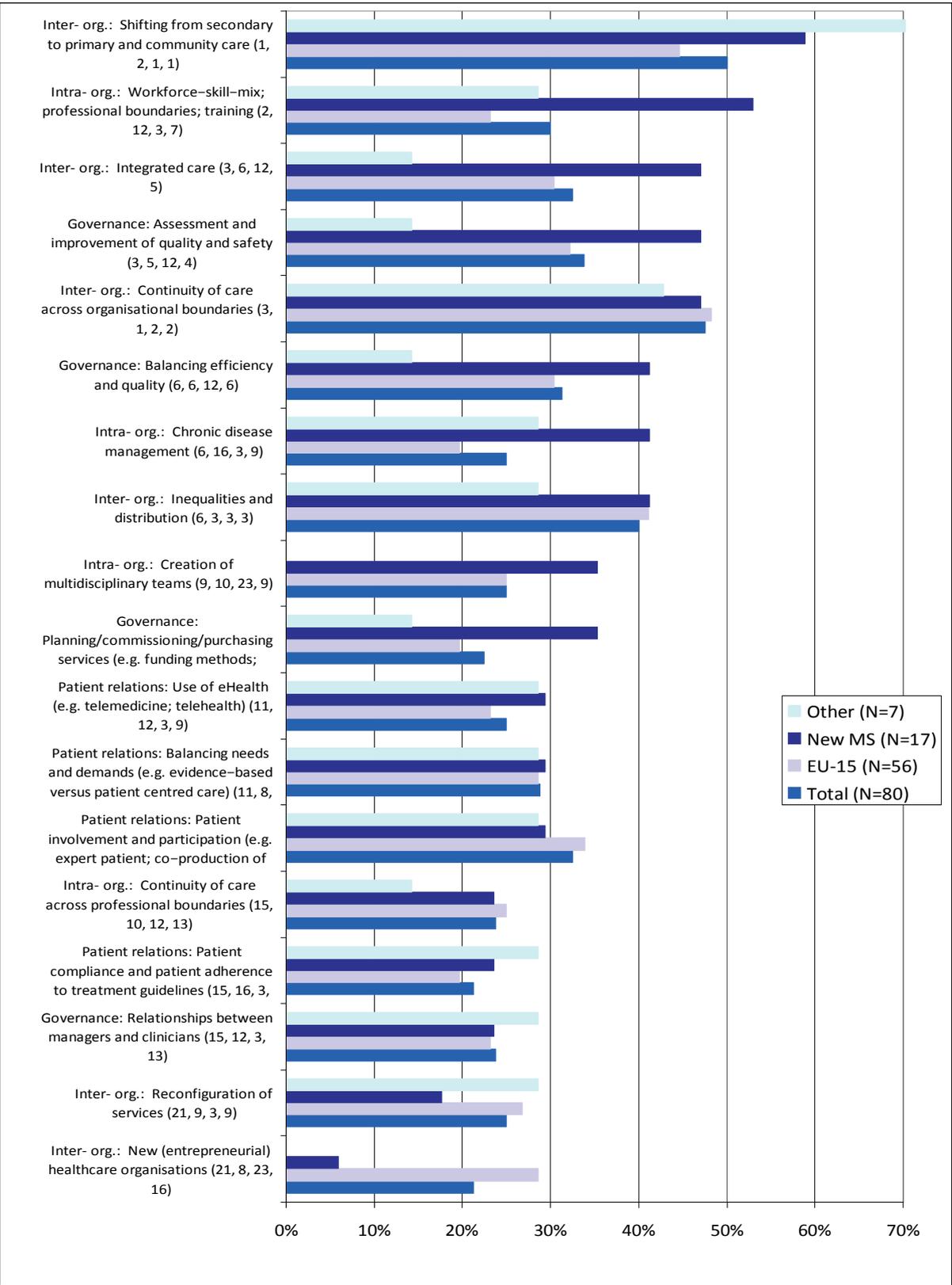


Figure 4.8 Research areas prioritised for the next two to five years by cluster of countries

Figure 4.9 considers research topics within each of the four research areas. It includes the 13 topics receiving the most support. They are ranked in descending order based on decision makers' views, though there is considerable concordance with the views of researchers (correlation 0.84). Sorted in this manner it appears that the two most important topics take an integrative perspective of both primary and secondary care, which should ideally be studied in combination.

A listing of priority topics for each of three regions (EU-15, New Member States and other countries) reveals the relationship between primary and secondary care to be an even higher priority in new Member States and other countries than in EU-15 countries. Moreover, the same experts from new Member States consider workforce issues a higher priority than other countries, in part perhaps because they are often the source of workforce migration (Buchan, 2007).

Figure 4.9 Research priorities most frequently listed (total share more than 20%) by cluster of countries, sorted in descending order based on new Member States' ranking (with rank scores between brackets: new MS, EU-15, other, total)



Working conference discussions

Greater detail about future research needs was obtained through a half-day workshop at the project working conference in April 2010. The most mentioned topics within three topic areas were selected for discussion in more detail. This choice was made based on the bibliometric analyses as well as preliminary survey outcomes. Only in the domain of governance and accountability was no topic selected, because of its inclusion in another part of the conference, namely health systems research. These discussions led to the identification and refinement of a large number of ideas, summarised below:

1. Integration of care across organizations

What integration of services, organisations or professions entails varies between countries, thus hampering international comparison. Conference participants also pointed to a clear lack of data and evidence as to whether integration improves patient outcomes and experiences, preferably at reduced cost. We should therefore learn more about drivers and success factors for integration of care, and which forms of integration are suitable for which types of patient groups, under which conditions. Can integration also be achieved in new organisational forms, such as care networks? The topic would also benefit from a comparison with the two other main fields of discussion, patient-centred care and skill-mix.

2. Patient-centred care and patient involvement in health care settings

Many policy documents refer to the importance of patient-centred care, which can be studied at the level of the health system as a whole, at the organisational level, and at the level of individual patients. From an international perspective, the use and interpretation of the concept can vary due to differences in cultural backgrounds. Policy can benefit from international comparisons, aimed at understanding how incentives for patient-centred care vary due to effects of the (regulatory) environment of the health care system and how tensions can arise between professional guidelines and patient-centred care. From a patient perspective, more insight is beneficial about the overlaps and discrepancies between patient needs and their expectations, and the most suitable type of patient-centeredness for chronically ill versus other patient groups. Further research can facilitate the use of patient-centred care in practice, by means of an evaluation of strategies, interventions and incentives that aim to empower patients or that raise professionals' awareness of patient-centred care. A final theme that emerged is the relationship between patient-centred care and technology, both positive and negative. Do new technologies indeed work for all patient groups?

3. Evaluating the skill-mix, organisation and delivery of care

Although international comparisons are considered difficult, there is a clear need for more insight into variations across Europe into the tasks and specialisation of professionals and their consequences for the quality of care. Linked to this are several factors, including the role and use of guidelines, their implementation, and the shift from secondary to primary care: which elements, such as training, type of organisation, leadership and skill-mix are required to meet future health needs, in part when transferring health care to primary care settings? In addition, not much is known about the effects of team climate and composition on their performance, as well as on the limitations and possibilities that professional roles and (inter)professional education impose on skill-mix utilisation. Understanding is also often lacking as to which interventions, both technological and organisational, have improved the quality of care. What are the core factors of such interventions and to what degree are they applicable independent of the (national) context?

Follow-up meetings

Country expert consultations

Country experts from 26 countries identified key priority areas which were used in their countries. One very broad priority area which was mentioned regularly was the assessment of new and innovative ways to organise the delivery of health care, e.g. in England, Denmark, Estonia, Finland and France. In addition, country experts from Germany, Italy, the Netherlands and Norway identified continuity of care as a priority area in their countries, and in particular the implementation of chronic disease management programs. Other experts listed research into the hospital sector (e.g., Bulgaria, Austria) or collaboration between hospital and primary care (e.g., Denmark, Czech Republic) as main research priorities in their countries. Similar to the results in chapter 3 on health care systems, a number of consultants also referred to the growing attention for privatisation and financing of (hospital) care (e.g., Austria and Macedonia) or the emergence of public-private partnerships (Denmark). Two other main topics most frequently mentioned were the growing recognition of patient orientation and patient empowerment (e.g. in Denmark, Finland or Italy), and various aspects of the health workforce (e.g. attractiveness of the health sector in Finland, deployment of the NHS workforce in England and workforce planning and forecasting in Slovenia). Overall, the responses not only showed a large overlap in priorities between countries, but also a clear similarity with the online survey results.

4.3.4 Comparing past and current research with future priorities

Overall, future research priorities compared with past publications and EU-funded projects (Figure 4.11) reveals that inter-organisational relations has received much less attention than respondents suggest it should in the future.

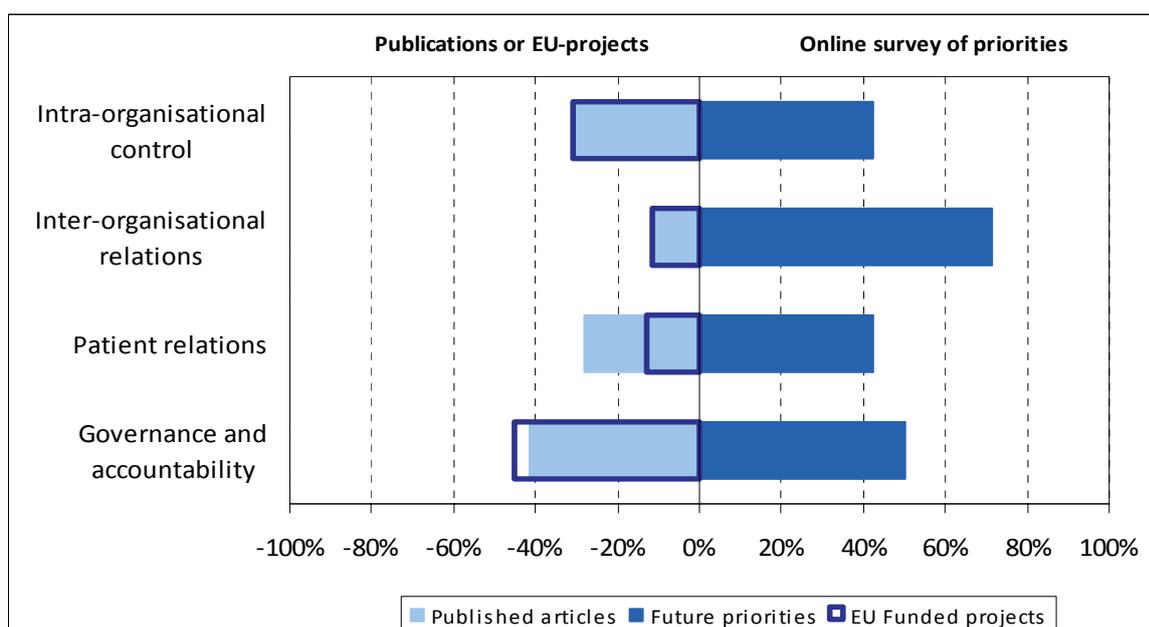


Figure 4.11 Comparison of past/current research areas with perceived priorities for the next two to five years

Comparison at the level of topics in rank order of expert views of priorities is shown in Figure 4.12. Regarding 'inter-organisational relations', all three topics that are considered priorities are so far hardly addressed in past or current research. This applies for example to the questions how organisations in primary and secondary care relate to each other and how patients move through

both sectors. The fourth most prioritised topic, 'assessment and improvement of quality and safety', is the only topic already regularly studied, both in past research and especially in EU-funded projects. Similarly, some other topics, such as 'workforce', 'e-health' or 'patient involvement' appear to be receiving increasing attention and are seen as important for the future. Additional topics such as 'chronic disease management', 'continuity of care' and 'creation of multidisciplinary teams' are also considered priorities while they are hardly being addressed at present. The topic of chronic disease management is already catching up at the level of European funded projects, which in turn may serve as a driver for more knowledge being developed by other (nationally funded) research initiatives.

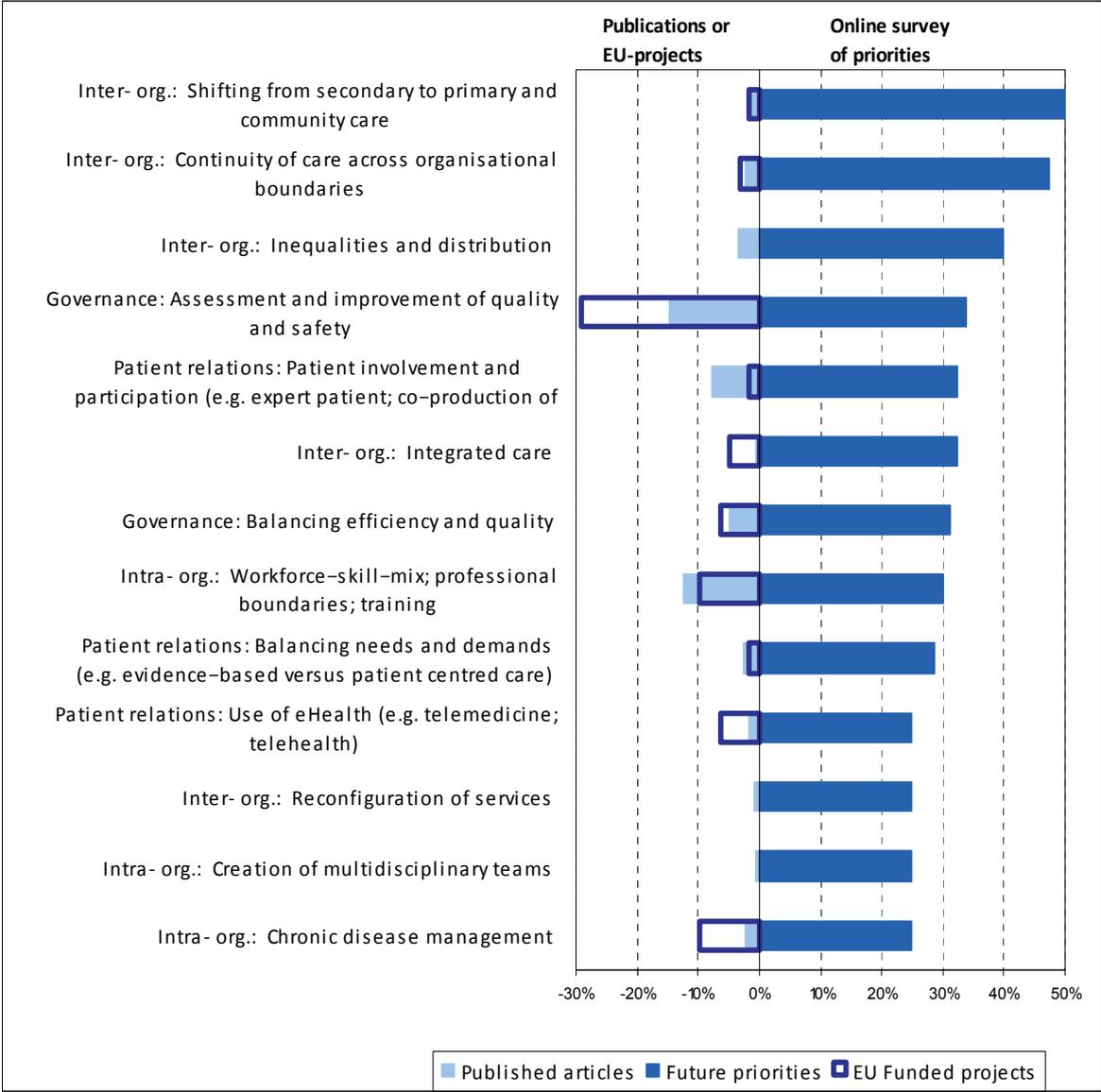


Figure 4.12 Comparison of past/current research topics with perceived priorities for the next two to five years (25% or more)

4.4 Discussion

4.4.1 Main findings

After a period of growth from 2000-2007 when the number of publications on health care organisations increased by 10% a year, the research area appears to have had to retrench with 11% annual declines in the following two years. The reason for this trend is not apparent given that we are not aware of a substantial drop in research funding over that period. Research activity varies dramatically across Europe, with a particularly high share in the research databases of UK and Ireland based studies. As selected publications at least incorporate an abstract in English, this may underestimate the output from countries that have non-English language journals as an outlet. It is also apparent that only a small share of studies addresses more than two countries. This lack of comparative studies limits the possibilities for better understanding of the effects of certain health care interventions or policy measures in different settings. Can their effectiveness or ineffectiveness be explained by certain contextual factors, such as the way the health care system is organised or financed? (González-Block, 1997)

The large variation in research topics having been studied between countries reflects differing concerns and interests. Overall, the area with the highest proportion of publications is governance and accountability (41%) followed by intra-organisational relations (31%) and patient relations (28%). The fourth category, inter-organisational relations is the focus of only 11% of publications.

Comparison of past publications with EU-funded research suggests there has been no recent alteration in priorities or interests. There is, however, evidence that past and current research do not reflect experts' views of future priorities. The clearest discordance is research on inter-organisational relations, the area that 71% of experts viewed as a priority yet traditionally only representing 11% of research activity.

There was considerable homogeneity in views between experts, regardless of their role in the health care system or their geographical background. In a few cases, differences occurred, such as between new and old Member States on the importance of workforce issues, continuity or integrated care and the need for information on quality of care. New and candidate Member States have a larger need for information than old Member States, also reflecting the difference in availability of research funding and research capacity.

Based on the various search strategies a general picture emerges for the further development of organisational research priorities. One overarching element is the clear need for more information in all four research areas. There is a need for taking a comparative perspective on how to configure hospital and primary care services, and to change the way both sectors operate (see also Hofmarcher et al, 2007; Frenk, 2009; Curry and Ham, 2010). Such a comparative perspective is already being taken up in much current research funded at the European level. This is far less the case for another topic identified namely patient involvement. In an era where health care is argued to become more and more patient-centred, it appears that EU-funded research is not yet following this approach.

This theme also emerged in at least two similar priority setting studies, that of Academy Health in the United States in 2006 and the Canadian study 'Listening for Direction' in 2008. In the former, it was mostly providers and consumer advocates who listed this as a major priority area (AcademyHealth, 2006). Another topic identified, workforce and skill-mix is strongly related to the

need for more efficient allocation of human resources, given the declining workforce in health care (DG EC-FIN, 2009). In a large variety of studies the same topic area was regarded a priority theme, including the above mentioned studies, as well as recent scoping exercises for the EU Presidency of Belgium in 2010 (Dussault et al 2010) and for the World Health Organisation (Jimba et al 2010).

In a way, this need for broad themes is reflected in the emerging method of priority setting at European Commission level, with more and more emphasis being placed on so-called two-stage priorities. In such cases, a more general topic field is identified, allowing for more degrees of freedom for project proposals to develop specific directions of research than is the case in single stage projects, where the specific research topic is more well-defined. Broadly speaking, any of the top priorities as identified in the survey and subsequent discussions would be suitable for such a two-stage approach, especially in the cases where EU-funded projects so far have been rare. At the same time, one needs to be aware of the limitations of comparing past research activities with future priorities, as a high scoring on both may not indicate that future research is no longer necessary, but rather that this balance in past and future attention shows the continuing importance of this theme for the improvement of health for citizens. It also calls for the need that future research indeed makes use of such previous findings in an optimal manner. How to resolve this recurring problem of utilising the research that is already available will also be addressed in chapter 7 on research and policy interactions.

4.4.2 Limitations of the study

Our focus was limited to primary and secondary care, excluding other areas of the health care sector. The bibliometric research was restricted to two databases, though we believe they include the vast majority of relevant journals. We made no attempt to encompass grey publications. Limiting our research to publications that included an English language abstract will have meant that a substantial amount of research in some countries may have been excluded. In addition, only analysing MeSH terms from databases implies a low specificity of studies that indeed address organisational topics. It is for this reason that an additional classification of a smaller sample of articles was made to get a better view of the real topics addressed. Finally, our attempt to obtain information on the subject of current or recently finished research was limited to EU-funded studies which represent only a small proportion of all relevant research.

When reflecting on the strategies used, it is clear that each has its pros and cons. It is therefore the combination and triangulation of methods that provides the most stable impression of future priorities. One cannot depend on surveys per se as a discussion platform provides more insight into the specific directions to be taken (Lomas et al, 2003). Results found are in part dependent on presenting the right classification to respondents. To avoid this problem of steering respondents' views, a broad selection of topics was provided together with the opportunity to provide open answers. It also illustrates the need to provide more room for detail and specificity in research questions to be developed, among others by providing an (online) platform for discussion.

4.4.3 Implications and recommendations

Our review of past and current research on health care organisation and service delivery suggests that research so far does not reflect the views of European experts on future priorities. So far much research has either focused on the hospital sector or on primary care. In contrast, the relationship between both sectors has been under-researched despite being in constant development. This discordance illustrates the need to monitor priorities for research on a regular basis. At the same time, the strong similarity in the priorities identified in this study compared to those in previous

studies illustrates how the same challenges and priorities are shared throughout the EU and in other countries. Differences in intensity of health care developments, the context of the health system and the strategies for change make cross-border learning important.

There remains a clear geographical component in HSR, with new and candidate Member States having a larger need for information than older Member States. In part this is a reflection of the availability of research funding as well as research capacity. Comparative studies should involve these countries in order to make European research relevant to their specific context and to future HSR capacity. While each country can study the organisation and delivery of services in their own system, there is much to be gained from comparative studies. For single country research this calls for the need to extract lessons of international comparability by using a methodological framework similar to that in other countries or by following a comparative approach. Ideally, studies are international in nature, as the wide variety of ways of organising services in different countries provides Europe with an interesting natural experiment to assess and determine the impact of different models of care. The opportunity this presents needs to be exploited if the benefits that could accrue from research on the organisation and delivery of care are to be realised.

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