Center On Strategies For Public And Civil Entrepreneurs

An exploration of

future hospital care

in 10 countries

Australia
Belgium
Canada
France
Germany
Greece
Spain
Sweden
United States
United Kingdom

Dutch Hospital Association

NVZ Vereniging van Ziekenhuizen

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Contents

1. Introduction

The changes in health care are profound and irreversible. The increasing demand for better and more customized care has an enormous impact on the providers of care. Innovations, new technologies and advanced procedures are fueling the urgent need for change in clinical and managerial processes. These developments require the constant attention of governments, the private sector and civil entrepreneurs.

In order to be able to take a proactive stance, the Dutch Hospital Association, representing over a hundred hospitals in the Netherlands, has initiated a project aimed to develop a long-term vision on the future role and position of hospitals. The 'Hospital of the future' project has focussed on two areas:

1. The hospital of the future in the Netherlands
Research was conducted in the Netherlands to map the developments in the health care, describing the effects of trends on curative care and the hospital of the future, developments in ICT, pharmacology and technology and estimating future capacities.

Approach: desk research & interviews
Creating a vision of the future requires a solid knowledge and understanding of ongoing trends and developments. Therefore extensive desk research has been performed, focussing on a myriad of topics, ranging from demographic developments to the latest in pharmacology, from the effects of information technology to the different concepts on how to organize care and cure processes. Next to desk research, interviews were held with a large number of specialists working in care and cure sectors.

2. International exploration of future hospital care
Countries around the globe are facing similar healthcare problems to the Netherlands. Yet their solutions are often quite different. It therefore becomes both important and intriguing to understand the workings and rationale for different solutions to common problems. Perhaps a best practice case can be discerned, but it will surely cause one to rethink one's own solution and allow one to think out of the box.

Public SPACE, the international knowledge and research center of the Boer & Croon Strategy and Management Group, has conducted an international search for trends, views and practices related to hospital care and its future. The international scan has centered on ten countries: Australia, Belgium, Canada, France, Germany, Greece, Spain, Sweden, United Kingdom, and the United States.

Approach: correspondents, internet & literature
The international exploration of future hospital care was carried out by using a network of international correspondents. In each of the selected countries specialists on hospital management and/or health care were approached for information and references. In addition to the information provided by the correspondents, general resources (like WHO, OECD, internet, et cetera) and selected literature were used to create an overview of the present situation, future developments and interesting examples.

Country reports
For each of the countries a country report has been prepared. The country reports are built up in a similar fashion in order to facilitate comparisons. Our research has centered on the following six topics:

1. **The national health system**
   This section gives a short description of the health system and the position of hospitals and related care providers within the system.

2. **Trends influencing hospitals**
   This section investigates the trends hospitals are subject to.

3. **The future strategic position of hospitals among other health care providers**
   This section deals with impeding change of the system in the long run often based on trends within the country.

4. **The future internal organization of hospitals**
   This section deals with the adaptation of the hospital to new developments and old problems.

5. **Interesting examples of futuristic hospitals/cure processes**
   A section celebrating the implementation of both visionary and innovative thinking.

6. **Interesting sites**
   An overview of interesting websites on hospitals and health care

How to read this document

In chapter 2 OECD figures are presented on the expenditures & investments, resources and utilization of hospital care for comparison of the ten countries. Chapter 3 subsequently deals with the individual countries, giving a detailed report on the six topics described above. In Chapter 4 major trends are deduced from the country reports and emerging patterns for hospital organization are described in three areas: general trends influencing hospitals; trends on future strategic position of hospitals among other healthcare providers and trends on the future internal organization of hospitals.

Acknowledgments

This document has been prepared with help of many contributors in the various countries we have investigated. We owe them our gratitude for their insights and information. We would also like to thank the European Healthcare Management Association (EHMA), the Standing Committee of the Hospitals of the E.U. (HOPE), and the International Hospital Federation (IHF) for their valuable contributions.

Public SPACE

The exploration of future hospital care in 10 countries is performed by Public SPACE, the research and knowledge center of the Boer & Croon Strategy and Management Group

Winning strategies for the common good

Public SPACE's mission is the innovative and sustainable production of the common good by investigating and analyzing the dynamics within and between the public and private domains and by developing constructive partnerships between them.

Research & knowledge management

Public SPACE offers research and knowledge management for non profits (civil or social entepreneurs), government bodies and private companies. We initiate international benchmarks, policy research and webenabled project communication. We focus on sectors such as healthcare, public transportation, education, utilities and urban development.

Dutch Hospital Association

The Dutch Hospital Association is primarily concerned with advocating the collective professional, social and economic interests of its members. Its members include all general and specialist hospitals in the Netherlands. In addition to these members the Dutch Hospital Association has awarded membership to hospitals in the Dutch Antilles, Aruba and in Suriname. In total there are about 170 members.

The Dutch Hospital Association aims to create a framework that allows the hospitals to optimally anticipate and react to developments in the need for cure. As such, the Association develops policies, lobbies and negotiates with other important players in the field of cure. In addition to that, the Association supports the individual members by disseminating information concerning both general and specific topics relevant to the hospital sector.

2. Expenditures, resources and utilization

To introduce hospital care in the selected ten countries, three tables are presented in this chapter. First, to give an impression of the size of the healthcare sector, figures are presented on the expenditure on health and the investments in medical facilities.

Please note that the data collected in these tables cannot be compared without keeping in mind that countries use different statistics and counting methods to calculate the figures presented in the dataset. Nevertheless, this gives a first impression of the sector and the priorities in various countries.

Table 1: Expenditures & Investments

	Total expenditure on health				**Investment in Medical facilities/per capita**		
	Total	Public expenditures	Private expenditures	% of GDP	Total	Public investment	Private investment
Australia	1.889	68%	32%	8,3	99	60%	40%
Belgium	2.066	71%	29%	8,6	121		
Canada	1.880	70%	30%	9,0	49	84%	16%
France	2.275	78%	22%	9,4	54	100%	-
Germany	2.713	77%	23%	10,5	78	100%	-
Greece	1.005	55%	45%	8,7	42	26%	74%
Spain	1.001	77%	23%	7,0			
Sweden	2.196	84%	16%	8,1	(1996) 96	75%	25%
United Kingdom	1.499	84%	16%	6,7	71	61%	39%
United States	4.015	45%	55%	13,0	70	29%	71%
Netherlands	*2.091*	*69%*	*31%*	*8,7*	*93*	-	*100%*

Figures for 1997 in million US$[1]

Following the general overview of expenditures is a closer look at the resources available in the countries. A table has been prepared with more detailed information on health care resources, in particular related to hospital facilities and employees.

Table 2: Resources

	Health Employees per 1000 population	**In patient beds** per 1000 population	**CT scanners** per million population	**MRI units** per million population	**Radiation Therapy** per million population
Australia	16,9	8,3	(b) 20,8	(b) 2,9	4,9
Belgium	-	7,3	-	3,2	6,4
Canada	11,1	4,4	8,2	1,8	7,0
France	(a) 18,6	8,6	9,7	2,5	7,8
Germany	10,5	9,4	17,1	6,2	4,6
Greece	(a) 7,1	5,0	(a) 6,1	(a) 1,2	-
Spain	(a) 9,3	(a) 3,9	9,3	3,3	3,3
Sweden	-	4,0	-	-	-
United Kingdom	22,4	4,4	(c) 5,8	(b) 3,4	3,3
United States	16,2	3,9	13,7	7,6	4,3
Netherlands	*9,1*	*11,3*	-	*(b) 3,9*	*7,2*

Figures for 1997 (a = 1996, b = 1995, c = 1998)[2]

[1] OECD Health Data 2001
[2] OECD (2001)

The last table generated from the data gathered by the Organization for Economic Cooperation and Development shows the national differences in use of hopsital services. The table presents ratios on hospital performance and utilization.

Table 3. Utilization

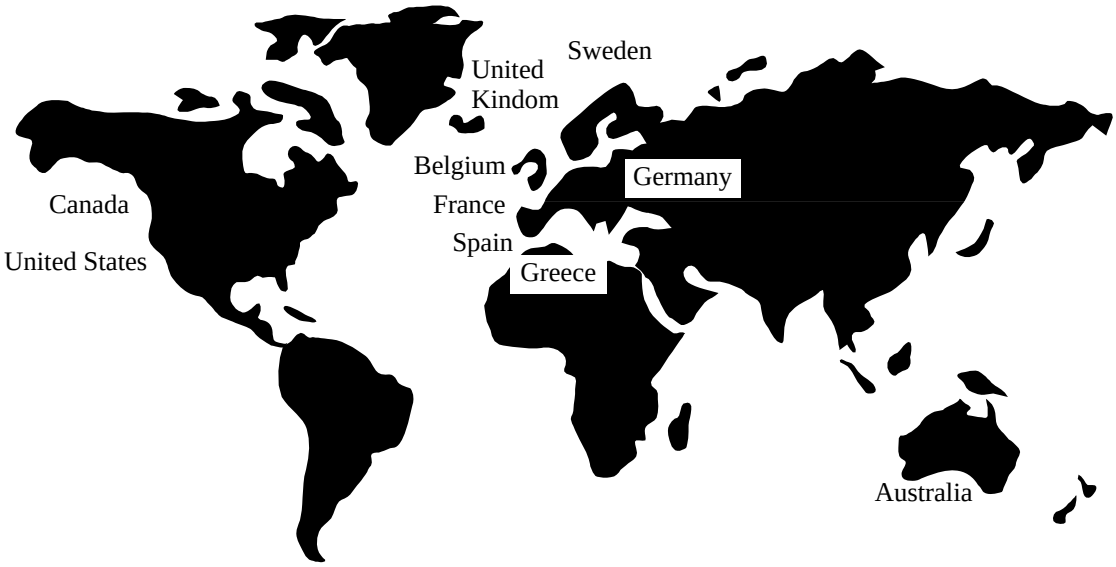
	Beddays number per capita	**Occupancy** % of available beds	**Turnover rate** Cases per available bed	**Staff ratio** Number of staff per bed	**Admissions** Per 1000 population
Australia	1,0	68,4	40,0	2,40	159,0
Belgium	1,3	77,7	38,1	-	(a) 180,0
Canada	1,0	-	-	-	95,2
France	1,2	75,7	47,1	1,08	205,0
Germany	1,9	80,4	28,1	1,50	196,1
Greece	-	-	-	-	-
Spain	(a) 0,8	(a) 77,3	(a) 35,5	(a) 1,59	(a) 110,0
Sweden	(a) 0,8	(a) 77,5	(a) 42,0	-	(a) 159,0
United Kingdom	1,0	78,9	55,6	3,60	(a) 214,0
United States	0,7	61,9	36,9	4,44	118,0
Netherlands	*1,0*	*71,4*	*27,2*	*2,46*	*101,3*

Figures for 1997, inpatient, acute care (a = 1996)[3]

The tables presented above give a general overview of the finance, status and utilization of healthcare facilities in the selected countries. The Netherlands has been included for comparison reasons only and will not be included in the country reports. In the following chapter, each of the countries will be examined in more detail.

[3] OECD (2001)

3. Country reports



Australia

1. Short description of the national health system[4,5]

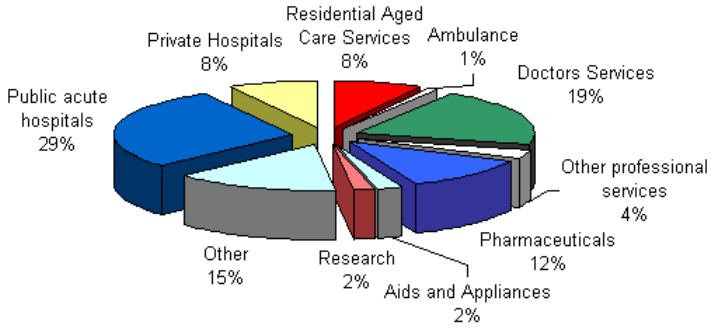
The Commonwealth currently has a leadership role in policy making and particularly in national issues like public health, research and national information management.

The States and Territories are primarily responsible for the delivery and management of public health services and for maintaining direct relationships with most health care providers, including the regulation of health professionals.

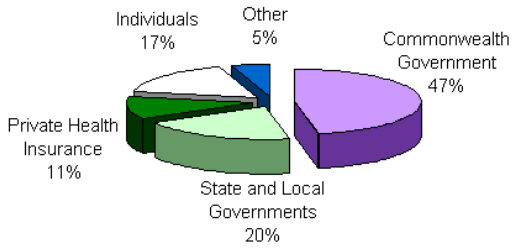
The States and Territories deliver public acute and psychiatric hospital services and a wide range of community and public health services.

The State and Territory governments directly fund a broad range of health services. The Commonwealth funds most medical services out of hospital, and most health research. The Commonwealth, States and Territories jointly fund public hospitals and community care for aged and disabled persons.

Per cent distribution of recurrent health expenditure by category of expenditure, Australia 1997-98



Percent distribution of recurrent health expenditure by source of funds, Australia 1997-1998



A mix of public and private sector providers delivers health services. There is a large and vigorous private sector in health services. The Commonwealth Government considers that strong private sector involvement in health services provision and financing is essential to the viability of the Australian health system. For this reason the Commonwealth Government provides a 30 percent subsidy to individuals who acquire private health insurance and has introduced additional arrangements to foster lifelong participation in private health insurance.

Doctors

The majority of doctors are self-employed. A small segment consists of salaried employees of Commonwealth, State or local governments. Salaried specialist doctors in public hospitals often have the right to treat some patients in these hospitals as private patients, charging fees to those patients and usually contributing some of their fee income to the hospital. Other doctors may contract with public hospitals to provide medical services. There are many independent pathology and diagnostic imaging services operated by doctors. For some allied health/paramedical professions, there is a significant

[4] Commonwealth Department of Health and Aged Care (2000a)
[5] Commonwealth Department of Health and Aged Care (2000b)

number of self-employed. Others are mainly employed by State and local government health organizations.

Hospitals
Public hospitals include hospitals established by governments and hospitals originally established by religious or charitable bodies but now directly funded by government. There is a small number of hospitals built and managed by private firms providing public hospital services under arrangements with State governments. Most acute care beds and emergency outpatient clinics are in public hospitals. Large urban public hospitals provide most of the more complex types of hospital care such as intensive care, major surgery, organ transplants, renal dialysis, and specialist outpatient clinics.

Private hospitals are owned by for-profit or not-for-profit organizations such as large corporate operators, religious operators, and private health insurance funds. In the past, private hospitals tended to provide less complex non-emergency care, such as simple elective surgery. However, some private hospitals are increasingly providing complex, high technology services.

Separate centers for same-day surgery and other non-inpatient operating room procedures are found mostly in the private sector. Many public hospitals provide such services on the same site as inpatient care.

The system in brief
The aim of the national health care funding system is to give universal access to health care while allowing choice for individuals through a substantial private sector involvement in delivery and financing. The major part of the national health care system is called "Medicare". Medicare provides high quality health care, which is both affordable and accessible to all Australians, often free of charge at the point of care. It is financed largely from general tax revenue, which includes a Medicare levy based on a person’s taxable income. Commonwealth funding for Medicare is mainly provided as: subsidies for prescribed medicines; substantial grants to State and Territory governments to contribute to the costs of providing access to public hospitals at no cost to patients; and specific purpose grants to State/Territory governments and other bodies. State and Territory governments supplement Medicare funding with their own revenues, mainly for funding public hospitals.

Private health insurance can cover private and public hospital charges (public hospitals charge only patients who elect to be private patients in order to be treated by the doctors of their choice), and a portion of medical fees for inpatient services. Non-government religious and charitable organizations play a significant role in health services, public health and health insurance.

Hospital care under Medicare
All people eligible for Medicare are entitled to a choice of:
- free accommodation, and medical, nursing and other care as public patients in State/Territory-owned hospitals, designated non-government religious and charitable hospitals, or in private hospitals which have made arrangements with governments to care for public patients; or
- treatment as private patients in public or private hospitals, with some assistance from governments.

On admission to public hospitals, patients may choose to be public (Medicare) patients, or private patients. If they choose to be public patients, they receive free medical and allied health/paramedical care from doctors nominated by the hospitals, as well as free accommodation, meals and other health services while in hospital.

Medicare-eligible patients who choose to be private patients in public hospitals are charged fees by doctors, and are charged by the hospital for hospital care, usually at a rate less than the full cost of providing these services. If the patient holds private insurance, this will usually cover all or nearly all of the charges by a public hospital. Medicare pays benefits subsidizing part of the cost of doctors' fees, and private insurance pays an additional amount towards doctors' fees. Private insurance benefits can also contribute to payment of the costs of allied health/paramedical and other costs (for example, surgically implanted prostheses) incurred as part of the hospital stay.

Patients may choose to be treated in a private hospital. Private patients in private hospitals are charged fees by doctors and some allied health/paramedical staff, and are billed by the hospital for accommodation, nursing care and other hospital services such as use of operating facilities. If a patient holds private insurance it will contribute to these costs. If a patient is eligible for Medicare as a permanent resident of Australia, the doctors' fees generally attract Medicare benefits.

2. External analysis: trends influencing hospitals[6]

Demographic and social trends

Most important is the impact of an aging society. Other trends which will cause changes in the provision, delivery and nature of health care include: increasing urbanization; changing family structures; changing ethnic blend; increasing income inequality; and increasing population mobility which may decrease community support networks.

Information technology

Information technology will create the potential for great improvements in the health system, such as more informed consumers and providers, better integration and coordination of care, the ability to study outcomes of care, and the development of a complete, portable medical record. It will also create new risks: privacy concerns, the heightened expectations of consumers, a revolution in work force requirements, and new inequalities between those who can use the new technology and those who cannot or will not.

Consumer demand

Consumer demand for new and more customized health care services will fuel change in the delivery, presentation and content of health care. Consumers will demand: choice; autonomy in decisions; access and advice; control of personal information; greater flexibility in the delivery of health services; and increasingly critical evaluation by consumers of the quality of health care.

Making efficient use of resources

The need to maximize the efficient use of resources will drive changes in the organization and delivery of health care. Factors that will influence the direction of change include: changes in the relative contributions of the public and private sectors to the funding and delivery of health services; safety net service levels as determined by governments and other providers; market forces; substitution between service types; a recognition that the drive for improvements in health outcomes will not necessarily lead to cost containment, but might even result in the increase of costs.

Changing patterns of disease

New diseases and environmental threats will create new burdens for health care. These include: infectious diseases; new, as yet unknown, micro-organisms, together with the problems posed by increasing antibiotic resistance; problems related to aging; more people with severe disabilities who, nonetheless, enjoy an increased life-expectancy; cancers; diabetes; and mental illness.

Research and development

Research and development will create the potential for great improvements in the health system, such as the availability of genetic and other screening tests, better diagnostic tools and more effective treatments with fewer side effects. But research and development will also create new challenges and dilemmas, including cost pressures, ethical questions and the need to re-evaluate priorities.

[6] Leeder (2000)

3. The future strategic position of hospitals among other healthcare providers

Health care integration

No longer can hospitals and community ignore one another. Integration has been identified by the Australian Health Ministers Advisory Council (AHMAC) as a strategic priority for the period 2000-2005. All Australian health organizations will be involved in the growing movement to integrate health care delivery at local, state and national level. The Mater hospital – University of Queensland - Center for General Practice was established in 1994 to research, promote and evaluate care integration between the Mater hospital and their community. The experiences of the Center in this capacity helped shape a model of health care integration. This model has provided the foundation for numerous successful integration activities.[7]

Primary Care Initiatives, Coordinated Care Trials

One area where there is scope for doing better is where people receive a number of different services from different providers. In particular, there are opportunities to offer better care to those with chronic and complex illnesses through the tailoring of care to meet their needs, particularly through enhanced coordination in service delivery and by making better use of existing resources. In recent years the Federal Government has made determined efforts to explore innovative measures that improve care planning and service delivery for these people. The introduction of the Enhanced Primary Care Medicare items enable GPs to work with other health care providers to improve their patients' care. For example, the Hunter Urban Division for General Practice has worked on evidence based care and improved collaboration with other health care providers.[8,9]

4. The future internal organization of hospitals

Health Workforce

The health workforce is mobile, multi-skilled and motivated. It has a primary care focus, supported by other types of services. The workforce is well educated and involved in continuing education, training and re-skilling. Much of the workforce is part-time, and some engage and disengage with particular services as required. They are employable, rather than employed, for life[10].

Health Management

The health system of 2010 has a new genre of management. There is not just a new situation to address, but a situation of accelerating change and greater uncertainty. Management addresses this by new types of planning and research, based on new, higher levels of technology and industry (beyond tertiary and even quaternary). The capacity of the workforce to keep up with this change and to live with uncertainty causes particular strains. Leadership skills are vital[11].

5. Examples of interesting futuristic hospitals/cure processes

National Demonstration Hospitals Program[12,13]

The National Demonstration Hospitals Program (NDHP) wants to: reduce clinically inappropriate waiting times for elective surgery by identifying and disseminating strategies to overcome barriers to improved management of the whole elective surgery process. Funds were provided directly to hospitals

[7] www.uq.edu.au/cgpmh
[8] www.health.gov.au/hsdd/primcare/index.htm
[9] www.hudgp.org.au
[10] Leeder (2000)
[11] Leeder (2000)
[12] http://www.archi.net.au
[13] www.health.gov.au/hsdd/acc/ndhp/index.htm

that had developed and implemented best practice models in elective surgery management to work with groups of hospitals seeking to improve their services in similar areas.

NDHP Phase 1 (1995 - 1997)
Projects were funded in three priority areas integral to effective management of elective surgery including: pre-admission assessment and admission scheduling; operation resources utilization and scheduling; and discharge care and post discharge planning.

NDHP Phase 2 (1997 - 1998)
Many hospitals did not have systems in place to integrate the management of all admissions (i.e. emergency and non-emergency medical and surgical admissions). Generic principles for achieving integrated bed management have been developed.

NDHP Phase 3 (1998 - 2001)
Projects will identify and implement innovative models that improve the quality, coordination and integration of all services provided by the acute care sector (including pre-admission, ambulatory, inpatient and post discharge services), and that provide effective two-way links between hospitals and community providers including GPs.

Australian Resource Center for Hospital Innovations (ARCHI)
Originally established in 1998 as a clearing house for the National Demonstration Hospitals Program (NDHP) ARCHI promotes the dissemination of information and resources related to innovative health care delivery both in hospitals and across the community. ARCHI generates information regarding innovative health care models, activities and practices. This includes care both in hospitals and in the community.[14]

Hospital in the Home
Hospital in the Home (HITH) is the provision of hospital care in the comfort of the person's own home. Patients are regarded as hospital inpatients and remain under the care of their treating doctor in the hospital. Patients receive the same treatment that they would have received had they been in a hospital bed. Patients may be able to receive all their hospital care in HITH or they may have a stay in hospital and then receive HITH in the latter part of their treatment. Participation in HITH is voluntary - patients and their carers must agree to have their care provided at home. There are no additional charges to patients for being in HITH.[15,16]

The virtual hospital
Hospitals are changing. Clinical and financial factors are the primary causes forcing change in hospitals. These changes are in turn compounded by technological, industrial, customer preference and information technology factors. In reviewing these elements of change, it is easy to argue that the hospital of the future will be small and extremely “acute” – an emergency service, operating suite, and intensive care unit(s). Although this may be correct from the viewpoint within a traditional hospital, from the perspective of the patient or health service manager, a different situation might occur.

The hospital evolves into an organization including multiple campuses and services of diverse types (clinics, procedure centers, nursing centers of varying acuity, hospital in the home, et cetera) supported by a mix of facilities and services. These diverse health services are bound together by an information system serving both patient and organization requirements. The bricks-and-mortar hospital is no longer the central focus of care. The “solid” remnants of this monolith now merely supports for the information management system that has become the focus of care. This system, and the management of it, becomes the “virtual” hospital/health system.

[14] www.archi.net.au
[15] www.dhs.vic.gov.au/ahs/quality/hith/hith.htm
[16] www.health.gov.au/hsdd/acc/ndhp/pubs/hith.htm

The core business of the new hospital organization is two-fold: (1) Managing patient information between the various foci of clinical activity that deal with the patient, such as clinics, procedure centers, or diagnostic services and (2) Assuring appropriate quality and cost of the activity centers of the organization. (Note this does not necessarily extend to management).[17]

Health Information
The health system takes advantage of the opportunities created by information technology. There is a fully integrated health information system for every individual Australian. The health information system also has details on services, drugs and appliances, diseases and their treatment, costs, access to finance and individual eligibility to government and other assistance. The system has intelligence capacity to enable risk assessment, consideration of cost effectiveness, performance evaluation, and research and analysis. Consumers have access to all the information they desire for themselves.[18]

E-health
The National Office for the Information Economy (NOIE) is active in a variety of e-health projects. There are considerable opportunities to apply e-commerce to the health sector in Australia. Online technologies can assist the sector to expand its reach, deepen its quality and usefulness, and improve the efficiency of delivery. The health sector is also well placed to take advantage of export opportunities such as the delivery of online health education and telemedicine consultations. Electronic health (e-health) is much broader than telemedicine or telehealth. It covers the use of digital data transmitted electronically—for clinical, educational and administrative applications—both locally and at a distance. Hence, e-health is the overall field that encompasses telemedicine and other applications.[19]

Patient Management
A Patient Management Task Force has been established to undertake review of patient management practices across the metropolitan public health care system. This group has been set up not just to gather data, but also to contribute to achieving change. The project incorporates:

- a systems approach to review current patient management practices and processes across the health sector
- a collaborative approach that will involve wide consultation with stakeholders, particularly clinicians and health service management through their representative bodies
- an action oriented model of review that will provide short and medium term strategies for change

The Task Force will identify essential patient management practices across the metropolitan public health care system, identify and prioritize areas of improvement, and make recommendations on measures (including incentives) to support the necessary change in practice and enable ongoing monitoring.[20]

Travelling to Australia for health care
Because Australia has a high quality health care system, with low costs compared to some other developed countries, it is an excellent destination for patients seeking treatment which they cannot access in the country where they live. Eight countries have reciprocal health care agreements with Australia. These are: Great Britain, Finland, Ireland, Italy, Malta, the Netherlands, New Zealand, and Sweden. Citizens from these countries are eligible for Medicare assistance for immediately necessary medical treatment (but not for pre-arranged treatment). Under the agreements hospital treatment is provided only if the patient elects to be a public patient.[21]

With special thanks to Mrs Jane Gilchrist (Victorian Healthcare Association), Mrs Diane Easton (Australian Resource Center for Hospital Innovations) and Mrs Sue Gray (Healthcare Association of Western Australia)

[17] Kerridge (1998)
[18] Leeder (2000)
[19] www.noie.gov.au/projects/ecommerce/ehealth/index.htm
[20] www.dhs.vic.gov.au/ahs/patman/index.htm
[21] Commonwealth Department of Health and Aged Care (2000a)

Interesting sites

Australian Department for Health and Aged Care
www.health.gov.au

National Demonstration Hospitals Program
www.health.gov.au/hsdd/acc/ndhp/index.htm

Australian Resource Center for Hospital Innovations
www.archi.net.au

National Health and Medical Research Council (NHMRC)
www.health.gov.au/nhmrc

Australian Institute of Health and Welfare (AIHW)
www.aihw.gov.au

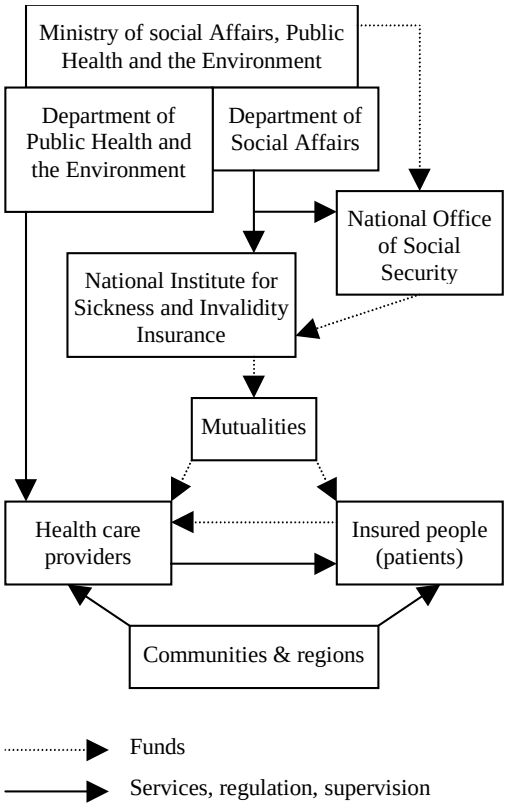
University of Queensland - Center for General Practice
www.uq.edu.au/cgpmh

Belgium

1. Short description of the national health system

Federal system

Belgium is a federation and it is divided into three separate language communities: a Flemish, French and German community. There is a clear division of power between the federal government and the communities. It is the federal government that sets the framework of the healthcare sector: it enacts legislation, finances infrastructure and expensive medical equipment and it is responsible for the National health insurance. The communities in turn are responsible for the remainder, which includes the policy of care in and outside the hospital.[22]



Health care services have not yet been decentralized to the federal states, and financing is still a central government matter. The National Institute of Sickness and Handicap Insurance controls the management of the sickness and handicap funds and, with the Ministry of Health, organizes cost-control and the levels of reimbursement. The Ministry of Health decides the budgets for hospitals according to their activities. However, services for personal health, disease prevention, domestic help, occupational health, school health and ambulatory mental care are the responsibility of the provinces or of the localities.[23]

The system is characterized by its heterogeneity and fragmentation. Ever since its inception, an essential principle of the Belgian health care system has been the patient's freedom of choice between a wide range of independent providers. The Belgian system is based on a liberal tradition. Thus people are allowed to freely choose their health care provider who may or may not be a party to a national agreement. They have direct access to the hospital. This tradition is supported by a system that facilitates over-supply of health care providers due to the absence of systemic planning of manpower. As such there is a high density of health care providers and waiting lists are scarce. Health care is therefore privately managed and delivered (mainly by a range of non-profit organizations) while responsibility for the funding of health care and oversight of its organization are in the public sector, and are shared amongst numerous public authorities.[24]

Healthcare structure

The tasks of primary and secondary care are not well defined, which results in overlapping activities and competition among physicians. Patients can visit general practitioners or specialists in their surgeries but can also visit a specialist in the hospital or in a polyclinic. No referral is needed to gain access to specialist services, or hospital so many specialist provide primary care, including outpatient

[22] UN: Agenda 21.
[23] WHO Regional Office for Europe & European Commission (1997)
[24] European Observatory on health care systems (2000)

perinatal health care, outpatient mental health care, medical services for industry and care of the handicapped. Medical care outside hospitals is provided by numerous general practitioners (GPs) and by specialists working alone. However, there are centers, known as integrated health care practices, which operate a multidisciplinary team, including several general practitioners, nurses, administrative staff, et cetera.

Home care is a high priority in Belgium and the country has a well developed system of community nursing services. The most important organization is the White and Yellow Cross, a national federation with 9 provincial associations and 180 local branches.[25]

Hospital care

The government plans global hospital capacity, in the sense that hospitals must obtain accreditation form the Ministry of Public Health to operate a certain number of beds for each service category (e.g. acute care, surgery, maternity). The accreditation is granted by the Ministry of Public Health only if a proposal (for hospital opening, extension or alteration) respects national planning. There are a variety of accreditation norms. Organizational norms relate to staff requirement and responsibilities, hygiene, ethics requirements; architectural criteria concern the number, size, comfort, hygiene of hospital rooms; functional standards refer to convenience, accessibility, et cetera; additional norms relating to minimum activity, e.g. they stipulate that hospitals should have no fewer than 150 beds, diagnosis/surgical units no fewer than 30 beds, and they set minimum facility standards and expected staff numbers.[26]

Hospitals' capital planning is dealt with separately. The regions and the federal government have together drafted a building program, with the aim of controlling capital expenditure. Some high technology medical services are also subject to planning and accreditation. The federal authorities fix the appropriate quantity of equipment for different areas of the country.

Hospitals are divided into two categories: psychiatric and general hospitals. The general category is divided into:

- acute care hospitals (80%)
- geriatric hospitals (4%)
- specialist hospitals (16%)

Specialist hospitals specialize in cardiopulmonary diseases, locomotive diseases, neurological disorders, palliative care, chronic diseases and psycho-geriatric care. There are nine university hospitals, which have special status due to their teaching and research functions. [27]

Hospitals	Number	Beds
Acute	177	57,532
Long-term	70	16,684
Total	247	74,216

Public and private

About 60% of Belgium's hospitals are non-profit private institutions, and the rest are public institutions. There are very few private for-profit hospitals. Public hospitals are often owned by the public municipal welfare centers. Ambulatory care is mainly organized by an important independent private sector, while most hospital care is provided by private non-profit hospitals supplemented by public hospitals. Many of the Belgian institutions are rooted on religious or ideological beliefs. Not only are the social insurance funds organized on a religious, non-profit private basis, hospitals and home care organizations are similarly rooted in such beliefs. This means that many organizations have a private or semiprivate structure even though they are funded via national healthcare insurance.[28]

[25] WHO Regional Office for Europe & European Commission (1997)
[26] WHO Regional Office for Europe & European Commission (1997)
[27] WHO Regional Office for Europe & European Commission (1997)
[28] WHO Regional Office for Europe & European Commission (1997)

2. External analysis: trends influencing hospitals

Science for greying population and chronic patients
Progress in medical science is enormous and efforts have to be made to make technological innovations available to the population. New technology will be essential for coping with the increasing demand from an aging population and the increase of chronic patients.[29]

Access to care
The access to care will have to be ensured and improved. Insufficient public funding and the privatization of care bear the risk of excluding a (growing) number of people from adequate health care. As many other countries in Europe, Belgium is faced with ever growing budgetary problems. The question revolves around cost containment and raising sufficient funds to cover the public share of the health care bill. In addition, the system is inefficient due to its oversupply of healthcare services. The aging population will cause a substantial structural cost increase. That such a development would make it even more difficult for Belgium to continue its current expenditure is obvious when one keeps in mind the large state deficit and the problems of pension funding in the coming years. [30]

3. The future strategic position of hospitals among other healthcare providers

Division of tasks
If a hospital doesn't have all programs a patient might need, patients will have to be sent to another hospital or health care provider that is able to provide an integrated care package. Therefore hospitals should cooperate and divide tasks. This cooperation is best implemented in networks of hospitals. Transmural care will be encouraged to facilitate a smooth transition between hospital care and home care.[31]

Interhospital alliance for infrastructural cooperation (IRIS)
A group of public hospitals formed an alliance in order to build a network of public hospitals in Brussels open to anyone who needs medical treatment. The network and associate hospitals will have to develop sound financial systems. The alliance intends to deliver medical services of a high quality. The hospitals have legal and financial autonomy but are governed by an association. Important areas of cooperation are: implementation of new management techniques, cooperation of medical and logistical operations, increase efficiencies in logistics, introduce new work methods, create a common medical policy, explore the use of information technology, improve overall service and improve the image and attractiveness of alliance.[32]

4. The future internal organization of hospitals

Patient as focus point
The objective is to make the patient the focus of all medical and related (care) activities. In other words: to provide individualized care in all phases of a patient's illness. This approach blurs professional and organizational boundaries. The approach is interdisciplinary with consultation of patients in both the preventive and curative phases.[33]

[29] Vandenbroucke (2000a)
[30] Vandenbroucke (2000a)
[31] Vandenbroucke (2000b)
[32] www.iris-hopitaux.be
[33] Vandenbroucke (2000b)

A new organization for hospitals
A patient oriented approach requires the development of a coherent organization of hospitals and the development of regional programs for continuity in the overall provision of care. Hospital organization should be strengthened. The organization should be changed from a vertical to a horizontal structure in which various medical disciplines are working together on care programs.[34]

Regulating supply and 'end of service'
To limit both the entry of new physicians and the number of older physicians, supply and 'end of service' will be regulated. The objective is to redistribute labor and to create opportunites for younger physicians. This means that in 2004 only 700 positions will be availble, 650 in 2005 and 600 the year after. Concerning 'end of service' the physicians will be forced to stop working at the age of 67.[35]

Evaluating medical practice
Medical practices will be evaluated through a system of 'Peer Review'. Physicians will participate in the evaluation system. Accreditation will be made conditional of the participation.[36]

Evidence-based medicine
The need to constantly improve the quality of care will require the development of procedures and standards that will be applicable to all medical activities. These protocols will facilitate and enhance medical operations.[37]

Corporate governance
Hospitals will have to adapt their corporate governance to new criteria in work and quality. Four major themes for the future are:
- redefining the role, position and work methods of governing bodies
- professionalizing functions and appointments
- positioning of medical staff in policy making
- improving quality of information, transparency and management[38]

Mobility
It is important to increase the exchange of knowledge and skills between the personnel of different departments and hospitals. To this end, employees may go to work in another hospitals (in a group), either temporarily to train or conduct research, or on a longer-term basis. In order to encourage career prospects between hospitals, working conditions should be made as uniform as possible. The simplification of titles and qualifications, a clear allocation of powers and responsibilities, motivational evaluations and training opportunities are the key features of a modern staff policy in the hospitals. the modernization in managing human resources.

Ongoing education
Employees should keep a very close eye on the latest developments. By regularly attending seminars in Belgium or abroad and using the knowledge they acquire, they will be able to benefit their particular hospital and network.

[34] Vandenbroucke (2000b)
[35] Colla (1996)
[36] Colla (1996)
[37] Vandenbroucke (2000b)
[38] Belgian Hospital Association (2001)

5. Examples of interesting futuristic hospitals/cure processes

The nursing wards

The nursing care at the acute hospital bed will intensify, thus requesting more skills and professionalism of the nurse. Already, in a number of instances, has the concept of nursing floors, grouping and systematizing e.g. 4 nursing units of about 30 beds each, proved to be the innovative idea in ward planning for the nineties and probably beyond. Several time and cost consuming functions, as e.g. supply, paramedic provisions, night-supervision, are shared by the four or two-by-two nursing units on the same floor. At the University Hospital Gasthuisberg (Leuven, Belgium) an assessment of direct nursing costs showed a decrease of 20 to 25 % at ward-level after moving to the new facilities.[39]

Stimulating group practices

The importance of group practices (in primary care) will be increased. With the increased complexity of care more global and integrated services will have to be deliverd. The integrated health care practices operate a multidisciplinary team, including several general practitioners, nurses, administrative staff, a physiotherapist and a psychotherapist. These practices will be characterized by:

- accessibility: services close to the patients
- continuous care: permanent access, 24 hours a day
- polyvalency: Small diversified team (interdisciplinair and intradisciplinair)[40]

[39] www.uzleuven.be; http://users.tijd.com/~tdn17428/hospital.html
[40] Aelvoet (1999)

Interesting sites

Ministerie van Sociale Zaken, Volksgezondheid en Leefmilieu
www.health.fgov.be

Belgische Vereniging der Ziekenhuizen
www.hospitals.be

Universitaire Ziekenhuizen Leuven
www.uzleuven.be

Medinet
www.medinet.be

Info-Santé web
www.sesa.ucl.ac.be/infosante

Belgian Medcare
www.belgianmedcare.com

Interhospitalenkoepel van de regio voor infrastructurele samenwerking
www.iris-hopitaux.be

Canada

1. Short description of the national health system

Most health care in Canada is publicly financed, but delivered privately. Medicare provides access to universal, comprehensive coverage for medically necessary hospital, inpatient and outpatient physician services. Health care is financed primarily through taxation, in the form of provincial and federal personal and corporate income taxes. In Canada, governments act as the payer, and for insured hospital and medical services they are the sole payer. The private sector's role as a payer is limited to those services, which are not completely covered by provincial health programs. The health care payers in the private sector include private insurance companies, employers who provide supplementary health benefits and individuals who pay for supplementary health care out-of-pocket.[41]

General practitioners

General practitioners (GPs) and family physicians are usually the first contact with the formal health care system and control access to most specialists, many allied providers, admissions to hospitals at which they have admitting privileges, et cetera. Most GPs are private practitioners work in community health centers, hospital-based group practices or work in affiliation with hospital outpatient departments, but enjoy a high degree of autonomy.[42]

Physicians are remunerated on a fee-for-service basis by provincial health insurance plans, though a trend is developing toward salaried remuneration of specialists in teaching hospitals and capitation for primary care providers.[43]

Spread of general practitioners

Until recently, general practitioners were free to practice where they preferred. This has lead to an oversupply of physicians in urban areas, and a chronic shortage in rural and northern areas. In response, a number of provinces have introduced or consider supply restrictions in urban areas, incentive systems for rural doctors, or a mandatory time period in rural practice for foreign physicians.[44]

Many specialists maintain private practices and often have a staff appointment in a hospital or an affiliation with a hospital outpatient clinic.

Hospital care

Over 95% of Canadian hospitals are operated as private non-profit entities run by community boards or trustees, voluntary organizations or municipalities. Hospitals have control of the day-to-day allocation of resources provided they stay in within the operating budgets established by the regional or provincial health authorities. Hospitals are primarily accountable to the communities they serve, not to the provincial bureaucracy. The for-profit hospital sector comprises mostly long-term care facilities or specialized services such as addiction centers.[45]

Hospitals are typically organized as general or acute care facilities, community or secondary care, and long-term or chronic care. Depending on affiliation with a medical school, any of these hospitals may also be classified as a teaching hospital. In larger centers, hospitals may be more specialized as

[41] WHO Regional office for Europe (1996:6)
[42] Health Canada (1999)
[43] WHO Regional office for Europe (1996:7)
[44] WHO Regional office for Europe (1996:23)
[45] Health Canada (1999)

maternity hospitals, children's hospitals, rehabilitation facilities or cancer treatment centers. In the largest cities, some institutions have become highly specialized, with hospitals focused on arthritis care, orthopedics and women's health. Many highly specialized services are being consolidated in single urban centers with service the entire province or region.[46]

Health institutions 1994
- Hospitals 1167
- Other institutions 6087

Spread of hospital facilities
To a large degree, the geographical distribution of hospital facilities has been influenced by two factors. The first is that the majority of Canada's population lives within 150 km of the border with the United States. This concentration of the population has limited the need to build a highly dispersed system. The second is that funding for hospital development was relatively easy. Thus, a large number of hospitals were built to cover the population. Provinces with a rural base tended to build a large network of smaller hospitals throughout the province, many of which are now closing or being converted to community health centers. More recent population shifts have put pressure on the existing distribution of hospitals, particularly in highly urbanized areas.[47]

2. External analysis: trends influencing hospitals

There is a growing comprehension of a change in future population health needs, and an understanding of the actual impact of health care on the population's general health status. This is causing a shift of focus away from the health care system towards the health system, which thus acknowledges that health is more than health care. The focus shifts to integrated community based models which place increased emphasis on health promotion and prevention; and by developing strategies for the coordinated management of the health care workforce, including the remuneration, geographical distribution and appropriate use of various health care providers.[48]

Technological advances have made possible the provision of many hospital services in private clinics. The number of private clinics providing services such as eye surgery, abortions and hernia repair has been increasing over the last few years.[49]

Hospitals and health care providers are operating in an environment of dynamic change. Key forces of change include: consumer attitudes, expectations and behavior; information and medical technology; and science and health research.[50]

Key forces of change and innovation

Trends and changes in **consumer attitudes and behaviors** and their impact of health and health care:
- increasing awareness that people have choices and can influence their own health
- increased spending on alternative treatments and medicine and well-being
- increased desire for boutique-shopping in health care and customized, hassle-free service

Trends and changes in **information technology** and their impact of health and health care:
- move toward non-traditional delivery settings (remote, home care, etc. supported by technology)
- increasing research opportunities due to improving databases
- increasing control over access to personal records for consumers

[46] WHO Regional office for Europe (1996:25)
[47] WHO Regional office for Europe (1996:25)
[48] Health Canada (1999)
[49] WHO Regional office for Europe (1996:25)
[50] Ontario Hospital Association (2001), The Change Foundation (2000)

Trends and changes in **science and technology** and their impact of health and health care:
- more emphasis on preventive care capabilities and complexity of ethical issues
- increased demand for innovative health care services increase the need for change management
- hospital increasingly tied to science and technology and the research and development cycle

3. The future strategic position of hospitals among other healthcare providers

Health networks

Through voluntary and collaborative efforts, a number of Ontario health care organizations have, over recent years, demonstrated the creativity and capacity to evolve into health networks. The health networks approach to health care reform offers a promising avenue for the achievement of long-term health system integration, proceeding on a consensual basis and treating participants as equals. More integration appears to have taken place in terms of horizontal integration, clinical and non-clinical programs and management. A health network is a community-led health care system that is focused on the integration of four key cornerstones of care, namely: hospitals, long-term care facilities, home care, and physicians' offices/clinics. [51,52]

More and more hospitals across Ontario have developed strategic alliances with one another and with other health care providers, such as physician's practices, long-term care and home care. These new 'health networks' have resulted in improved integration of patient care. In addition, hospitals are evolving into new health enterprises, ranging from specialized centers of excellence to general care centers. Critical to these changes is the adoption of new information and communications technology that will allow hospitals to deliver patient care anywhere the patient is residing – at home, in the workplace or while on vacation.[53]

Future hospital-community interface

An integrating model for addressing the interface between in-hospital and in-home services, with four key players: hospitals, Community Care Access Centers (CCAC), home care provider agencies and physicians. Opportunities: develop joint training and education opportunities; develop cross-boundary clinical pathways; develop new collaborative service offerings; promote staff movement across boundaries; compete with community service providers in bidding for CCAC contracts (CCAC are submitted to managed competition and get concessions for a limited period of time); and make arrangements with service providers for designated client groups.[54]

Vertically integrated health systems

Partners For Health consists of a group of health care agencies working together to plan and coordinate services for the Southeast Toronto community. Service sectors include: public health, primary care and prevention, acute care, rehabilitation, in-home support and long-term care. The initiative focuses on vertical integration intended to facilitate easier access to services for patients, the consumers can move more easily between sectors and within sectors. The partners include: the community (hospital catchment area); Toronto East General and Orthopedic Hospital; South Riverdale Community Health Center; and other affiliate members.[55]

Partners For Health is a unique model for integrated health systems:
- it focuses on health promotion and prevention of illness
- the funding model is designed to keep savings in the community
- geographical coverage to address the specific needs of a defined population
- the planning approach is needs-based
- the East York Community Development Council provided strong sponsorship for the process

[51] Ontario Hospital Association & KPMG (1998), www.oha.com
[52] Ontario Hospital Association (2000), www.oha.com
[53] Ontario Hospital Association (2001)
[54] Ontario Hospital Association (1998)
[55] www.changefoundation.com

Managing the Transition from Hospital to Home
Bridge to Home provides furnished accommodation in Housing Authority buildings with volunteer supported services, free of charge to guests who would otherwise stay in hospitals. The Bridge to Home differs significantly from other models because it uses less expensive nursing or retirement home facilities. Bridge to Home is an innovative partnership led by a hospital, a home care provider and a Community Care Access Center. The patients share the need for a supported environment for a transition period in which to regain their strength and confidence.[56]

Multi-Site, Multi-Service Organization
From a hospital center in Nipigon, Nipigon District Memorial Hospital operates a range of acute, long-term car and community outreach programs. It operates nursing/medical centers in three other communities. The Nipigon District Memorial Hospital is an example of a Multi-Site, Multi-Service Organization. The extent and range of services and alliances that this small hospital has developed are services offered within the hospital facility ranging from inpatient services, emergency services to home care nursing and a diabetic clinic. The hospital also provides enhanced services (other community outreach programs): a service for those requiring transport, telephone assurance, meals-on-wheels (delivering meals to home), wheels-to-meals (bringing clients to meals in the hospital), and ambulance services.[57]

4. The future internal organization of hospitals

Capital budgets
The most important distinction in the financing of hospitals in the separation of operating budgets form capital budgets. Capital projects and the purchase of capital equipment is closely controlled and only partially funded by the provinces. The residual funds are raised within each community as capital needs are identified and approved. As a result, most hospitals maintain a fundraising arm or foundation to provide an ongoing fund pool for capital purchases. Decisions on capital spending are reached through a separate process which involves negotiation between hospital boards, provinces, providers, and increasingly, citizens.[58]

Acute care system succeeds with private bond issue
A Canadian healthcare provider (Toronto Hospital, now Toronto University Health Network) raised a significant sum of money from the sale of bonds. Institutional investors - primarily U.S. and Canadian - liked the deal so much that was oversubscribed. With bond proceeds and private donations, the hospital will rebuild two of its three campuses.[59]

Entrepreneurial spirit
For some, private health care ventures include opening food franchises on hospital campuses, operating parking lots and turning hospital lobbies into a type of shopping mall. For others, it means partnerships to provide home-care services, acquiring laboratories or venturing into the e-health business. The drive is to seek new sources of funding.[60]

Internet
For example a patient in the U.S. or anywhere in the world could undergo magnetic resonance imaging, an X-ray or other diagnostic test in his of her own country and have it read via the internet at a Canadian doctor's computer screen, for a fee.

[56] Woods (2001), www.oha.com
[57] www.changefoundation.com
[58] WHO Regional office for Europe (1996:35)
[59] Pallarito (1999)
[60] Priest (2000)

5. Examples of interesting futuristic hospitals/cure processes

Ontario hospitals embrace e-learning solutions
More and more Ontario hospitals are embracing the groundbreaking advantages of e-learning for health care professionals. e-learning occurs when educational content is delivered and supported by electronic networks, such as the internet, intranet, broadcast media (e.g., satellite) and other content delivery mechanisms. e-learning is considered to be a powerful tool to recruit and retain health care workers in Ontario, e-learning is a cost-effective way to deliver real-time learning to their employees. The advantage of e-learning is that it provides the right content at the right time. It can cater to any size audience, anywhere in Canada, or the world for that matter.[61]

Hospital report cards
A system cannot be improved unless you first measure how well it is performing. By publishing a comprehensive hospital specific report card (including clinical utilization and outcomes, patient satisfaction, financial performance and conditions and system change and integration), quality of care is measured and greater accountability is promoted.[62]

One-stop-shopping
The growth area in community care is the home-care sector, as there is increasing interest in, and need for, services provided outside institutions. Community home care may take many forms, ranging from physician visits, specialized nursing care and homemaker services to meals-on-wheels programs and adult day care. As these services tend to be provided by many different organizations, some provinces have begun to offer one-stop-shopping by organizing these services around one access point.[63]

Quick response teams
Some provinces have introduced with quick response teams to redirect elderly and chronically ill patients out of acute institutions and into community based home-care programs (to contain cost and to facilitate care at home).[64]

Virtual organization (a program based network) – www.echn.ca
When plans for a freestanding children's hospital for Northern Alberta did not prove economically feasible, a multi-disciplinary multi-site, program-based network or 'virtual organization' was established. The Children's Health Center (CHC) of Northern Alberta manages children's health care in acute hospitals in Edmonton and the surrounding region. It bases its operations on programs rather than facilities to create a network of child health services within existing facilities. The rationale for the regionalization of pediatric care included improving quality, achieving better coordination for access to the system by families and care providers and creating financial efficiencies. Although pediatric facilities are being developed and operated from five existing hospitals, the facilities are owned and the staff is employed by the host hospitals, one Board is responsible for children's acute care hospital services in Edmonton. The Board has control over the budget, medical staff, and the type of program and service volumes at each site.[65]

With special thanks to Mr Steve Orsini (Ontario Hospital Association), Mrs Elizabeth Dickson (Canadian Institutes of Health Research) and Mrs Karin McCarthy (Canadian Institute for Health Information)

[61] Bryans (2001), www.oha.com
[62] Ontario Hospital Association (2001), www.oha.com
[63] WHO Regional office for Europe (1996:29)
[64] WHO Regional office for Europe (1996:29)
[65] www.changefoundation.com , www.echn.ca

Interesting sites

Health Canada Online
www.hc-sc.gc.ca

Canadian Health Network
Www.canadian-health-network.ca

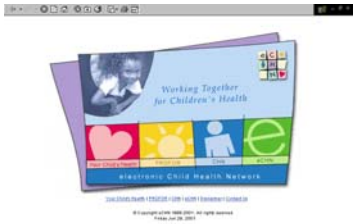
Ontario Hospital Association
www.oha.com

University Health Network

http://www.uhn.ca/home.htm

The Change Foundation

Www.changefoundation.com

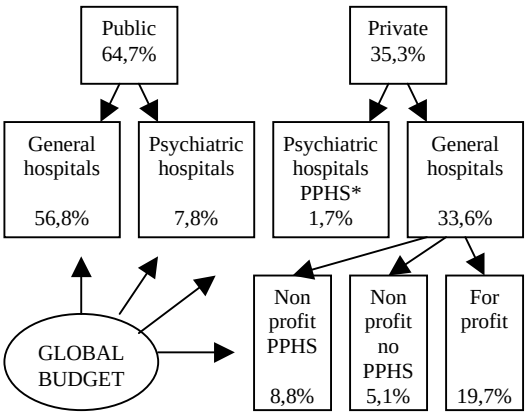


Electronic Child Health Network
www.echn.ca

France

1. Short description of the National health care system

Public + private hospitals = 508075 beds (1997)



* PPHS: participating in Public Hospital Servic

The French health care system is a social insurance (social security) system. The system is characterized by a powerful government role in assuring universal coverage and regulating. The Ministry of Employment and Solidarity monitors the activities of twenty-two regional health planning-inspectorate bodies (DRASS) en through the latter, similar bodies in ninety-six departments (DDASS). New regional institutions, the Regional Hospitalization Agencies (ARH), created in 1996 and also under responsibility of the government, are involved in the planning and financing of the hospital services within the region.

The health care system is a public/private mix, with ambulatory care mainly private and a dominant public sector for hospital care. Hospital care is mixed. Public facilities account for 65 percent of hospital beds. Both public and private sectors include general and specialized hospitals.[66]

Public hospitals have three functions: preventive and curative care and rehabilitation. Medium- and long-stay hospitals are devoted to follow-up treatment and also look after patients who can no longer live alone. However, as in most European countries, despite a major effort to develop alternative solutions to long-term hospital stays, general hospitals still have an important, if ill measured, medi-social function.[67]

The hospital sector is characterized by market institutional rigidities. Whereas to a large extent private clinics come under private law – and in a way are like business – hospital are run more like public administrations. Private clinics respond rapidly to changes in financial and economic incentives, and underwent sweeping reorganization during the 1990s. In contrast, in public hospitals, a set of administrative rules constrains decision making, making it difficult to reach optimal decisions.

The first factor of rigidity is that the conditions of service of hospital staff are governed by general rules set for the entire civil service, including those that apply to recruitment, redundancies, promotion and wage setting. Furthermore, mobility between hospitals is particularly low. Hospital doctors are appointed directly by the Ministry to a particular hospital and specialization, which in effect makes it difficult to move them in the event of reorganization. A second element of institutional rigidity is the fact that hospital boards are chaired by the local mayor. As a hospital is usually the main provider of jobs in the area in which it is situated, local authorities have a direct interest in keeping it there. Thirdly the accounting procedure used by hospitals has shortcomings. While hospitals enjoy certain derogations form public accounting, such as the right to make depreciation allowances, their accounting procedures do not give them an exact picture of their activity from the point of view of assets. At the central level, it is difficult to obtain a precise picture even of the land area occupied by hospitals in France.[68]

[66] French Hospital Federation (????:1-13)
[67] WHO Regional Office for Europe & European Commission (1997:34)
[68] Imai, Jacobzone & Lenain (2000:23-24)

2. External analysis: trends influencing hospitals

Hospitals, facing growing recruitment problems, need to be more active in promoting their activity towards younger generations.[69]

Another important issue is the implementation of the 35 hours workweek legislation in the public sector which has already been implemented in the private sector.

3. The future strategic position of hospitals among other healthcare providers

Health networks
The object is to set up treatment and care networks, improving coordination between the health care services and between the health and social sectors and reinforcing collaboration between the public and private hospitals. The care networks, often introduced without conceiving what such structures may imply, can be organized either in the private practice frame, with the 'city network', or in the hospital basis, with the hospital networks. In both cases, the networks can include practitioners and institutions. The boundaries between ambulatory care and hospital are changing, but it is still a marginal change.[70]

4. The future internal organization of hospitals

Management focus
Hospitals will no longer be bureaucratic institutions, as they still are in some countries. They will be management focused. After having been administered directly by the State authorities, the last step to decentralization and professionalization of management will be made.[71]

Public health focus?
Hospitals will not be asked to do everything and the question is if they should be health promoters? This role depends on the level reached by the health care system. Hospitals are useful where they are adding value. They are not supposed to do what others can do better. Although the length of stay is still decreasing, hospitals will of course remain a place of cure. The demise of the hospital is not foreseeable.[72]

Patient focus
Hospitals will consider themselves and will be considered by others to be a constructive part of the global health system. To view the patient as the center of a process of care is for hospitals the way of the future. Hospitals will become members of health networks, sometimes but not always organized by themselves. If not, they won't be able to exist any longer. Some of them will disappear because they won't have been able to weave links with the other hospitals and the other professionals.[73]

Social focus
Hospitals will remain a key social actor. Western European countries know it already; they have to meet a role they thought they would not see any more. Urban societies have created exclusion and a new poverty, this population will find in hospitals what the word originally meant: hospitality. Hospitals may be the first actor of the crisis reduction in our different countries.[74]

[69] Vincent (2001)
[70] French Hospital Federation (????:40)
[71] Vincent (2001)
[72] Vincent (2001)
[73] Vincent (2001)
[74] Vincent (2001)

5. Examples of interesting futuristic hospitals/cure processes

Health cards

Smart cards in France go back to their original development by Roland Moreno in 1974. The Carte Sante (health card) was launched in 1990 by the mutual insurance companies, with 250 000 cards issued and 1000 readers provided in medical practices in 1992. The system shows the trend towards convergence between medical and financial applications. The card is part administrative and part medical record. The administrative data include personal, social security, and health insurance contributions details as well as acting as a means for paying for health services. The medical record includes emergency data as well as some ongoing health records. At the core of the system is a processing center which manages the financial transactions, contributions from patients, and payments to providers as well as collecting some updated medical data. The current plan is to issue some 600 000 health professional cards and 50 million patient cards by the end of 1998 in the Sesam Vitale program. The main force behind this initiative is the electronic management of payments, although limited medical records will still be carried.[75]

Develop tools of evaluation and performance measurement

Quality certification procedures have been developed as from the late 1990s. Care quality evaluation was made compulsory in 1991 and a special research fund was wet up for the purpose. The Agence Nationale d'Accréditation et d'Évaluation en Santé, officialy created in 1996, has seen its activities and resources enlarged. It is now, after AHCRQ (Agency for Health Care Research and Quality) in the United States one of the leading agencies of this type in the world. It takes part in the development of evidence-based medicine by way of close contacts with expert panels and medical journals. It evaluates medical technologies and will soon take over the process of accreditation of hospital services.[76]

Georges Pompidou

The establishment of the Georges Pompidou European hospital in the Paris region is geared to future developments in the field of hospital care. The hospital operates on the basis of three clinical centers (emergencies/networks, oncology/specialisms, cardio-vascular) and on three medico-technical centers (biology/pharmacy/blood, imaging and anesthetics – resuscitation). This new hospital plans to provide targeted health care in those areas where demand is high and/or research and technical equipment are already highly advanced. However, it is an integral part of the strategic development of networks since it must have links to the overall health care matrix in the form of contractual ties covering psychiatry, neuro surgery, head and neck surgery and vasculo-cerebal traumas. This is the shape of the emerging large-scale centers of hospitals excellence where intervention will be limited to specific fields and as a result there will be a catchment area for patients that will extend beyond the traditional geographical regions that the hospital formerly served.[77]

With special thanks to Mr. Pascal Garel (French Hospital Federation)

[75] Neame (1997)
[76] Imai, Jacobzone & Lenain (2000:29)
[77] Palm, Nickless, Lewalle & Coheur (2000:143)

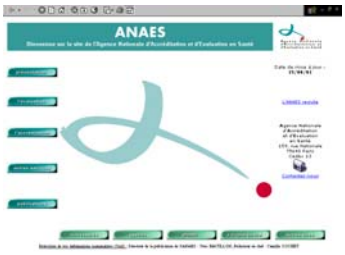
Interesting sites

Sante.fr

www.sante.fr

Ministere de l'Emploi et de la Solidarité
www.sante.gouv.fr/index.htm

Research and Information Center For Health Economics
www.credes.fr



l'Agence d'Accréditation et d'Evaluation en Santé
www.anaes.fr

French Hospital Federation

www.fhf.fr

Germany

1. Short description of the national health system

Germany does not have one budget for health care. Instead, there are 17 tax-based budgets (one at federal level and 16 at Länder level) and currently 453 sickness fund budgets (not counting other social insurance budgets, reimbursement through private health insurance companies, et cetera). The sickness funds do not have fixed pre-determined budgets, but they have to cover all the expenses of their insured members. The 453 sickness funds have about 72 million insured persons and the 52 private health insurance companies are covering around 7,1 million fully insured people.

The hospitals have dual financing: financing of investment costs through the Länder and of running costs through the sickness funds (plus private patients). The running costs include all personnel costs, as hospital physicians are salaried employees of the hospitals. The heads of medical departments usually have the right to charge private patients for medical services on top of the hospital charges. In order to be eligible for investment costs, hospitals have to be listed in the hospital plans, which are set by the Länder.

The Länder governments are responsible for maintaining hospital infrastructure. They attempt to fulfill this duty through hospital plans and funding the hospital investments outlined in those plans. The investments are paid for independently of actual ownership of the hospitals and according to the priorities of the Länder government.

Privatization is another important feature of the German health care system. Some health care sectors are in fact based entirely on private providers, e.g. the office-based ambulatory and dental care sectors. In other sectors, both private no-profit and for-profit providers co-exist with public providers, e.g. in the hospital sector (with a trend toward more privatization).[78]

Development of the public-private mix in ownership of general hospitals 1990-1998

Beds % share	**1990**	**1998**
Public	62,8	55,3
Non-for-profit	33,5	37,9
Private	3,7	6,8

Germany has no gatekeeping system; instead the patients are free to select a sickness-fund-affiliated doctor of their choice.

Primary and secondary ambulatory health care

All ambulatory care, including both primary care and outpatient secondary care, has been organized almost exclusively on the basis of office-based physicians. The majority of physicians have a solo practice – only around 25% share a practice. The premises, equipment and personnel are financed by the physicians. Ambulatory physicians offer almost all specialties.

Around 5% of all office-based physicians have the right to treat patients inside the hospital. All other physicians transfer their patients to hospital physicians for inpatient treatment and receive them back after discharge, i.e. post-surgical care is usually done by office-based physicians and not by the hospital surgeons. In addition to the office-based physicians, around 11.000 other physicians are accredited to treat ambulatory patients.[79]

[78] European Observatory on health care systems (2000)
[79] European Observatory on health care systems (2000:59)

Secondary and tertiary hospital care
German hospitals concentrate on inpatient care. Only university hospitals have formal outpatient facilities, originally for research and teaching purposes. Recently, their role in providing highly specialized care on an ambulatory basis (e.g. for outpatient chemotherapy) has been recognized through special contacts with the sickness funds. Day surgery is another new area for German hospitals.

Hospitals in 1999[80]	2.252
General hospitals	2.014
- Public	753
- Non-for-profit	832
- Private	429

Hospitals
There were 2252 hospitals in Germany in 1999 with a total number of 565,000 beds. Between 1991 and 1998, the number of beds per 1000 in the western part of Germany decreased from 8.2 to 7.0 (-14.4%), in the eastern part even from 8.9 to 6.8 (-23.7%). Trends between public and private for-profit hospitals differed dramatically, however: -24% vs. +58% (with not-for-profits at –2%). While average length of stay fell from 14.3 to 10.8 days (-24.4%) and from 16.1 to 10.5 days (-34.8%) respectively, the number of admissions per capita increased by 8.4% and 29.0% respectively. Until 1997, the net effect on bed-days was negative as well (-15.3%/ -19.8%) but stabilized in 1998. It is likely that the number of cases will continue to increase while length of stay will continue to decrease.[81]

Regulation of the hospital sector follow a 'dual planning' approach: the number of hospitals and hospital beds is planned at the state level. Staff planning and the number of hospital days to be provided are negotiated between hospital owners and sickness funds within the framework of negotiating per diem charges.[82]

Hospital staffing
While the number of hospital physicians continues to increase (1991-98: +10.5%), the number of nurses reached its peak in 1995 after a strong 10.2% growth in four years which was mainly due to the legal link between the required nursing time documentation and the resulting number of nursing jobs between 1993 and 1995. Since 1995, the number has declined slowly (by 2.4% until 1998). The number of other personnel declined during all of the 90s (1991-98: -6.2%) so that the overall skills mix is changing. The turnaround in nursing personnel coincides also with the partial introduction of prospective payments in 1996 and in costs per hospital case (1995-98: -2.9% in the western part). It is likely that the hospital workforce will be reduced once inpatient capacities have been downsized.

In general, the ambulatory sector appears to be much more regulated than the hospital sector. Explicit coverage decisions regarding medical and surgical procedures are currently non-existent for the hospital sector. This is due to the fact that coverage of medical devices and expensive medical equipment falls under budget negotiations at hospital level and hospital plans at state level.[83]

Hospital capacities will be reduced in Germany with a shift from inpatient to outpatient services. The legal framework inhibits the restructuring in some ways: so far outpatient services are still mostly the domain of doctors in private practice while hospitals are required to provide outpatient care. The integration of services has received some support but there is still a long way to go. To a certain extent further reductions in hospital length of stay are likely to be achieved. Hospitals will almost certainly increase their outpatient services (e.g. same day surgery, diagnostic services). Some experts have declared that the total number of hospitals will decline, while the share of private and more specialized hospitals will increase.[84]

[80] Krankenhausstatistik (2001), www.dkgev.de
[81] Koerner (2001), e-mail
[82] Wieners (2001:143)
[83] European Observatory on health care systems (2000:93)
[84] Koerner (2001), e-mail

2. External analysis: trends influencing hospitals

More quality through greater cooperation
There is a need for greater collaboration within the health care system. The society's age-structure is in the process of changing. The number of chronically ill patients and of elderly persons suffering from several different illnesses at the same time is on the increase. new forms of care and treatment provision have to be encouraged and supported. Physicians will have to work together more than has been hitherto the case and improve their cooperation with other health professionals at the same time.

More time - better guidance
Caring will regain its position as one of the hallmarks of the public health care system. Patients need doctors who have time to listen to them, to advise them and to inform them. Everything which improves individual counselling and builds the relationship of trust between patients and doctors has to be promoted. The reform strengthens the role of the family physician whose task it is to guide and accompany patients through the sometimes less than transparent health care system.

Economize more - waste less
New technical equipment, new medicines, new treatment possibilities - medical progress is making great strides but this progress also costs money. These costs can and need to be better controlled. The available financial resources must be distributed and used in such a way that every patient can receive the benefits and services he or she needs.

Better prevention - a better future
Promote health, prevent disease, treat the causes not the symptoms after the disease has taken hold - that is modern health care policy. More support has to be given to health promotion, disease prevention and rehabilitation. Self-help groups are being recognized, taken seriously and supported. The health insurance funds are once more in a position to support and promote individual initiative in the maintenance of health.

More rights - more individual responsibility
An increasing number of men and women have a critical attitude towards a health care system which sees them merely as the object of care. Consequently, patients' rights and independent facilities for patient counseling have to be strengthened. The entire health care system benefits from this new situation since only well-informed and self-confident patients and insured persons are in a position to take on responsibility for their health and are able to make sensible use of the benefits and services offered by the health care system.[85]

3. The future strategic position of hospitals among other healthcare providers

Improved cooperation
The cooperation of family practitioners, ambulatory specialists, and hospitals is being improved. In a new act contracts are allowed between sickness funds and providers that cross the line between ambulatory and the inpatient sectors. A group of providers could contract with funds to provide both kinds of care. To promote a (voluntary) gatekeeping function of family practitioners, sickness funds are allowed to give their insured a bonus if they access specialist via their family practitioner only.[86]

[85] Bundesministerium für Gesundheit (January 2001), *Health care in Germany, including the health care reform 2000*, www.bmgesundheit.de
[86] Wieners (2001:150)

4. The future internal organization of hospitals

Technology
Medical devices and medical technology will play a central role in all German hospitals: in prevention, diagnosis, treatment and rehabilitation. From simple wound dressings to modern incontinence products, from fever thermometers to magnetic resonance imaging, from hearing aids to cardiac pacemakers and from home pregnancy tests to sophisticated laboratory systems, medical devices are indispensable in the provision of modern, high-quality health care.

5. Examples of interesting futuristic hospitals/cure processes

Introducing market-based competition
The Landesbetrieb Krankenhäuser (LBK) Hamburg, a consortium of eight hospitals with 7.000 beds, 13.500 employees and a budget just shy of $1 billion has turned its autonomous and uncoordinated member hospitals into a smoothly functioning public health system. LBK Hamburg is expected to lower operating costs and increase customer satisfaction while maintaining its high clinical standards.

- AK Barmbek reduced its bed count by one-third by eliminating inefficiencies, using advanced information technology and cross-training teams of healthcare workers to cover more areas
- A distinctive marketing and service-delivery strategy aims to differentiate LBK Hamburg in the marketplace and create an LBK Hamburg brand
- LBK Hamburg is defining and building core competencies and setting up "centers of excellence". Emergency services are a core competence of the hospital group, since it handles two-thirds of all emergency cases in Hamburg and administers six of the city's eight emergency medical centers
- The hospital group is eliminating duplication and waste and is getting rid of non-core functions: Orthopedics will be moved out of AK Barmbek to another LBK Hamburg hospital
- Many ancillary and service functions, such as waste disposal and facility management, are being centralized to reduce costs and improve performance
- LBK Hamburg is forging strategic alliances with new partners to deliver products and services outside of its own core competencies. AK Barmbek and St. Georg hospital have merged their eye-clinic departments and LBK Hamburg and Hospital Finkenau formed an alliance to consolidate their obstetrics-gynecology departments, to create the largest birth center in Germany
- Information technology has been the key to systemwide improvements and efficiency
- The consortium's information systems has been reviewed to link the member hospitals more closely
- A centralized purchasing and distribution system has been build that is expected to cut costs by 5 percent to 10 percent
- Payroll cost have been saved, LBK Hamburg's head count has been reduced from approximately 15,800 employees in 1996 to fewer than 14,000 currently, and 650 beds have been eliminated[87]

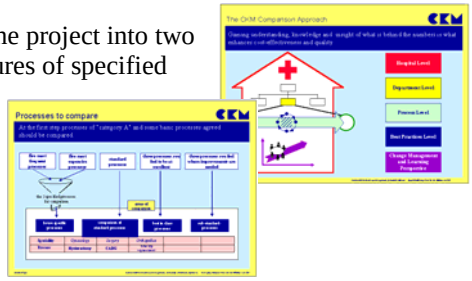
Clinics seek foreign patients
Germany’s cash-strapped hospitals are trying to lure wealthy foreign patients with a double dose of advertising and luxurious custom accommodations in their clinics. Reforms introduced in 1998 allow German hospitals to keep profits made in treating foreign patients who pay their own way, opening the door for intensive promotion initiatives in countries like Russia and Saudi Arabia. German hospitals need to market their health care services to take advantage of the economic possibilities. Increasing treatment of foreign patients who pay their own medical bills will help maintain facilities and secure jobs in Germany.[88]

Hospital Benchmarking Project
The overall objective of the CKM/Bertelsmann international benchmarking project in healthcare is to develop a concept that on the one hand allows a comparison of hospitals in order to find out the critical

[87] Millman (2000), www.acccenture.com
[88] Cole (1998)

success factors that are enabling hospital performance. On the other hand the concept had to facilitate a transfer of the identified parameters from one organization to another.

In this respect the CKM developed a methodology that devides the project into two categories: a comparison of procedural outcomes and cost structures of specified clinical processes, for example total hip replacement, CABG, hysterectomy and hernia repair; the other is learning about best practices at the participating hospital benchmarking partners. In the context of the project a best practice can be a clinical, care, or an administrative best practice.[89]



Health Telematics and Telemedicine

The introduction of telematics tries to find solutions to specific problems in German Healthcare: (1) The diversified system of distributed responsibility for GP, specialists, hospital services and public sickness funds in Germany. This is creating information gaps; (2) A comprehensive biography of patients is not available and medical documentation is often not usable for communication purposes; (3) Current information systems are isolated. Integrated solutions combining knowledge dissemination, patient data and administration (such as needed for electronic prescribing and processing) are lacking; (4) Treatment is maximized (following the legal responsibility of physicians) but not optimized (e g, patient transport services are not supported by data communication.). The key solution is the establishment of the telematic platform to link the activities, to ensure interoperability, and to offer a common infrastructure for secure communication in health care within an accepted legal framework.[90]

Electronic hospital of the future

The Center for Information and Communications Technology at the University of Bremen, and the Central Hospital Bremen North co-operated in the development of MONICA, which is aimed at significantly improving the quality of patient data and thus the intensive care of patients in the hospital. The Central Hospital Bremen North is one of the pioneers in Germany in the use of computer systems in intensive care, taking advantage of its own high-performance computer network with glass fibre technology. The project is a cooperation between the university, the hospital and the business enterprise.[91]

With special thanks to Mr Thorsten Koerner (Hannover Medical School)

[89] www.krankenhaus-management.de
[90] Dietzel, (?), *Health Telematics and Telemedicine in Germany - current developments*, Bundesministerium für Gesundheit, www.bmgesundheit.de, www.afgis.de, www.iid.de/aktionen/aktionsprogramm/index.html
[91] Fresenius HemoCare (2000)

Interesting sites

Deutsche Krankenhaus Gesellschaft
www.dkgev.de

Bundesministerium für Gesundheit
www.bmgesundheit.de

Landesbetrieb Krankenhäuser (LBK) Hamburg
www.lbk-hh.de

Aktionsforum Gesundheitsinformationssystem
www.afgis.de

Centrum für Krankenhaus Management
www.krankenhaus-management.de

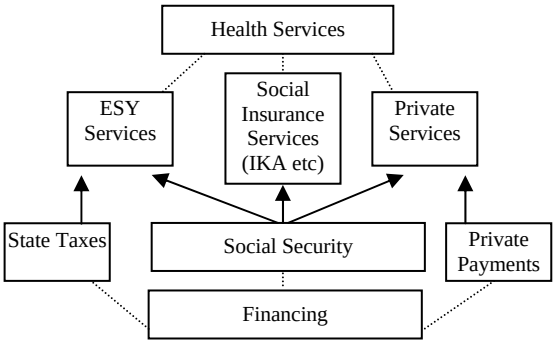
Unfallkrankenhaus Berlin

www.ukb.de

Greece

1. Short description of the national health system

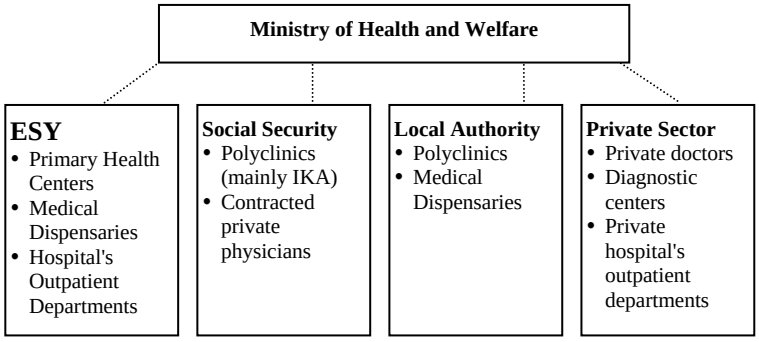
The Ministry of Health and Welfare has the responsibility of co-ordinating National Health System (ESY) and is responsible in total for over 90 percent of activities relating to health. It is assisted by the Central Health Council (KESY) which is an administrative body responsible for routine issues that are forwarded at the discretion of the Ministry although initially its role was meant to be that of a scientific advisory body.



Organization and financing of health services

From 1981 there have been many attempts to strengthen and improve the National Health System. However, these attempts were fragmented, had a limited scope and consequently were not effective in solving crucial functioning problems of the ESY, which have reached a considerably worrying point in the last years. For this reason, the present government re-elected in April 2000 set as a main priority the reform of the country's health system.

Primary health care in rural areas is provided by 176 health centers and 19 small hospital health centers. Primary care in urban areas is provided by private doctors, hospital outpatient departments, and polyclinics belonging to the social insurance system. Secondary care is provided by the general hospitals located in almost all of the 52 Prefectures of Greece while tertiary care is provided by the university hospitals of the seven medical schools of the country and the regional hospitals. There are also 39 social insurance funds that provide medical coverage in addition to a wide range of social services.



Primary Health Services

Plans for the development and operation of health centers were put into action immediately, and, as a result, 176 rural health centers and 19 small hospital health centers were established by 1987, covering the needs of about 2.5 million people living in rural areas. However the lack of official operational regulations and inadequate staff created a considerable number of problems. Personnel were not in a position to offer or involve the local community in health promotion or health education activities. The centers functioned mainly as small-scale treatment units cut off from secondary health care. None of the 210 health centers planned in urban areas were established. Primary care in urban areas continued to be provided by private doctors, hospital outpatient departments, and polyclinics belonging to social insurance funds, mainly IKA which covers employees in private enterprises (about 50% of the Greek population) The attempt to establish a referral system through general practitioners failed, and was not implemented anywhere in the country.

Hospitals
Hospital care holds a central position in the health system. In Greece, the proportion of health expenditure which is allocated to hospital care is one of the highest among EU countries (over 50% of total health expenditure and near 80% of the public health expenditure).

Hospital care is provided through:
- National Health System (ESY) hospitals - 32,682 hospital beds in 128 NHS hospitals (3.1 beds per 1,000 population).
- Public hospitals outside ESY- 4,312 beds in 11 hospitals (0.4 beds per 1,000 population)
- Private hospitals - 218 hospitals and 15,806 beds (1.5 per 1,000)

Hospitals and beds per 1,000 population by geographic region (2000)

	ESY		**Private sector**	
	Hospitals	beds	Hospitals	Beds
Geographic Region	per 1,000 population		per 1,000 population	
Eastern Macedonia & Thrace	6	2.3	12	0.8
Central Macedonia	20	3.6	37	1.7
Western Macedonia	5	1.8	7	1.7
Epirus	5	2.9	4	0.2
Thessalia	5	1.6	35	2.2
Ionian Islands	6	4.2	1	0.2
Western Greece	11	2.3	14	0.8
Central Greece	8	0.8	8	0.4
Greater Athens	34	4.0	78	2.4
Peloponnese	9	2.1	7	0.2
Northern Aegean Islands	5	1.5	3	0.5
Southern Aegean Islands	5	4.6	1	0.1
Crete	9	4.3	11	1.0
Total	**128**	**3.1**	**218**	**1.5**

Source: National Statistics Department (2001)

Public hospitals
Public hospital beds amount for 70% of the total number of beds, while the remaining 30% are private beds. According to OECD data (1996), Greece has the lowest indicators concerning the coverage and use of public hospital beds (69%), although it has one of the lowest number of total hospital beds (5 per 1,000 population) amongst the EU countries. The average hospitalization period is 4.7-4.9 days for small hospitals, approximately 5 days for middle-sized hospitals and 6 days for large hospitals. Large hospitals have a mean annual bed occupancy rate of 75%, middle sized hospitals approximately 60-63%, and small hospitals approximately 55%. The average number of hospitalization days and the mean annual bed occupancy rate are higher in Attica because the majority of the population prefer hospitals of the center, as it is believed that services provided there are of a higher quality.

Consequently, large hospitals have higher coverage while small and middle-sized hospitals have very low efficiency and large scope for improvement (the average time of hospital bed vacancy is 4.7 days in small hospitals, 3.1 in middle-sized hospitals and only 2.1 in large hospitals). Low hospital bed vacancy rate combined with low coverage leads to increased daily hospitalization costs which are higher in small hospitals than in middle-sized or large hospitals (68,330 GRD approximately for 1995 for small hospitals compared to 49,910 GRD for large hospitals). The daily hospitalization cost for 2000 is estimated around 90,000 GRD. Although the daily hospitalization cost is lower in large hospitals, increased hospital activity and financing problems (delays, underpayments, et cetera) from social security leads to significantly high deficits per patient (53,000 GRD in 1995 for large hospitals compared to only 7,000 GRD for small hospitals and 35,000 for middle-sized hospitals).

Although public hospital services were integrated into ESY and many resources were consumed for their improvement, their function is still problematic and public dissatisfaction remains a major concern. On the other hand, the introduction of some administrative improvements had positive effects on production and productivity and led to a significant reduction in hospital expenses. Furthermore, three large university hospitals were established in three rural areas (Ioannina, Patra and Crete) and certain changes were made to a number of hospital departments. Despite these improvements, significant problems in hospitals still remain:

- There is a serious shortage of long-term care hospital beds, which may lead to more serious problems because of the aging population in Greece.
- There are long waiting lists and significant under-utilization of operating rooms.
- There is a lack of incentives for hospital staff to increase productivity, quality and efficiency.
- There is inadequate management and overdependence on governmental coordination and financial support.
- There is a lack of computerized patient record systems, and, in general, there are limited technological resources.
- There is no financial auditing which leads to significant financial debts called to be covered by the State.
- There is an increase in health service's ‘black market’ and a continuation of the wide spread practice of the 'fakelaki' (cash offerings to bribe doctors, nurses and other hospital staff for early admission or better treatment).

There are significant interregional inequalities with the most prominent characteristic the overconcentration of hospital services in the two large urban centers (Athens, Salonika). In the greater Athens area in 2000 there were 34 hospitals and 6.4 hospital beds per 1,000 population while the corresponding ratio in Central Greece was 1.2 beds per 1.000 population. Attica also shows serious inequalities in the distribution of hospitals since public sector health establishments are concentrated within one privileged geographical location, in the center of Athens, while private hospitals are concentrated primarily in the northern suburbs. The private sector is extremely concentrated in Athens, and lately in Salonika. Thus, the infrastructure and the bed coverage between center and periphery, between small and large hospitals between departments of the same medical specialty, and so on, differ significantly resulting in serious inefficiency problems concerning the provision and the use of resources.

The 'oversupply' of physicians and the low number of nurses continue to exist, as do the wide discrepancies between their distribution in different regions. In 2000, there were 53,200 doctors in the country or 42 doctors per 10,000 population making Greece second in Europe (after Spain) in the ratio of physicians per population. Nevertheless, there is a wide variation between the distribution of doctors in different regions, since in the greater Athens area in 2000 there were 88 doctors per 10,000 people, whereas in other regions (Central Greece and the Aegean Islands) the corresponding ratio is less than 30. A certain increase in the number of nursing staff has been observed in the country, but this is comparatively low to the increase observed in other European countries. Despite this increase, discrepancies in the distribution of nurses between rural and urban areas still exist.

In Greece, the problem of regional maldistribution and low percentage of adequately trained nurses is important, as it is found that approximately half of the nursing manpower is concentrated in Athens’ hospitals, an expected fact given the relevant high concentration of medical doctors, hospital beds and technical and material infrastructure in Athens. Greek hospitals' nursing staffing problems are as much quantitative as they are qualitative.

Private hospitals

One of the central aims of the 1983 reform was the separation of the public from the private health sector. This was partially achieved. The ban on the building of private hospitals and on the extension of existing ones was implemented to a considerable extent. As a consequence, private beds were reduced from 41% of the total percent in 1981 to 30% in 1991. In 1980, there were 468 private hospitals which were reduced to 218 in 2000. A similar reduction was observed in private hospital beds. From 25,075 in 1980, private hospital beds were reduced to 15,806 in 2000. This reduction reflects the closing down of small units that did not manage to survive due to the low hospitalization fees and the competition from large private hospitals. The greatest concentration of private hospitals is found in Attica (78) and in Central Macedonia, which includes Salonika (37). However, the conservatives' rise to power in 1992 led

once again to the alteration of the law and the establishment of new private hospitals was once again permitted.

The ban of private practice for hospital physicians had an adverse effect, as it fueled black market activities, posing a serious strike against the fundamental principle of ESY that all citizens were entitled to equal and free of charge treatment. For all these reasons, despite the establishment of ESY, Greek citizens according to public opinion and research are not satisfied with the system, while the phenomenon of seeking medical treatment abroad continues.

The following conclusions were drawn through the examination of the activities of selected private hospitals in the last decade:

a) The number of admissions has been steadily increasing during the last decade, while the number of hospitalization days shows fluctuations with a downward trend, compared to the beginning of the decade. This is due to the clear decrease of the average time of hospitalization and the establishment of day-surgery departments. Hospitalization days for hospitals with a capacity of 300 beds range between 85,000 and 90,000 days.

b) Hospitals are reducing their bed capacity with a simultaneous change in the class distribution of existing beds, in order to significantly reinforce the availability of single and double rooms, while reducing significantly the number of rooms with three beds. This tactic is justified when considering the activity indices, which show lower occupancy rates for three-bed rooms, in which only 30% to 45% of hospitalization days are consumed. At the same time, Intensive Care Units and day-surgery departments are reinforced, covering 7% and 5% of hospitalization days respectively.

c) Secular trends of occupancy rates show that this choice for the redistribution of beds by bed/room class is correct, given that the average occupancy rates observed in the large private hospitals, from 70% at the beginning of the decade exceeded 80% in the last years. At the same time, this operational capacity measure has proved to be competitive.[92]

2. External analysis: trends influencing hospitals

Demographic data and morbidity indices

The decreasing birth rate accompanied by the simultaneous decrease in mortality rates has resulted in a "demographic aging" of the Greek population. The phenomenon is expected to assume greater proportions in the near future due to the further decrease of the two indices mentioned above. The above shift in the demographic composition of the Greek population will inevitably result in changes in the demand of health services. An increase in the demand of health services is expected due to the increased illness expectancy of the population group of 65 years and over along with an alteration of the type of services demanded with an increase of various degenerating illnesses. Furthermore, the decreasing infant mortality rates along with the consequent increase in the survival rate of infants with low birth weight increases the demand of specialized services for this sensitive population group.

The trends observed the last years in the causes for hospitalization are expected to influence the functioning of hospitals in the future. According to the data, the major causes of hospitalization among the Greek population in 1995 were circulatory system diseases, digestive system diseases, cancers, accidents and poisonings. Compared to the causes of hospitalization in 1985, the most important difference concerns the number of hospitalizations for circulatory system diseases which increases significantly (from 139,507 admissions, to 213,725) becoming the first cause for hospitalization. There was also an important increase in the number of hospitalizations for cancers (from 75,958 to 140,505), from diseases of the nervous system and the sensory organs (from 56,083 to 92,217), from diseases of the urinary and reproductive system (from 96,212 to 125,469), while a notable decrease was observed only for admissions for blood and blood producing organ diseases (from 43,203 to 26,111).[93]

[92] Institute for Social and Preventive Medicine (2001)
[93] Institute of Social and Preventive Medicine (2001)

Chronic diseases
The increase in life expectancy, modern lifestyle, and the aging of the population have increased the prevalence of chronic diseases such as hypertension, degenerative arthropathies and other diseases of the myoskeletal system, diabetes and diseases of the sensory organs factors which will also influence the functioning of hospitals in the future as these will need to increase their capacity in order to effectively deal with these phenomena.[94]

Socio-economic indicators
The country's improved economic indicators are expected to have an influence on the functioning of hospitals as a larger segment of the population will be seeking medical care in public and private hospitals and will be in a position to afford private insurance. Furthermore, the central role Greece is playing in the Balkans is expected to urge private enterprises in creating technologically advanced health units which will be in a position to offer excellent services no the citizens of the greater Balkan area.[95]

3. The future strategic position of hospitals among other healthcare providers

In July 2000, the new Minister of Health and Welfare announced the new health reform consisting of 200 measures. The most important change introduced is the establishment of Regional Health Systems (PE.S.Ys) in each of the 17 health regions of the country. PE.S.Ys will exercise management of regional health services (including hospitals) based on an analysis of the particular characteristics of each region this way dealing with situations such as over consumption of hospital care. Furthermore, this new development will allow for functioning links to be created between regional hospitals and the various other health services of the area.[96]

4. The future internal organization of hospitals

The healthreform has the aim to alleviate the phenomenon of the "hidden economy", strengthening hospital competitiveness, facilitating citizen access, and improving hospital hotel infrastructure. The following changes to the internal organizational structure of all of the country's hospitals are being implemented:

1. Hospitals are no longer legal entities but are autonomous decentralized Pe.S.Y. units.

2. Contracts will be signed between Pe.S.Ys and Hospital managers specifying efficiency goals, which have to be fulfilled during the course of their employment. The contacts will also outline the manager's specific duties.

3. Based on the new administration and functional structure of hospitals, modern operational plans are being created and new hospital regulations are put forward. According to the new operational plans distribution and redistribution of beds, laboratories, medical and technical equipment and manpower is being conducted.

4. The new operational plans established are also based on the merging, abolition, and transfer of clinical and administrative activities, the closing down of the hospital or the change of its type and aim, and the abolition or change over of hospitals into geriatric and rehabilitation hospitals, specialized centers or Health Centers.

5. New departments and services are established for the support of the administration of hospitals (departments of quality control, computer technology, statistical analysis, setting prices, et cetera).

[94] Institute of Social and Preventive Medicine (2001)
[95] Institute of Social and Preventive Medicine (2001)
[96] Institute of Social and Preventive Medicine (2001)

6. A unified managing system is created through computerizing and coding all medical, financial, administrative, and technical hospital services. Furthermore, in all hospitals a Unified Logistic and Double-recording plan is being established. This will be completed in 2002.

7. The Board of Directors of each Pe.S.Y. will be responsible for the strategic business planning of the hospital, budget account, placement of high rating administrative executive members, and for supplies for which a national limit will be set.

8. Health services units, which have been operating, at least for seven years, as Reference Centers for specific medical specialty or health care service, can undergo the accreditation procedure in order to become Centers of Excellence.

9. A "Patient Reception Service" is created in every hospital. The Service will be staffed with specially trained personnel who will record patient information, and provide guidance to incoming patients.

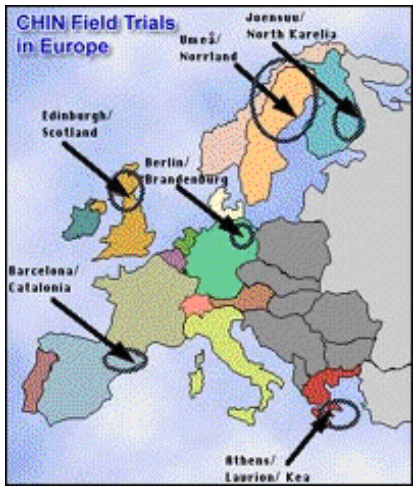
10. Each hospital, according to its size and capabilities, will be able (based on an administrative decision) to offer after hour evening services. The services will include afternoon clinics, diagnostic tests, while certain therapeutic acts and operations will be performed.

11. Hospitals will be able to offer hospitalization and other health services to beneficiaries of private insurance companies and high-income citizens, based on set prices.[97]

5. Examples of interesting futuristic hospitals/cure processes

Modern Asclepieions Parks and the New Scientific and Technological Innovations
The concept of Modern Asclepieion Parks is to design, as part of city planning, large enough green-areas where the natural world can be related to health and culture. These areas need to provide attractive facilities for all city residents and visitors so that they may have the opportunity to engage in 'activities', which will promote health maintenance, lifelong learning, social interaction and cultural pursuits. In today's world, such services can be most effectively supported by the new scientific and technological innovations of the developing information society. Suitable infrastructures will need to be build for the effective and efficient exploitation of the opportunities offered by these new technologies. The developments in the telematic technologies i.e. the combination of information and communication technologies (ICT's), are expected to provide new powerful products, processes and services for the solution of existing complex and chronic societal problems. As a result they will also facilitate the introduction of innovations in all the activities related to Environment, Health and Culture.[98]

Telemedicine
CHIN is a European Telematic Project which plans to implement a viable set of co-operative regional healthcare telematic networks, with the participation of Hospitals, Health Centers, doctors, patients and Public health institutions and administrations. CHIN creates a modular, open, and scaleable reference installation of services and applications on a European level via CHIN Servers. CHIN is a network of servers which support a range of generic services. One of these services is the online regional resource directories which provide Health Information and Educational Services to the users. Through this effort we aim to the establishment of a reliable and valid Health Service Information System (HSIS), available in both metropolitan and rural areas. The CHIN project is implemented



[97] Institute for Social and Preventive Medicine (2001)
[98] Institute for Social and Preventive Medicine (2001)

in both urban and rural areas of six European countries, these are: Athens, Lavrion, Kea, Greece; Barcelona, Catalonia, Spain; Berlin, Brandenburg, Germany; Edinburg/Scotland, UK; Umea, Norland, Sweden; Joensuu/North Karelia, Finland.[99]

Managed care system

The domestic example which is of interest is the establishment of a managed care system (Medisystem) by the biggest private insurance agency (Interamerican). Medisystem provides to its members hospital and primary care services for a fixed annual fee. These services include one hospital in the center of Athens, a Medical Call Center, a number of primary diagnostic laboratories and a network of private physicians of all clinical specialties.[100]

With special thanks to Mr Yannis Tountas (Institute for Social and Preventive Medicine)

[99] www.nh.gr/CHIN/eng/tele/index.html
[100] ISPM (2001)

Interesting sites

Ministry of Health and Welfare

www.ypyp.gr

Hellenic Resource Network

www.hri.org/nodes/grmed.html

Mednet Hellas, the Greek Medical Network

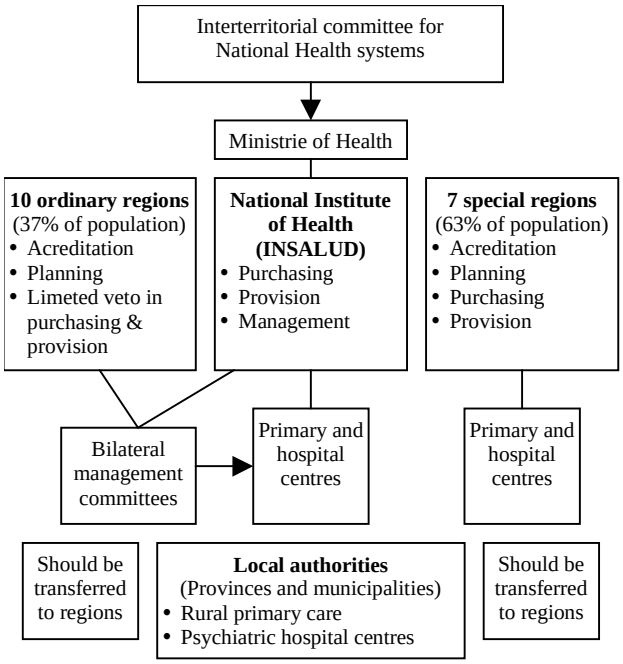
www.mednet.gr

Cooperative Health Information Networks (CINE)
www.nh.gr/CHIN/eng/hospitals

Spain

1. Short description of the national health system

The Spanish health care system has been set up as an integrated National Health Service, which is publicly financed and provides nearly universal health care free of charge at the point of use. Provision is mostly publicly owned and managed: this applies to all general practitioners and primary health care centers, to specialized outpatient clinics and physicians, and to 80% of hospital care. Governance of the system is decentralized, with local organization in each of the 17 autonomous communities, or regions, which comprise the Spanish State.[101]



The National Institute of Health (INSALUD) manages the social security health care services in the 10 autonomous communities (of 17) which have not yet assumed full political responsibility for health services (covering 38% of the population).[102]

The Autonomous Government, an elected body, has limited normative capacity for coverage and financing but has full capacity to organize health services provision, developing their own Health Regional Service, but can not change the services catalogue or financing criteria. In fact, autonomous communities receive a finalist budget for health services, being calculated on population basis. The present financing system does not take into account age or regional living cost differences, or patients from different regions. The present autonomous communities financing system is going to be changed in 2002, when autonomous health services will no longer receive a finalist budget from central government, but it must be guaranteed a minimum for health services. This minimum level will take into account the proportion of population older than 65 years.

As a way of separating financing and provision functions, there have been applied two kinds of reforms. First, the introduction of 'Block-contracts' in public hospitals, which simulate the buying of the hospitals activity by the central level. Second, to open new public hospitals as ‘public trusts’, which are public organizations managed under private legislation. [103]

Health areas

Each Autonomous Community has drawn up a health map stipulating a series of health areas and basic health zones. Each area comprises several health zones. Formally the health areas were defined according to geography, socio-economic standards, demography, employment, epidemiological factors, cultural concerns, transportation and the health facilities existing in the area.

[101] European Observatory on health care systems (2000:17)
[102] European Observatory on health care systems (2000:27)
[103] Huguet (2001)

Basic health zones are a subdivision of health areas and are the smallest unit of the health care organization. Each basic health zone is defined in accordance with the degree of concentration of the population, the epidemiological characteristics, and the facilities and health resources of the area. A maximum distance between communities and the location of services and a standard travelling time to these facilities (30 minutes) were also taken into account.[104]

The following services are provided in the health areas: primary health care, specialized ambulatory care and hospital (outpatient and inpatient) care:

Primary health care
Primary health care is defined as care of individuals, families and the community at large through a number of programs, including health promotion, prevention, curative care, and rehabilitation, using the area's basic resources and those of the units which support the public network of primary care centers.

Primary health care is delivered through two distinct networks. The traditional system depends on a solo practitioner working individually and on part time basis. This system is gradually replaced by the reformed system. The reformed system is a team-based, group practice with a multidisciplinary approach to primary health care problems. A specific feature of the Spanish primary care provision is that it is 100% publicly owned and staffed with public practitioners paid on a salaried basis.[105]

A private sector used mainly by higher income groups exists alongside the public scheme. Doctors have their own practices and are paid on a fee-for-service basis. This is not covered by the national health system.

Specialized ambulatory care
Specialized care is provided through an integrated public network of specialized ambulatory centers which are dependent on hospitals, and in some cases staffed with the same teams which comprise the clinical services of general hospitals (with members rotating to cover ambulatory visits). Organization and planning of specialized care is regionally based and all health areas must have, or be linked to, a general hospital for acute cases.

Hospital (outpatient and inpatient) care
Hospitals within the system largely confine themselves to acute care and provide at least the minimum basic services of: internal medicine; general surgery; core surgical specialties (ophthalmology, ear, nose and throat); orthopedics; obstetrics and gynecology; pediatrics; physiotherapy; radiology and laboratories. All these hospitals have 24-hour emergency services. Larger hospitals, mainly those that are located in the provincial capitals, offer highly specialized services which are not cost-effective in smaller areas. In general, all autonomous communities have at least one general hospital for acute cases with the full range of specialties available. Access to these services, although referral based, is only through referral by other specialized health care services and not general practitioners.[106]

Private health sector
Private sector hospitals also are becoming increasingly popular, with American chain Tenet Healthcare Corp. a major player in Barcelona. There are 142 privately owned hospitals operating in Spain. But the real private sector battleground is on the insurance side, where about 150 companies are competing in a market expected to grow in tandem with the Spanish economy. Asisa is the biggest private insurer, with 1.6 million policyholders, a network of 21,800 physicians and 13 owned hospitals and clinics. Second-ranked Adeslas has 1.5 million policyholders. Asisa and Adeslas each have about 900,000 government employees on their membership rolls. Sanitas, owned by the British United Provident Association, has 1 million enrollees, 15,100 physicians, two owned hospitals and 11 clinics. Partly because of its foreign

[104] European Observatory on health care systems (2000:27)
[105] European Observatory on health care systems (2000:58)
[106] European Observatory on health care systems (2000:73)

roots, the company has enrolled only 20,000 government workers but has made inroads with multinational corporations that do business in Spain. The Big Three insurers control 56% of the market.[107]

The private health sector is most of the times complementary to the public sector. It shares the 24% (included co-payments and private health insurance) of the total health expenditure and the 28% of services provision, but 42% of this private activity is concurrent with the public sector (this means that the public national health system includes these services).[108]

Although the public system provides health care mainly through its own resources, it has traditionally contracted some 15-20% of hospital provision with private non-profit providers. The only important exception to this rule is the Catalan public health care sector, in which two thirds of public hospital services are provided by private non-profit hospitals. The total number of hospitals (public and non-public) in Spain was 799 in 1997.[109]

The health system in Catalonia

The so-called "Catalan Health Service model" is a variation of de Spanish national health system. It is a result of historical and cultural differences, differences in the structure of the health care sector, and socio-economic differences from other Spanish territories.

The long tradition of self-government until the eighteenth century and the well preserved Catalan language have given to the Catalan people a strong sense of self-identity and a strong support for a institutional devolution. At the same time, Catalan industrial entrepreneurs have always seen Spain as their natural and direct market. Now, this is changing and the commercial balance with other European countries is growing rapidly compared to the rest of Spain.

The weak development of the social security hospital network during the 60's and the earlier industrialization that provoked the development of voluntary and non-profit insurance organizations has build an important private non-profit hospital sector contracted with the social security system.

This situation has resulted in one of the major differences between Catalonia and the rest of Spain. While Spain as a whole has only 10% private hospital beds, Catalonia has 70%, and they have a long tradition of contracting out their services to the public administration. This situation is also present, on a smaller scale, in a few other territories (Madrid, Basque Country, Navarra and Balearic Islands).

The main steps of the Autonomous Government towards a new organization of health services were the following:

- A hospital accreditation Law (1983), a series of regulations to be fulfilled by each center, especially important for private institutions.
- The creation of a public utilization hospital network (1986). Included are public hospitals together with a selection of private non-profit hospitals, in order to guarantee a 30 minutes isocrone to reach a hospital by car. 14% of beds remains as freestanding private supply.
- The design of a hospital reorganization Plan (1986). The initial objective was to help hospitals financially by means of internal reforms aimed to institute a basic set of efficiency measures. It also served as a reference for contracting hospital activity by the public finance institution. Another effect was the reorientation and reform of small clinics and hospitals not included into the Plan towards long-term care centers.
- The Health Services Organization Law (Llosc, approved in 1991), introduced the separation of financing and provision functions. A public health service was created for planning, financing and contracting health services to a mix of public-private providers.

To resume, the 'Catalan model' can be defined as an Internal Market, with a planned supply, publicly financed, provided by a independent public-private network, and regulated by prospective contracts

[107] Bell (2000)
[108] Huguet (2001a)
[109] European Observatory on health care systems (2000)

between a single public finance institution and different public-private providers which are partially competing between them.[110]

2. External analysis: trends influencing hospitals

A rapid growth of the elderly population is expected in the near future, which will only be mitigated by immigration from Africa and Latin America. Mental health in primary health care and chronic degenerative disorders in elderly services are the emerging problems. Therefore, there will be an increasing demand for health services linked to geriatrics and an increasing demand for social dependency services. At present, both demands are financed and provided differently. Health services on a National Health Service basis and social services on different public-private financing and services.

Increasing costs driven by universalization of coverage, medical consumerism, comfort and satisfaction expectations, technological advances and the greying of the population are in conflict with public financing limitations. Despite increased efficiency and the diversification of hospital services, the medical profession is experiencing demoralization and demotivation.

The introduction of a finance provision split in public managed health services has resulted in hospital information systems, especially based on DRGs (Diagnosis Related Groups). This can be used to improve clinical management.[111]

3. The future strategic position of hospitals among other healthcare providers

Specialist ambulatory clinics were integrated into the public hospitals to reinforce primary health reform. This vertical integration was an opportunity for hospitals to consolidate the patient's flow for specialized services but did not bring the necessary internal reorganization. At the same time primary health services have grown more as a separate rather than a collaborative service. Coordination programs will be needed in the near future.[112]

Catalonia has a large population of elderly and has therefore been developing a private sector for long-term care. Currently, the sector will be modernized to diversify services and to meet new demands. The larger majority of these services remain in the private sector. Special social services, linked to health conditions, have been developed to facilitate hospital discharges for chronic patients.[113]

Comprehensive health care organizations in Catalonia
Different organizations providing hospital services are able to contract with the public administration. Various consortiums formed by the autonomous government, municipalities, non-profit organizations, private foundations, and public companies are currently contracting. At first, these organizations were only intended to provide hospital services. However, in order to improve the efficiency care and to become the single provider in its catchment area, the organizations are starting to provide primary health care and long-term care services as well, thus becoming comprehensive health organizations.[114]

[110] Huguet (2001b)
[111] Huguet (2001a)
[112] Huguet (2001a)
[113] Huguet (2001b)
[114] Huguet (2001b)

4. The future internal organization of hospitals

The organization of specialized care suffers from a number of problems, which will have to be addressed in the near future:[115]

- a limited capacity to manage centers due to over centralization of decision making
- the quasi-civil service status of health professionals linked to the health system
- difficulties in encouraging health professionals to introduce and use health care technologies
- lack of managerial skills
- lack of coordination between primary health care and specialized care
- long waiting times for some medical and surgical specialties

Hospital system in Spain is more a territorial network than a regionalized organization. Hospital beds are concentrated in cities, especially in big cities for highly specialized clinical services. There is and will be an increasing flow of patients to city hospitals, even for relatively non-complex cases.

Hospitals are still the main resource for education and research and there are few mechanisms for coordination between different levels of care. There is need for collaboration and integration programs.

As of the 90's hospitals are applying two policies. The first policy aims to limit the annual budget growth, which was around 5-7% in the 80's. The second policy encourages the process of vertical segmentation. Main activities are outsourcing laundry and other hotel services and engineering services. Another development is product diversification. With the creation of day-hospital units, day-surgery units, hotels for patients, domiciliary hospital units, and rapid diagnostic units there is more control on expenditures.

Clinical Governance will be introduced in order to share management responsibilities between managers and clinical professionals. It is a decentralization process, first constructing relevant information systems (like unit costs and DRG's, Diagnosis Related Groups), later resource management programs. In some university hospitals Clinical Directorates have been created.

Hospitals are preparing to change their structure from specialty units to patient-oriented processes, in which different specialist intervene based on patient needs. University hospitals can apply this approach for cancer and cardio-vascular patients and create large clinical institutes. General hospitals can develop smaller units, for example stroke units. Hospitals will have to become more open to patient demands and environment influences.

As a result of these policies, the number of acute beds is falling. Therefore, hospitals have to reduce their size, become more intensive in treatment and technology use, more tertiary in treatment and care, and to be more open and permeable to the rest of health and social services.

Hospitals in the private sector, especially those located in tourist areas, are experiencing increased demand for their services. In a number of larger cities specialty clinics have been build by foreign capital investments. Some medical areas, like ophthalmology, are experiencing rapid growth. There will be more opportunities for private services. Public financing is problematic and professionals are demoralized, for the public professional salaries are one of the lowest in Europe.[116]

Developments in Catalonia

Hospitals will maintain their central position as a clinical, education and research centers, but they will face a reduction of bed numbers, growing alternatives to hospitalization to maintain a reduced core of inpatient intensive and expensive treatment.

Catalonia seems better prepared to develop integrated and comprehensive health organizations, financed on capitation basis, and expanded from traditional hospital services. Competition will be introduced by the primary healthcare, self-managed, professional associations.

[115] European Observatory on health care systems (2000:83)
[116] Huguet (2001a)

Regionalization is being completed both in Spain and in Catalonia. The main challenge will be to make hospitals more efficient in maintaining the equity they have acquired.

Another important challenge will be decentralization and the different regulatory initiatives of the Autonomous Governments: What kind of coordination will be set up and how much will it differ between the Autonomous Communities?

Clinical Governance in the Catalan hospitals is more advanced then in the rest of Spain. Management decentralization, patient-oriented processes and creation of managed clinical units are further developed and clinical units are developing integrated health care programs in different patient locations. [117]

5. Examples of interesting futuristic hospitals/cure processes

Navarra University Clinic

The ideal hospital should break the barrier between public and private health care. In the model used at the Navarra University Clinic the patient is the focal point of the system. In the ideal hospital everything should be oriented towards the patient and his family. On the basis of this philosophy, units known as "coordination units" have been created at the Clinic to coordinate patient care, serving as a channel of information, acting as a test planning center and decentralizing admissions and billing. Teamwork is another basic ingredient for proper administration. There won't be watertight compartments but, instead, the existing compartments will be open to the other teams in order to achieve more complete health care. The hospital of the future will be a structure that is homogeneous yet made up of different professionals: doctors, nurses, administrators, and administrative personnel who work in different areas but on one common front. This approach requires that each department plans its work from a multidisciplinary perspective. Consequently, multidisciplinary functional areas, comprised of professionals from different departments, have been put into practice in the following areas: obesity and nutrition, vascular risk, cellular therapy, breast, and neuroscience. The hospital of the future cannot forego the application of new technologies, both in diagnosis as well as in administration and computer systems. The ethical norms that guarantee the integrity of the center ethical training in the areas of health care and research must be promoted.[118]

Barcelona Clinical and Provincial Hospital

Integrating health care services are carried out in the Clinic Health Care Corporation. The aim is to radically redesign the service offered from the patient's perspective, which will help to drastically improve quality and cut costs. The way to do this sprang from a new structuring of the services, which consisted of grouping patients together according to requirements and common characteristics, decentralizing medical services, eliminating and simplifying intermediary processes and structures and giving professionals greater autonomy. This organization makes it possible to group together homogeneous groups of patients and makes patient care compatible with teaching and research.[119]

Centro Medico Teknon

Private hospitals have capitalized on the low patient-satisfaction scores of government facilities. Tenet's Centro Medico Teknon is a full-service, 193-bed acute-care facility at the foot of Tibidabo Mountain in Barcelona. Teknon Managing Director Robert Manson says the $70 million integrated medical campus is modeled after Tenet's 211-bed Delray Medical Center in Delray Beach, Fla. Their marketing strategy is based on quality medicine, quality hotel services, choice of physicians, scheduling flexibility, and a full-range of services and technology. In addition, Teknon has teamed with New York's Memorial Sloan-Kettering Cancer Center to open an oncology unit on its Barcelona campus. The ambulatory-care center, which opened in October, is designed to offer therapy to European cancer patients who have been treated at or later may need treatment at Sloan-Kettering in New York. The New York hospital has similar clinic partnerships in Geneva; Istanbul, Turkey; Sao

[117] Huguet (2001b)
[118] Virseda (November 1999), *The Ideal Hospital faced with the Third Millennium*
[119] Virseda (November 1999), *The Ideal Hospital faced with the Third Millennium*

Paulo, Brazil; and soon in Singapore. Teknon is becoming a regional referral provider for the Southern Europe-Mediterranean market.[120]

Quality improvement
Quality improvement is an important issue for Spanish healthcare providers. The Avedis Donabedian Foundation is devoted to organizational improvement, peer review and facility accreditation. To develop standards, the foundation has teamed up with America's Joint Commission on Accreditation of Healthcare Organizations. Two years ago, the Hospital General de Catalonia, a private facility in suburban Barcelona, became the first non-American hospital outside the U.S. or its military outposts to land the Joint Commission's seal of approval. But most of the healthcare establishment remains skeptical.[121]

Public trusts
A number of hospitals is under a new kind of 'public trusts'. These hospitals have to develop instruments to run the hospital like a private enterprise, which is contracted by the public administration. Examples: Consorci Hospitals Creu Roja (Red Cross), Barcelona, Catalonia; Fundación Hospital de Verín, Pontevedra, Galicia; Hospital Costa Del Sol, Marbella, Málaga, Andalucía, Fundación Hospital de Alcorcón, Alcorcón, Madrid; Fundación Hospital de Manacor, Manacor, Baleares. Hospital "Ribera Baixa",Alzira, Valencia. (a public hospital with a management contract to a private insurance company. The financial contract is on capitation only for hospital care).[122]

Catalonia
More than 30 new health care, hospital or primary health care organizations have been created in Catalonia in the last 15 years. All of them are contracted with the public administration and hospitals are part of the public utilization hospital network. Some of the most interesting are: Consorci Hospitalari 'Parc Taulí', Sabadell, Barcelona; Consorci Sanitari 'Baix Empordà', Palamos, Girona; Sagessa, health companies holding, Reus, Tarragona; Primary Health Care Association Firm, Vic, Barcelona; and the Blood Transfusion Public Company, Barcelona[123]

With special thanks to Mr Mateu Huguet (Escuele de Alta Dirección y Administración)

[120] Bell (2000)
[121] Bell (2000)
[122] Huguet (2001a)
[123] Huguet (2001b)

Interesting sites

Ministerio de Sanidad y Consumo
www.msc.es

INSALUD

www.mcs.es/insalud

Universidad de Navarra

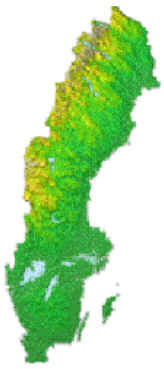
www.unav.es/un/clinica/indice.html

Centro Medico Teknon
www.teknon.es

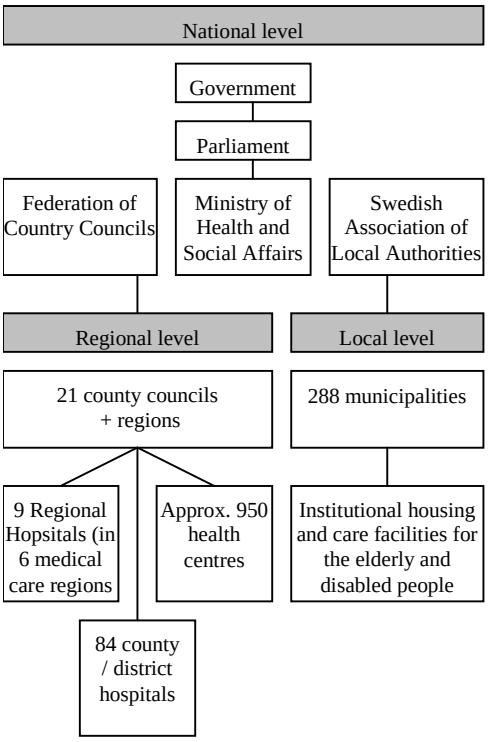
Hospital de la Ribera
www.hospital-ribera.com/plana.htm

Sweden

1. Short description of the national health system



The Swedish system is decentralized. Elected regional county councils or local municipalities are running all health care in Sweden. The counties are responsible for the delivery of health care services, with some notable exceptions where the municipalities are responsible. About 80% of the counties' activities are devoted to health care. The responsibility of the counties also includes planning and financing of most of the privately supplied care, which is mainly publicly financed. The services are for 90% publicly financed from a combination of taxes and social insurance. The counties and communities have a strong position based on their right to levy local taxes. Approximately 70 percent of county council revenues are derived from direct taxes, 10 percent from the federal government and the rest from patient charges. The level of co-payment is close to 20 percent if costs for drugs and dental care are included. [124]



The politicians in county councils and communities have freedom to decide the organizational structure of health and medical care in their regions and decide on the balance between primary and secondary care. The advantage of the system is the strong democratic principles representing a majority among the population. The drawback is the repeated changes in management principles due to changes in political majority. The sensitivity to rapid changes in majorities also has made major structural developments difficult to implement. The devolution of power over health care going on for 40 years in Sweden has been positive as it has stimulated local democracy and made people aware of the close association between taxes, costs and supply of health care. The downside is that there are large regional differences in health, health care and also differences in utilization of health care.

The national government is responsible only for forensic medicine, health care in prisons, for the national defense and for refugees and immigrants who have not yet been admitted to a municipality. [125]

Hospital care

General hospitals are divided into three categories: [126]

- The 9 regional and teaching hospitals with university affiliation are administered by their local county councils but their activities are regulated by agreement between all the county councils

[124] WHO Regional Office for Europe (1996)
[125] Karlberg (2001)
[126] WHO Regional Office for Europe (1998:36)

making up the region. They have a large number of specialties and can cater for patients requiring the services of many different specialists.
- The 23 central country hospitals are large institutions comprising 15-20 specialist and also serve as district hospitals to their immediate neighborhood.
- The 47 district hospitals are smaller but have a minimum of four specialties: internal medicine, surgery, radiology and anesthesiology

The country is 2000 kilometers long and the density of population is very low in the northern part. In the area extending from the far south to the level of Órebro there are more than thirty acute care hospitals, while areas of similar size in the north may be covered by only one or a few hospitals. This difference is explained not only by the need of capacity in the south, but also by differences in expectations among the population.

Private sector

The private sector (providers side) is rapidly expanding. In some counties more than half of primary health care is run by private providers with contracts with the county. Examples are Västmanland´s county, and one of the Health Authorities in Stockholm County (each of the seven local authorities in Stockholm county is of the same size, population wise, as an ordinary county). In Western Gotaland a principle decision is taken by the political council to have contracts for all providers in primary health care and to allow private, corporate, trusts or personnel to compete for provider contratcs. In some counties free standing hospitals have contracts with the county. These hospitals may be run by for-profit agencies (Capio Co runs Saint Göran hospital in Stockholm – runs, not owns - and Lundby in Göteborg), by non-profit organizations or by free standing organizations under the legislation of companies on a free market but still all stock shares owned by the county. A political decision is taken in Stockholm county to have all acute care hospitals as free standing companies, owned by the county but run by alternative providers. The management of such a free standing hospital may have a political board or a board made up from local business people and local non-political representatives from the population.[127]

Physicians can establish new practices only with contracts with the county if they want to have subsidized practices. Otherwise any licensed doctor (according to EU legislation) is free to open his own practice based on patient fees only or based on co-payment from private insurance funds. The history behind this goes back to 1970 and 1985. Before 1970 any licensed doctor could open his practice, the patient payed the price and was reimbursed from the national insurance fund. From 1970 the patient payed only a small fee, and the provider: county, hospital or primary care center send the bill to the insurance fund. From the same day doctors working for the counties are salaried. However, doctors in private centers could still send the bill to the insurance fund up till 1985, when all money was given as block grants per capita from the national insurance fund to the counties. From that day all doctors need to have a contract with the county to be subsidized (or rather their patients to be subsidized).[128]

The number of General Practitioners is one per 2 500 population as a national mean. Variations are large from one per 1500 to one per 3000. This figure is not stable, since many positions are vacant and many vacant positions are covered by short time working substitutes. The short time doctors may be Danish or from any other EU country, provided the language skill is sufficient, but may also be middle aged Swedish GPs who travel around to be free agents, increase their salary, and get rid of all administrative duties. The increase in salary (if you go to a remote area with long standing shortage of doctors) may be enough to allow every fourth week off. This is an attractive option for GPs in the higher age groups. The shortage therefore is relative, and the figure difficult to compare with other countries. In addition several hundred Swedish GPs are working in Norway for short or long-terms (higher salary, less working hours).[129] A high ratio of nurses (9,6 per 1000) indicates the importance given to nursing in Sweden.[130]

[127] Karlberg (2001)
[128] Karlberg (2001)
[129] Karlberg (2001)
[130] WHO Regional Office for Europe (1998:36)

2. External analysis: trends influencing hospitals

The need for hospital care for children and young adults has gone down, and in addition there is very little use of specific beds for infectious diseases and isolation. From the age of 70 there is an increasing need for cure and care due to age related conditions like hip replacement, hip fracture, heart failure and cataract surgery. Ten to fifteen percent of all health care cost is consumed during the last year of life. It is also for the treatment of those illnesses that new programs have developed and waiting lines created. These facts have made it necessary to reallocate resources from medical areas like pediatrics to planed as well as emergency care of people above the age of 70 to 75.

Three main issues on the political agenda for the last decade have been the graying of the population and it's concomitant effects on the need of care and support, structural changes in the name of effectiveness and efficiency, and the lack of personnel in health and social care. The main political aim now is to reduce cost for unplanned, somatic, hospital care and to reallocate resources to the care of the elderly, whether this is given in hospitals, primary care or community care. The need for integration between these different providers is urgent.

In rural areas in the north the mean age of the population is continuously rising, as young people have difficulties finding jobs and have to move to urban areas, mainly in the south. In fact Stockholm County has the youngest population in Sweden. From a health care perspective this means that rural areas in counties in the north have great difficulties in supplying it's population health care for two reasons: lack of financing due to a weak tax-basis and lack of personnel due to the transition of the work force to urban areas. Integration between medical and social care based on informal and personal networks is often an essential safety net.[131]

3. The future strategic position of hospitals among other healthcare providers

Not only are the differences large between north and south, but also between urban and rural areas in terms of general health and need of health care. Half of the population lives in the metropolitan areas, where the large hospitals are located and primary health care has a weak position. Integration between providers is generally not well developed. In rural areas on the other hand, primary care has a natural position, its status is high and cooperation with local hospitals and community care is well developed.

Primary-health care usually has responsibility for a given population within a geographical area. These centers are organized with GPs, district nurses and midwives. GPs are employed by the counties or have a contract with the county. Contracts are generally based on capitation. Formal referral – 'gate-keeping'– from a GP is not needed to visit a hospital clinic or to be admitted for hospital care. Patients can choose the health center and/or family doctor and which hospital they wish to attend. This freedom to seek care and for the hospitals to be reimbursed may stimulate hospitals to produce more medical care than may be 'needed', especially after the introduction of fee-for-service payment systems based on diagnosis related groups. There is a risk for 'crowding-out' of planned activities in favor of unplanned, non-emergencies entering the hospital. This phenomenon is illustrated by large local and regional variations in utilization of hospital treatment for common diseases.[132]

4. The future internal organization of hospitals

Compression of morbidity made structural reforms necessary. These included transformation of small hospitals into local health centers and nursing homes. In Stockholm county even two large hospitals were closed in 1996 in an attempt to adapt to organizational needs and to save money. Today Stockholm County has seven acute care hospitals and eleven geriatric units.

[131] Karlberg (2001)
[132] Karlberg (2001)

These developments also mean that personnel had to be reallocated, which is one of the reasons why lack of personnel in the caring sector today is the biggest political issue in Swedish health care (and in the other Nordic countries). Moving personnel from high status acute, somatic, specialized hospital care to primary care, long time, rehabilitation and care of the elderly is not an easy undertaking, particularly in competition with an expanding market outside of the sector also with large needs of recruitment. One way to ease the shortage within health care is to integrate services to increase effectiveness and save hands.

The dramatic change in the utilization of health care has necessitated large structural changes. These include closing of small surgical units for emergency cases, closing of small departments of pediatrics and reducing the units for infectious diseases. Problem is that many of the reduced medical areas are popular to young doctors and nurses, while geriatrics and care of the elderly are less popular. In combination with low birth rates and low salaries the problems of recruiting personnel seems to be the most pressing during the next decade.

Structural changes in hospital care arouses strong emotions among the population in the catchment area. One way to alleviate such problems is to strengthen primary care and turn small hospitals into local health centers with GPs and family doctors, nursing home facilities but without accident, emergency and delivery services.[133]

5. Examples of interesting futuristic hospitals/cure processes

Focus on primary healthcare sector

In many counties it has been the intention to transfer more patients to clinics in the primary healthcare system and patient categories traditionally handled by hospital-based specialist (e.g. diabetes and patients with hypertension) were thus transferred to general practitioners in the primary healthcare sector. There is a strong political will to strengthen the primary healthcare sector and at the same time increase home-based healthcare and also create a new role for hospitals as technique and competence centers supporting this sector.[134]

Nursing at home

By adapting housing, using technical aids, and providing medical services and nursing in the homes of the patients, it is both possible and easier for elderly an disabled people to stay in their own homes. People in hospitals and long-term patients (both those living in nursing homes and those living in service apartments) have access to medical and nursing services 24-hours a day. Great importance is attached to making these places as much like home as possible.[135]

The Guide to Health Care – a personal healthcare portal

In Sweden (Stockholm) patients and citizens have one portal to survey the whole of health care (www.vardguiden.nu). It provides a view of all units and producers, conditions for treatment, ways to get in contact with clinics and local doctors, advice services and inquiries. Next to information, citizens will be allowed to build individual channels for dialogue. Using communications tools the consumers prefers - a personal computer, a cell phone, WAP - the consumer will be able to subscribe to the kind of information he/she wants. It might be a monthly electronic newsletter, weekly medical advice or a symptoms guide. If a person suffers from asthma, he can build his own bank of knowledge, including lists of clinics and providers, relevant medication therapies, crisis instructions, forecasts on air pollution, support groups and research reports. Another new service will be electronic matrixes for patient documentation where the patient gives preparatory information about weight, health conditions, use of pharmaceuticals and medical history. These will reduce the provider's administration. The Guide's impact will gradually strengthen the consumer's position: the opportunity to compare all

[133] Karlberg (2001)
[134] Larsson (1999)
[135] Embassy of Sweden in the UK (1996)

contracted service producers from the Guide's quality ranking will not only put pressure on the contractors to improve but will also for the first time allow consumers to make an informed choice.[136]

Waiting lists
Sweden has a tradition of waiting lists for specialist treatment and surgery. Today, patients can already reduce their waiting time by consulting available internet tools. Citizens with urgent needs can compare waiting lists for different providers on the internet. The Greater Stockholm County posts estimated waiting lists for many - but not all - Swedish hospitals and clinics. If consumers are prepared to travel to another city, they can cut their waiting time quite dramatically. A webview of waiting list times in weeks for access to general surgery clinics, both private and public, found by clicking on www.sll.se/w_vanta/17592.cs.[137]

Entrepreneurship
Obtaining more information about the number and availability of producers allows the transparency and openness of the health care system to grow. Widely available information on the health care market is a critical component that gives individuals the power to make active choices. An interesting pattern is emerging: reform agenda politicians are trying to build alliances with health care consumers to pressure the administration to speed up the transition towards a patient focus. The success of newly entrepreneurial health-care providers, who have simultaneously improved the speed and quality of service and reduced unit costs, makes them natural allies in the search for higher productivity.[138]

Introducing public-private competition
Right now, about another 100 health-care units are in the process of leaving public ownership to become private companies. In general, the new contractors run local health-care stations, GP group practices, treatment centers for mothers and infants, laboratories and psychiatric out-of-hospital clinics. In 1999, a private company, Capio Ltd., bought one of Stockholm's largest hospitals, the St. George, from the Greater Council. Since the early 1990s, Capio has run a hospital in Gothenburg as well as X-ray clinics, laboratory services and other "infrastructure". The St. George operates at a cost level 10-15 percent below its most efficient public counterpart in Stockholm, the South Hospital. Compared with the average of public hospitals, the margin is 15-20 percent. According to Greater Council evaluations, the St. George is well known for implementing new, efficient organizational structures and treatments.[139]

With special thanks to Mr Ingvar Karlberg (Nordic School of Public Health)

[136] Hjertqvist (2001), www.vardguiden.nu
[137] Hjertqvist (2001), www.sll.se/w_vanta/17592.cs
[138] Hjertqvist (2001)
[139] Hjertqvist (2001)

Interesting sites

Swedish County Councils

www.lf.se/lfenglish/default.htm

the National Board of Health and Welfare
www.sos.se

Swedish Council of Technology Assessment in Health care, SBU
www.sbu.se/admin/index.asp

Greater Stockholm Council

www.sll.se

Greater Stockholm Council - waitinglists
www.sll.se/w_vanta/17592.cs

Personal Healthcare Portal

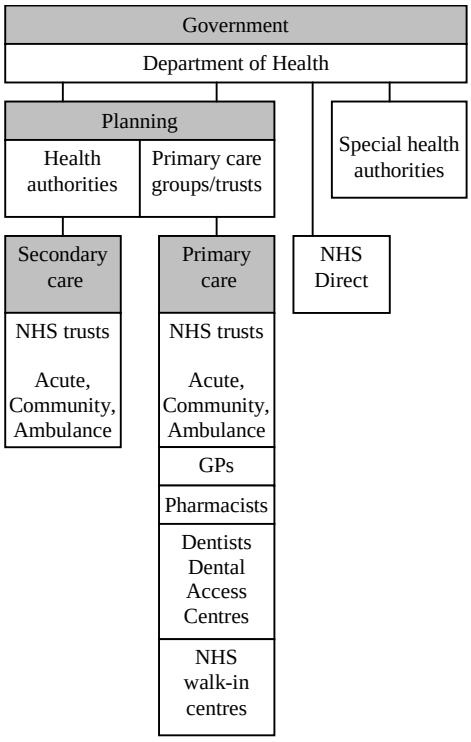
www.vardguiden.nu/vardguiden/nyheter.cs

Landstings Förbundet
Väntetider
www.lf.se/vantetider/index.asp

United Kingdom

1. Short description of the national health system

The National Health Service is a public health service financed mainly by taxes. The NHS distributes funds according to an annual budget to the District Health Authorities (106). General Practitioner's 'fundholders' and District Health Authorities purchase services form hospitals and community 'trusts' (self governing hospitals in the NHS), on behalf of their registered or resident patients.



In 1995 public hospitals became NHS hospital trusts. There are approximately 450 trusts, covering more than 1.600 hospitals, and representing the vast majority of hospitals, ambulance services and community units within the NHS in 1998. The trusts are independent, especially in employing their own medical staff and in providing services to a wide range of providers. They are able to acquire and dispose of property and land and generate funds in new ways. The hospital trusts contract with the purchasers an agreement for prices and the extension of provided health services.

Next to NHS there is a small but growing independent sector. Most of the hospital beds are NHS-public beds. Approximately 6% of acute care beds belong to the private sector. Many doctors additionally work in private practice.[140,141]

Reengineering NHS

The NHS reengineering focuses on empowering regional groups of primary care physicians as gatekeepers, decision makers, and allocators of funding. The so called primary health groups (PCGs) will be allocated fixed budgets for providing and arranging for a wide range of health care services (primary and secondary care) for defined populations groups.

In the NHS reengineering the insurer will contract independent groups of physicians to provide all covered medical services on a capitation payment basis, with the capitation payment fixed by annual contact. The NHS's fixed payment to the PCGs is adjusted to reflect variations in demographics and other risk factors for the population each PCG serves. The services include hospital, home health, ambulance, and other services as well as outpatient prescription drugs. The PCGs are allowed to retain any surplus annual revenues but are restricted to use surpluses only to improve facilities and services.

The NHS plan for governance and management of the PCGs will involve a body of trustees consisting of a majority of government appointed laypersons (the trustees) and a minority of up to ten participating providers, including physicians and registered nurses (the professional executive body). The trustees will oversee the PCGs health care facilities and determine its infrastructure. The professional executive body will determine priorities for professional services and capital investments.

[140] Jakubowski & Busse (1998: 120)
[141] Wieners (2001: 173)

2. External analysis: trends influencing hospitals

Large increase in throughput of hospitals

Increasing admission rates and falling bed numbers put an increasing pressure on the hospital system. The occupancy rates have remained fairly static at 75-85% for most countries. These trends indicate large increases in the throughput of hospitals: many more patients are passing through hospital beds in much shorter periods of time. In the UK the improvement in efficiency has more than compensated for the reduction in beds.[142]

Selected indicators for inpatient care hospitals and acute care hospitals

	Admissions (% of population)				Average length of stay (days)				No of beds (per 1000 population)			
	inpatient care		acute care		inpatient care		acute care		inpatient care		acute care	
	1986	**1995**	**1986**	**1995**	**1986**	**1995**	**1986**	**1995**	**1986**	**1995**	**1986**	**1995**
Australia	17,6	13,8	17,2	16,2	17,0	14,0	7,4	6,7	10,5	8,9	5,2	4,3
Belgium	17,3	19,8	16,3	17,7	16,3	11,5	10,9	7,8	9,0	7,6	5,9	4,8
Canada	14,8	12,5	14,5	-	13,9	12,2	10,8	7,5	6,7	5,1	4,4	3,6
France	21,6	22,7	19,4	20,3	14,9	11,2	8,0	5,9	10,3	8,9	5,6	4,6
Germany	20,6	20,7	18,0	18,0	17,5	14,2	13,5	11,4	11,0	9,7	7,6	6,9
Greece	12,0	13,5	-	-	12,0	8,2	-	-	5,3	5,0	3,9	-
Netherlands	11,2	11,1	10,7	10,3	34,4	32,8	12,3	9,9	11,8	11,3	4,7	3,9
Spain	9,2	10,0	9,0	10,0	13,1	11,0	9,9	8,8	4,5	4,0	3,5	3,2
Sweden	19,7	18,5	17,0	16,2	20,8	7,8	7,3	5,2	14,2	6,3	4,5	3,1
United Kingdom	15,7	2,0	12,9	21,2	15,2	9,9	7,8	4,8	7,2	4,7	2,6	2,0
United States	14,6	12,4	13,4	11,7	9,3	8,0	7,1	6,5	5,2	4,1	3,9	3,3

OECD health data 1997

Growing demand for hospital services

Little strong evidence exists to explain the sustained growth in demand for hospital services shown in the table, but changes in population structure, numbers of people living alone, pressure on primary care, risk management, patient expectations, and a increase ability to treat are frequently cited as possible reasons for this rise.[143]

Hospital activity (thousands) in England 1991-2 to 1996-7

	1991-2	1992-3	1993-4	1994-5	1995-6	1996-7
Ordinary admissions (total acute)	5.404	5.460	5.573	5.662	5.844	5.864
Accident and emergency attendances (total)	13.305	13.070	13.289	13.812	14.234	14.080
Outpatient attendances (total acute)	31.825	32.595	33.362	34.452	35.398	36.057
Day case admissions (total acute)	1.530	1.781	2.076	2.433	2.806	2.910

Source: Department of Health. Statistical Bulletin 1997/20.

3. The future strategic position of hospitals among other healthcare providers

Vertical partnerships

In the UK, local vertical partnerships between hospitals and community services and primary care have developed at the interface between primary and secondary care. Examples include hospital at home

[142] Hensher, Edwards & Stokes (1999)
[143] Edwards & Hensher (1998)

schemes, outreach, shared care, general practitioners working in accident and emergency departments, and community staff attached to general practices as part of the primary care team. These have developed mostly to improve the quality and seamlessness of services provided, and in response to new technologies that allow more treatment at home and easier communication with the hospital[144].

Increased volume of private sector provision
Revenues of independent hospitals and clinics (excluding NHS pay beds) are growing. It reached an estimated £1425 million in calendar 1997 (up 6% on the previous year) and an estimated £1,573 million in calendar 1998 (up 10%). The increase was fuelled both by strong self-pay demand as well as increased usage amongst the population of people with private medical insurance. On the back of strong self-pay business and increased usage amongst the population insured for private medical treatment, independent hospitals are likely to experience growth well above the average for the economy again in 1999. This is despite a drop in NHS contract business as a result of Labour's abolition of the GP fundholding schemes[145].

Acute independent healthcare facilities, UK	**1998**	**2000**
Independent acute surgical/medical hospitals	248	240
Private patient units in NHS trusts	78	86
Independent acute psychiatric hospitals	84	87
Independent out patient clinics/day care hospitals	168	202
Commercial pathology laboratories	115	115
Independent screening clinics	177	170
Diagnostic imaging centers	6	32

Ownership of acute medical/surgical hospital beds	**1998**	**1999**
UK for profit	5477	4997
Charitable Groups	2067	2092
Non-affiliated for profit	1104	1253
American (joint venture) for profit	567	891
Charitable/religious non-affiliated	1637	1118

4. The future internal organization of hospitals

Better organization
The complexity of modern clinical processes is such that this is itself a problem and an opportunity. The next big improvements in cancer care in the UK will come not so much from new science but from the better organization of existing services. Organization is a new and interesting magic bullet.

Clinical health networks
Treatment is more effective if disease is identified early and treatment is managed and coordinated by physicians who use protocols based on best practice. This means seeing the hospital as part of a complex health network and not simply as a place for a self-contained clinical event or consultation. When you build a new hospital you should pay regard to its relationship with the other parts of the health network whether these assets are in the public or private sector. (When you design a car the engine has to be compatible with the rest of the specification for optimal performance).

In the future medicine is moving towards managed clinical networks, which deliver multiple skills to individual patients. The system is networked together so that the point of patient entry becomes less critical. The patient will be guided, or in some circumstances taken, to the right professional. The hospital is a vital part of these networks but not necessarily the center. Well organized, these networks

[144] Dixon, Holland & Mays (1998)
[145] Laing & Buisson (2001)

can radically improve cancer services and Coronary Heart Disease (e.g. call to needle time for thrombolytics).

Accident and Emergency care is usually close to the top of any consumer priority list. In some parts of Europe regional or city wide systems of emergency care are developing. These systems have within them (all networked together) a range of services including a major trauma center, local accident and emergency centers, nurse led minor injury units and telephone advice centers with their associated internet sites.

Given the complexity of modern hospitals and the trend to unique patient treatments and one-stop shops (single patient visits to access multiple services) a hospital control room will become essential. This will act as the operational nerve center and coordinate and program all access to clinical services including beds.

The networks control rooms ensure that ambulances take patients to the right hospital not necessarily the nearest. The telephone advice services (which are usually staffed by nurses) appear to be very popular with the public but they take most calls out of hours and appear to have done little to take pressure off either the primary care sector or the hospitals. Walk-in centers are currently being trailed and assessed.[5]

Day surgery
Day Surgery will continue to develop. There is still some argument about how far the trend line will go but at least 80% of non-emergency surgical procedures looks to be likely. There is also a strategic decision to be made about whether to encourage surgeons and anesthetists to operate in local centers or whether to centralize facilities in Ambulatory Care facilities at the major hospitals where skilled supervision is more readily available and immediate support is available for the rare emergency.

Diagnosis
Given the importance of early diagnosis the nature and location of diagnostic services (radiology, scanning, ultrasound, and pathology) becomes very important. It is possible, using telemedicine, to centralize expert opinion and still undertake scans or tests locally. The capital outlay for a distributed system may be expensive but a good economic case can be made if patient time is included in the calculation.

Maternity care
Maternity care can be very controversial particularly if it entails the closure of small local units. Antenatal and postnatal care can be localized but the delivery itself, many experts, would argue is safer in large well-staffed and equipped hospital. Midwife led delivery is increasingly favored by some women. These units are almost certainly best located in close physical proximity to a consultant led unit, which can cope with the rare emergency. The options and risks involved need to be fully aired in public discussion. Patient safety or risk is a common dilemma when choice is being demanded. Do you provide for patients an option that you consider potentially unsafe?

Children's services
Children's services can also be controversial. The best option is to provide ambulatory children's centers in local hospitals but centralize inpatient care in specialist children's centers, which have proper provision for parents to stay with the child if they wish. The admission of a child to hospital should be a rare event. In the UK further reductions in inpatient services are anticipated.

Inside or outside the hospital?
Given the decreasing lengths of inpatient stay it is time to consider whether all rehabilitation services should be located in a community setting with outreach into the hospital rather than vice versa.

The specialist Outpatient Department and its diagnostic support will be an even more major part of the future hospital than at present and may have an internet component. The physical environment will be

quiet, calm and designed to maximize doctor/patient communications internet- based patient/doctor consultation is developing fast often across national boundaries.

5. Examples of interesting futuristic hospitals/cure processes

24 hour hot line
NHS has established a twenty-four-hour hot line for health care advice. Callers are provided with the advice and assurance they need to care for themselves at home or, if they need further help, are directed quickly to the right service at the right time. Information and advice about the most common illnesses and a range of treatments is also available on www.nhsdirect.uk .[146]

Contracting major employers
Some private groups of physicians, particularly in London and other major population centers, have been exploring the concept of bypassing insurers and contracting directly with major employers to provide specified medical services for their workforces and dependents.

Systematic reviews
Cochrane Collaboration offers an extreme useful opportunity for applying the internet as tool in preparing, maintaining and promoting the accessibility of systematic reviews of the effects of health care.[147]

Short stay observation units
An implicit assumption often exists that elective cases are less important than medical emergencies because we tend to equate abruptness of presentation with urgency of need. In fact many elective cases are urgent, while a significant proportion of emergency cases do not need to be admitted to hospital. An important innovation in emergency care in recent years has been the introduction of short stay observation or medical assessment units within or alongside accident and emergency departments, which aim safely to identify 'borderline' patients who will not actually require admission. Meanwhile admission units are increasingly used to provide more intensive investigation and active treatment for up to 48 hours to allow early discharge or transfer to less acute wards. Typically, such units will have another kind of staff: more senior doctors and more experienced staff.[148]

Nursing homes
The private healthcare sector is important in two main areas – elective surgery and continuing care. Immediately visible is the massive growth of the nursing home sector relative to the private acute hospital sector[149].

Changes in private sector provision

	Institutions	Acute hospitals	Acute beds	Nursing home beds
1984	1491	200	10067	32831
1994-5	5676	245	11363	173961
% change	281	23	13	430

Several methods to facilitate early discharge from acute hospitals have been developed in recent years. These include discharge planning, nurse led inpatient care, patient hotels, community or general practice hospitals, nursing homes, and hospital at home schemes. For many year the number of beds

[146] www.nhsdirect.uk
[147] Wieners (2001:179)
[148] Edward & Hensher (1998)
[149] Henscher & Edwards (1999)

operated by private nursing homes in the UK has grown consistently. Nursing homes are a very close substitute for hospital care.[150]

Recent studies in England suggest that up to 30-50% of patients on acute wards could be cared for in a more appropriate setting (step down facilities, nursing homes, and supported home care). The strategic decision about the appropriate place for intermediate care is crucial to determining the overall size of the hospital. If the decision is to invest in services outside the hospital (probably the right answer) then it is vital that these services are secure and of adequate quality otherwise the hospital gets silted up as it acts as place of last resort.[151]

Nursing strategies
Future roles for nurses in developing and leading services are considered in the areas of nursing, midwifery, and health visiting. Experience from the United States and Europe suggests that there is still greater scope for making better use of nursing staff in specialist role – for example, in anaesthetic departments and outpatient consultation settings and as surgical assistants.[152]

The patient's charter
An attempt to be more specific about patient rights and expectations in relation to the NHS a patient's charter has been introduced in 1991. The Charter set out a number of NHS rights together with charter standards which the NHS was expected to meet. These are not, however, enforceable through the legal system. Subsequent reports have provided information on comparative hospital performance in terms of Patient's Charter Standards[153]

With special thanks to Mr Brian Edwards, University of Sheffield

[150] Hensher, Fulop, Coast & Jefferys (1999)
[151] Edwards (2001)
[152] Dowie & Langman (1999)
[153] European Observatory on Health Care Systems (1999)

Interesting sites

National Health Service

www.nhs.uk

NHS direct

http://www.nhsdirect.nhs.uk

National Institute for Clinical Excellence

http://www.nice.org.uk

British Medical Association

www.bma.org.uk

Department of Health

http://www.doh.gov.uk

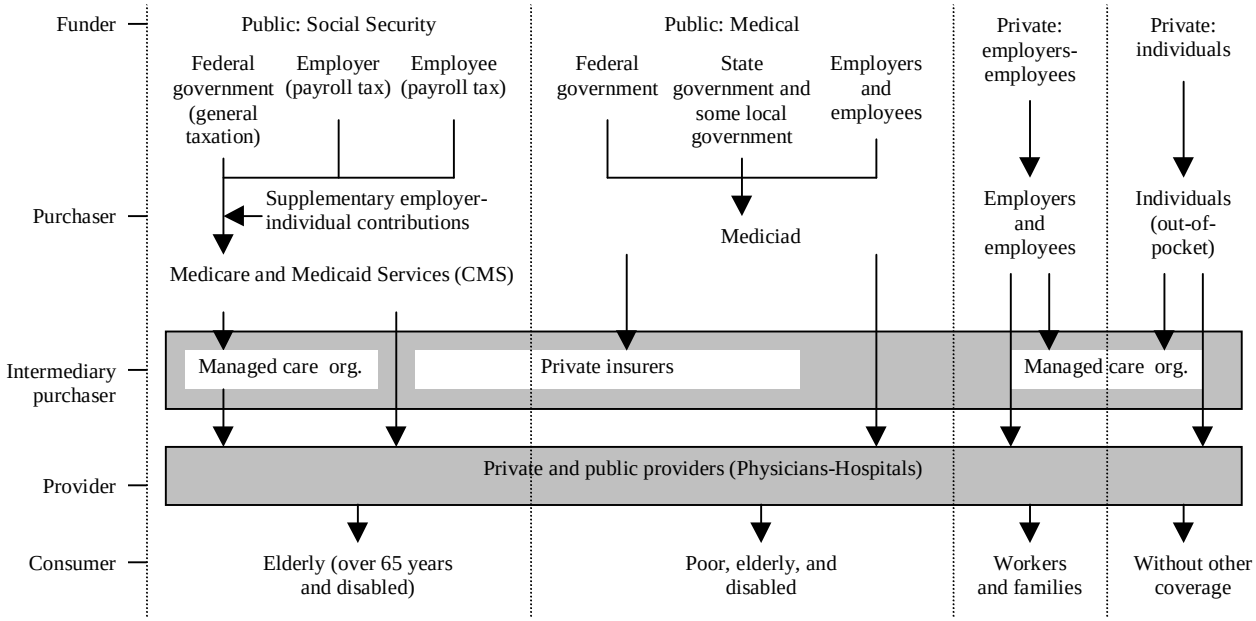
Cochrane Collaboration

http://www.cochrane.de

United States

1. Short description of the national health system

The U.S. health care system relies on the private sector for financing, purchasing and delivering health care services. Public expenditures, through federal, state and local governments, total 45 percent of overall health spending – primarily for purchasing health services for specific populations such as the elderly, disabled, and poor. The large majority of the population receives health insurance benefits through their employers and access services delivered by the private sector.[154]



Coverage

Medicare	14%	Elderly and permanently disabled
Medicaid	15%	Low income (women, children, poor who are elderly, disabled, blind)
Private health insurance	65%	Mostly employment based (89%)
Uninsured	18%	

In response to excalating cost of health insurance coverage, employers have devised strategies of cost containment. These included contracting with health plans that practiced a stringent form of managed care.[155]

Managed care
A type of health care organization – such as Health maintenance Organizations (HMO) or a Independent Practice Association – that seeks to control costs by monitoring how member doctors and hospitals treat patients and by limiting access to specialists and costly procedures.

Health Management Organization (HMO)
These health care groups offer coverage by a fixed panel of doctors for prepaid premiums. Supporters of HMOs point to the inherent incentives to avoid wasteful treatments and to practice preventive

[154] Wieners (2001)
[155] Kuttner (1999)

medicine. Critics of such systems bring up the eroding of the physician's role in making critical decisions, the failure of HMO's to curb costs, the restrictions on a patient's choice of doctor and hospital, and the incentives to withhold treatment.[156]

Independent Practice Association (IPA)
An independently organized network of physicians who provide care in their own offices to patients enrolled in HMOs.

Hospitals
Hospitals are primarily (70 percent) community based, non-profit institutions. Government owned hospitals are usually operated by counties and states and provide care for low-income and uninsured (usually urban) populations. Those with insurance receive most of their hospital care in private facilities.

Total number of all U.S. registered[a] hospitals[157]	**5.890**
Number of US Community hospitals	4.956
- Number of non-government not-for-profit community hospitals	3.012
- Number of investor-owned (for-profit) community hospitals	747
- Number of state and local government community hospitals	1.197
Number of federal government hospitals	264
Number of non-federal long-term care hospitals	649
Number of hospital units of institutions (prison hospitals, college infirmaries, etc.)	21
Number of community hospitals in a system[b]	2.238
Number of community hospitals in a network[c]	1.310

[a] registered hospitals are those hospitals that meet AHA's criteria for registration as hospital facility
[b] system is defined as either a multi-hospital system or a diversified single hospital system
[c] network is a group of hospitals, physicians, other providers, insurers and/or community agencies that work together to coordinate and deliver a broad spectrum of services to their community.

Physicians
Most physicians, both primary care practitioners and specialists, are in some form of private practice. The US has a higher ratio of specialists to primary care physicians (PCPs). With the rapid spread of managed care, however, demand for primary care providers has grown dramatically. PCPs are becoming coordinators of clinical care for their patients and managing referrals to specialists.[158]

The percentage of patient-care physicians in group practice after their residency training will increase from 46 percent in 1996 to between 57 percent and 62 percent in 2005 and will reach between 63 percent and 67 percent by 2010.[159]

Other providers
Outpatient services are provided through private physician offices and a growing number of primary care and specialty care clinics, rural health centers, ambulatory surgery centers, and family planning clinics. Some of these are free standing; some are chain-operated. Hospitals, managed care plans, or various levels of government own others. Like hospitals, clinics may be public or private, for-profit, or not-for-profit.[160]

[156] www.medsch.wisc.edu/pnhp/terms.html
[157] AHA Resource Center, www.aha.org
[158] Wieners (2001)
[159] American Hospital Association (2001), *AHA Environmental assessment 'summary'*
[160] Wieners (2001)

2. External analysis: trends influencing hospitals

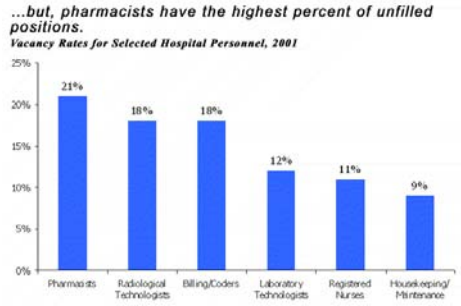
Changing market dynamics

Technological change and increased consumer demand are starting to drive up health care costs again, there is emerging evidence that changes in the organization and dynamics of local health care markets also may contribute to this phenomenon and perhaps exacerbate it in the future. Over the past two years, several important developments have taken place in local health care markets across the United States:[161]

- Extensive consolidation of hospitals has increased their negotiating leverage with health plans, helping hospitals successfully push back against aggressive plan payment policies.
- Tensions between physicians and hospitals have escalated as competition to provide high-margin specialty services heats up. At the same time, an increased emphasis on physician-owned facilities threatens to drive up costs.
- Increased provider clout and the move away from tightly managed products have led to a precipitous drop in risk-based contracting arrangements, eroding a key mechanism to control costs.
- Health plans have responded with premium increases that have gone largely uncontested by employers and by dropping certain lines of business that have become unprofitable, especially Medicaid and Medicare.

Shortage of health professionals

The latest threat to America's health care system is the growing shortage of Registered Nurses and other health professionals. With up to 168,000 unfilled positions in hospitals. The growing workforce shortage will have an impact on the hospitals[162].



The attractiveness of careers in health care, especially hospital care has changed in the past two decades. In a single generation, health care has moved from a favored to a less favored employment sector. Important changes are: In the 60s and 70s, healthcare was safe, secure, and prestigious employment, but in today's labor market, health care is seen as chaotic and unstable. In a traditional society, health care was one of only a few employment options for women, but in contemporary society, health care is only one of many choices. In a long-stay hospital system, staff had strong, supportive relationships with patients, but in a short-stay hospital system, staff are focused on disease protocols, regulatory compliance, and documentation.[163]

Science and Technology

There will be a significant increase in the number of new technologies available in the coming decade: rational drug design; advances in imaging; minimally invasive surgery; genetic mapping and testing; gene therapy; vaccines; artificial blood; and xenotransplantation. The information and communications revolution will move into the healthcare system in the next 7 to 12 years. Four main areas will be affected: automation of basic business processes; clinical information interfaces; data analysis; and telehealth.[164]

[161] Lesser & Ginsburg (2001), www.hschange.org
[162] Trendwatch (2001), www.aha.org
[163] AHA Policy Forum (2001), www.aha.org
[164] American Hospital Association (2001), *AHA Environmental assessment 'summary'*

3. The future strategic position of hospitals among other healthcare providers

Escalating Physician-Hospital Tensions
Hospitals in several communities have confronted increasing conflict with physicians. In Cleveland's highly concentrated hospital market, hospitals are exerting pressure on physicians to align more closely with one or the other system, spurring concerns among physicians about loss of autonomy. In other communities, physician-hospital organizations formed to foster managed care contracting continue to decline in importance. Instead, physicians are focusing on independent strategies that emphasize opportunities for enhancing revenue rather than building capacity to engage in risk contracting. This is seen most strikingly in Phoenix, where specialists are cutting back on affiliations with local hospitals and devoting more time to ambulatory surgery centers or specialty hospitals in which they have an equity interest. This trend threatens traditional hospitals with the loss of some of their most lucrative services and their ability to cross-subsidize less profitable services such as emergency care. At the same time, there are concerns that the proliferation of physician-owned facilities will induce greater utilization, particularly at a time when health plans' efforts to constrain utilization are weakening. For this reason, some observers suggest that this trend will lead to higher underlying health care costs.[165]

Provider Organizations
Health care plans, disease management companies, case managers, and other management organizations will become much more important in directing patients to providers and in intervening and directing the activities of care providers and patients.[166]

De-institutionalization
The shift towards de-institutionalized chronic care has also profoundly influenced the nature of the primary care provider. The doctor’s role in healthcare is, and always has been, to diagnose and prescribe treatment. Non-medical staff deliver the treatment and evaluate the results, functioning as the eyes and ears of the absent doctor. They are not intended to be unqualified doctor substitutes. But as care shifts out of the hospital and the differences between diagnosis and evaluation become less clear, nurses and other non-medical professionals are becoming even more important.[167]

4. The future internal organization of hospitals

Competition intensifies as Hospitals strengthen specialty care
Greenville's hospital systems, most area hospitals have strengthened their ability to deliver profitable specialty services such as cardiology, oncology and orthopedics. Consequently, hospitals have begun to compete more aggressively for patients and revenue in these services. Spartanburg Regional Healthcare System, for example, built a new cancer center and increased its capacity to perform cardiac surgery. Spartanburg's other major hospital, Mary Black Memorial Hospital, recently formed an alliance with a national oncology service provider to expand the hospital's cancer services. Similarly, Anderson Area Medical Center received state approval to open a cardiac surgery center. During this same period, Greenville's Bon Secours St. Francis Hospital opened new cardiac surgery and bone marrow transplantation centers and received state approval to provide an expanded array of neonatal intensive care services. These new services were expected to improve the hospital's competitive position relative to the nearby GHS, which has continued to offer deep discounts to health insurers that exclude St. Francis from their networks. These exclusive contracts have remained in place despite the expanded array of services available at St. Francis, helping GHS to retain its dominant position in the market. [168]

[165] Lesser & Ginsburg (2001), www.hschange.org
[166] American Hospital Association (2001), *AHA Environmental assessment ‘summary’*
[167] American Hospital Association (2001), *AHA Environmental assessment ‘summary’*
[168] Center for studying health system change, www.hschange.org

Provider Organizations
Healthcare organizations will compete for capital on the basis of current, quantifiable and competitive data. Losing the information race will mean losing the capital race. Healthcare organizations should focus on competencies they can measure and demand the same measurable results of their business partners. Outsourcing of some functions, such as information technology, business office services, lab, food service, housekeeping and facility management will accelerate. Improving clinical performance is the most important cost management strategy of the future. Clinical costs and providing patient care are 80-85% of the average hospital's budget.[169]

5. Examples of interesting futuristic hospitals/cure processes

Integrated system of care
Fragmentation is a pervasive deterrent to the efficacy and quality of publicly-financed health care. In particular, individuals with chronic illnesses and disabilities who require a myriad of health care services often receive inadequate care due to disjointed programs and funding sources. Through its focus on Integrated Systems of Care, the Center for Health Care Strategies is working with purchasers of publicly-financed health care, health plans, and consumer and family organizations to open lines of communication, foster collaborative planning, and, ultimately, achieve a seamless coordination of services to offer beneficiaries higher-quality, more cost-effective care.[170]

Mercy Health Services (MHS)
MHS has owned, managed, affiliated and associated hospitals and outpatient clinics in Iowa, Indiana, Michigan, Illinois and Nebraska that provide acute care and outpatient services as well as programs to promote health and well-being[171].

Marketing and Communications
A hot business trend – customer relationship management (CRM) – is the latest marketing trend in health care. CRM consulting services market is predicted to grow at 28% yearly through 2004. CRM is an e-strategy based on "mining" of customer databases to develop marketing programs that include direct mail, telemarketing, e-mail and traditional advertising. The goal of CRM is to create a positive image of the provider in the minds of consumers, even before they need the services.[172]

e-commerce
The healthcare industry will reach $370 billion in online transactions by 2004. The web will become the foundation for new healthcare industry infrastructure that supports complex, multiparty transactions among consumers, providers, insurers, and medical suppliers. These efforts will be driven by the need to control costs, improve information flow, and gain transaction efficiency.[173]

Accreditation
Accreditation is recognized nationwide as a symbol of quality that indicates that an organization meets certain performance standards. The standards address the organization's level of performance in key functional areas, such as patient rights. The standards set forth performance expectations for activities that affect the quality of patient care. The standards are developed in consultation with health care experts, providers, measurement experts, purchasers and consumers. Health care organizations seek accreditation because it assists organizations in improving their quality of care; may be used to meet certain Medicare certification requirements; enhances community confidence; provides a staff education tool; enhances medical staff recruitment; expedites third-party payment; often fulfills state

[169] American Hospital Association (2001), *AHA Environmental assessment 'summary'*
[170] Center for health care strategies, www.chcs.org
[171] Zorg Consult (1999), http://www.medicalresourcesusa.com/featured/mercy/information.htm
[172] American Hospital Association (2001), *AHA Environmental assessment 'summary'*
[173] Forrester Research (2000), www.forrester.com

licensure requirements; may favorably influence liability insurance premiums; enhances access to managed care contracts; and may favorably influence bond ratings and access to financial markets.[174]

ICT

The Maimonides Medical Center depends on a performing computer network offering sub-second response time to a wide range of ongoing applications, seven days a week. The hospital staff has constant access to all the required information at whatever location in the medical center, as well as at home, the office, or the satellite facilities. Nurses carry wireless devices and test equipment on carts to the patient's bedside to administer medication or to consult patient records, medical images, or graphic-enhanced data. Thanks to the efficiency of the distributed computing support services, more patients have found their way to Maimonides Medical Center and the duplication of medical tests has been reduced with 20%.[175]

With special thanks to Mr Jim Bentley (American Hospital Association)

[174] Joint Commission on Accreditation of Healthcare Organizations, www.jcaho.org/index.html
[175] Versweyveld (1998)

Interesting sites

Firstgov
www.firstgov.gov

Healthfinder
www.healthfinder.gov

American Hospital Association
www.aha.org

Center for studying health system change
www.hschange.org

Center for Health Care Strategies
www.chcs.org

Virtual hospital

www.vh.org

Joint Commission on Accreditation of Healthcare Organizations
www.jcaho.org/index.html

4. Trends & emerging patterns

1. General

Based on the articles, documents, internet and interviews a short overview of each of the countries has been presented in the previous chapter. Although the 'country reports' are not complete and only briefly describe the role, position and future of hospitals in the countries, the overview provides insight in a number of emerging patterns and trends. In this chapter those trends will be summerized and examined in more detail.

- Hospitals will continue to consume the bulk of the health care resources. Consequently, the hospitals will be examined closely and critically on their financing and performance.
- New medical science and technology have led and will lead to significant reductions in lengths of stay in acute care and even in admissions to hospital beds.
- The reduction in the length of stay in the hospital has provided the opportunity to rethink the minimum number of essential beds, quite possibly leading to the outsourcing of a great number of beds.
- The remaining hospital beds are used more intensively, treating ever more, and older, patients with increasingly costly facilities, equipment, staff and drugs.
- Factors that will influence the direction of change include: changes in the relative contributions of the public and private sectors to the funding and delivery of health services; safety net service levels as determined by governments and other providers; market forces; substitution between service types; a recognition that the drive for improvements in health outcomes will not necessarily lead to cost containment, and might even lead to an increase. At the same time, the complexity of modern clinical processes is such that it presents both a problem and an opportunity.

2. General trends influencing hospitals

Demographics
Most important is the impact of an aging society. The shift in the demographic composition of the population will inevitably result in changes in the demand of health services. Other trends which will cause changes in the form, delivery and nature of health care include: increasing urbanization; changing family structures; increasing income inequality; and increasing population mobility which may decrease community support networks.

Elderly services
There will be an increasing demand for health services linked to geriatrics and an increasing demand for social dependency services. Mental health disorders and chronic degenerative are emerging problems in this context.

Integrating of providers
In order to reduce costs for hospital care the resources allocated to the care of the elderly have to be redistributed. There is an urgent need for integration between these different providers (hospitals, primary care or community care).

Infant care
Decreasing infant mortality rates along with the subsequent increase in the survival rate of infants with low birth weight increases the demand of specialized services for this vulnerable population group.

Demand
Little strong evidence exists to explain the sustained growth in demand for hospital services, but changes in population structure, numbers of people living alone, pressure on primary care, risk management, patient expectations, and an increased ability to treat illnesses are frequently cited as possible reasons for this rise.

Consumers
Consumer demands for new and more customized health care services will drive change in the delivery, presentation and content of health care. Consumers will demand:
- choice;
- autonomy in decisions;
- access;
- advice;
- control of personal information;
- greater flexibility in the delivery of health services;
- and increased critical evaluation by consumers of the quality of health care.

Prevention
There is a growing comprehension of the change in future population health needs and an understanding of the actual impact of health care on the population's general health status. This results in a shift of focus away from the health care system towards the health system, which acknowledges that health is more than health care. The focus shifts towards on integrated community based models, placing increased emphasis on health promotion and prevention. The appropriate use, roles and positions of various health care providers, including hospitals, will have to be reconsidered.

Throughput
Increasing admission rates and falling bed numbers put increasing pressure on the hospital system. The occupancy rates have remained fairly static at 75-85% for most countries. These trends indicate large increases in the throughput of hospitals: many more patients are passing through hospital beds in much shorter periods of time.

Unplanned activities
The freedom to seek care includes a risk for 'crowding-out' of planned activities in favor of unplanned, non-emergencies entering the hospital. This phenomenon is illustrated by large local and regional variations in utilization of hospital treatment for common diseases.

Patient's charters
In an attempt to be more explicit about patient rights and expectations, patient's charter will need to be introduced. The Charter includes a number rights together with charter standards, which the health care providers are expected to meet. Evaluation reports will provide information on comparative hospital performance in terms of Patient's Charter Standards.

Image
To create a positive image of the provider in the minds of consumers, even *before* they need the services, the marketing and communications skills of health care providers will have to be improved. Using customer databases to develop marketing programs that include direct mail, telemarketing, e-mail and traditional advertising.

Diseases
New diseases and environmental threats will create new burdens for health care. These include: infectious diseases; new, as yet unknown, micro-organisms, together with the problems posed by increasing antibiotic resistance; problems related to aging; more people with severe disabilities who are, nonetheless, expecting longer life-expectancies; cancers; diabetes; and mental illness.

Chronic diseases
The increase in life expectancy, modern lifestyle, and the aging of the population have increased the prevalence of chronic diseases such as hypertension, degenerative arthropathies and other diseases of

the myoskeletal system, diabetes and diseases of the sensory organs factors, which will also influence the functioning of hospitals in the future as these will need to increase their capacity in order to effectively deal with these phenomena.

Social-economical factors
Social-economical factors influence the access to care and at the same time question the role and position of hospitals. The availability of economical means has a direct effect on care consumption. Social class and education have impact on health and consumer behavior.

Social focus
Hospitals will remain a key social actor and will have to fulfill a role they thought they would not see any more. Urban societies have created exclusion and a new poverty, this population should find in hospitals what the word originally meant: hospitality. Hospitals are and will be important first actors in facing and reducing inequalities and poverty caused by social-economic developments.

3. Trends on future strategic position of hospitals among other healthcare providers

Internationalization
Hospitals are challenged to develop beyond their national boundaries. An increased demand for their services and an increased need for further specialization creates new possibilities and new markets.

Luxurious treatments
Next to domestic market, hospitals need to market their health care services internationally to take advantage of the economic possibilities. Increasing treatment of foreign patients who pay their own medical bills will help maintain facilities and secure jobs. Wealthy foreign patients are attracted by intensive promotion initiatives and luxurious accommodations.

International patients
A high quality health care system, with low costs compared to some other developed countries, is an excellent destination for patients seeking treatment, which they cannot access in the country where they live. Countries will develop reciprocal health care agreements.

Centers of excellence
Medical know-how and top clinical facilities will increasingly concentrate in (European) ‘centers of excellence’. Countries will be too small for a number of high-end medical treatments. On the other hand, national providers will increasingly have an opportunity to promote their health care services internationally and establish various ‘top centers’ in their country. This is the shape of the emerging large-scale centers of hospitals excellence where intervention will be limited to specific fields and as a result there will be a catchment area for patients that will extend beyond the traditional geographical regions that the hospital formerly served.

Coordination & Cooperation
Over recent years an increasing number of health care organizations have demonstrated the creativity and capacity to evolve into health networks. The health networks approach to health care reform offers a promising avenue for the achievement of long-term health system integration, proceeding on a consensual basis and treating participants as equals. More integration appears to have taken place on the dimensions of horizontal integration, vertical integration, clinical and non-clinical programs and management.

Horizontal integration
Hospitals can also form alliances to improve management and increase efficiencies. Areas of cooperation could be: the implementation of new management techniques, cooperation in the areas of medical and logistical operations to increase efficiencies in logistics, the introduction of new working methods, the creation of a common medical policy, the exploration and use of informatics, the improvement of services and the improvement of image and attractiveness of the alliance or the individual hospitals.

Share best practices
To reduce waiting times and to improve management, hospitals should learn from each other. Hospitals that have developed and implemented best practice models should work with groups of hospitals seeking to improve their services in similar areas. Projects will have to be identified and innovative models will have to implemented that will improve the quality, coordination and integration of all services.

Divide tasks and complement
Hospitals will not always have all programs, treatments or services a patient might need. Patients will have to be sent to another hospital or health care provider that is able to provide that specific program. Therefor hospitals should cooperate, divide tasks and offer an integrated care package. One of the areas to be addressed is the interface between in-hospital and in-home services to improve the smooth transition between hospital care and home care. A number of key players are involved: hospitals, community care, home care and physicians. Here are opportunities to develop joint training and education opportunities; to develop cross-boundary clinical pathways; to develop new collaborative service offerings; and to promote staff movement across boundaries.

Vertical integration
Vertical partnerships between hospitals and community services and primary care have developed at the interface between primary and secondary care. Groups of health care agencies will work together to plan and coordinate services and will be focused on the integration of four key cornerstones of care, namely: hospitals, long-term care facilities, home care, and physicians' offices/clinics. The services include: public health, primary care and prevention, acute care, rehabilitation, in-home support and long-term care. The initiative focuses on vertical integration intended to facilitate easier access to services for patients, enabling consumers can move more easily between sectors and within sectors. Examples include hospital-at-home schemes, outreach, shared care, general practitioners working in accident and emergency departments, and community staff attached to general practices as part of the primary care team. These have developed mainly to improve the quality and seamlessness of services provided, and in response to new technologies that allow more treatment at home and easier communication between hospitals and other health care providers.

In many countries it is the intention to transfer more and more patients to clinics in the primary healthcare system. Patient categories traditionally handled by hospital-based specialist are transferred to general practitioners in the primary healthcare sector. There is a strong tendency to strengthen the primary healthcare sector and increase home-based healthcare. This will create a new role for hospitals as technique and competence centers supporting this sector.

Outpatient services are increasingly provided through private physician offices and a growing number of primary care and specialty care clinics, rural health centers, ambulatory surgery centers, and family planning clinics. Some of these are free standing and some are chain-operated. Hospitals will support, set up, managed or own these outpatient services.

Encouraging group practices
The importance of group practices (in primary care) will increase. With the increased complexity of care more global and integrated services will have to be deliverd. The integrated health care practices operate a multidisciplinary team, including several general practitioners, nurses, administrative staff, a physiotherapist and a psychotherapist. These practices will be characterized by: accessibility; services close to the patients; continuous care with permanent access 24 hours a day; polyvalency and small diversified teams that work interdisciplinary and intradisciplinary.

Establishing clinical health networks
Treatment is more effective if the disease is identified early and treatment is managed and coordinated by physicians who use protocols based on best practice. This means seeing the hospital as part of a complex health network and not simply as a place for a self-contained clinical event or consultation. When you build a new hospital you should pay regard to its relationship with the other parts of the health network whether these assets are in the public or private sector. Medicine is moving towards managed clinical networks, which deliver multiple skills to individual patients. The system is networked together so that the point of patient entry becomes less critical. The patient will be guided,

or in some circumstances taken, to the appropriate professional. The hospital is a vital part of these networks but not necessarily the center. Well organized, these networks can radically improve services.

Provide services
Hospitals can operate as a multi-service organization. Hospitals should form alliances with service providers and offer, services to facilitate patients' revalidation and personal well-being in addition to cure activities. Those services will include: transport services, communication facilities, meals-on-wheels (delivering meals to home), wheels to meals (bringing clients to meals in the hospital), house cleaning, recreation, pet service, day trips, entertainment, et cetera.

Private entrepreneurship
For some, private health care ventures include opening food franchises on hospital campuses, operating parking lots and turning hospital lobbies into a type of shopping mall. For others, it means partnerships to provide home-care services, acquiring laboratories or venturing into the e-health business. The goal is often to seek new sources of funding. In the past private hospitals tended to provide less complex non-emergency care, such as simple elective surgery. However, technological advances have made it possible that some private hospitals are providing increasingly complex, high technology services. Separate centers for same-day surgery and other non-inpatient operating room procedures are found more and more in the private sector. The number of private clinics providing services such as eye surgery, abortions and hernia repair has been increasing over the last few years. At the same time, private groups of physicians and other health care providers have been exploring the concept of bypassing insurers and contracting directly with major employers to provide specified medical services for their workforces and dependents. Some experts have declared that the total number of hospitals will decline, while the share of private and more specialized hospitals will increase.

4. Trends on the future internal organization of hospitals

Patient oriented
In the ideal hospital everything should be oriented towards the patient and his family. In order to redirect the focus, hospitals should change their structure to patient-oriented processes, in which different specialist intervene based on patient needs. The objective is to make a patient the focus of all medical and related (care) activities and to consult patients in both the preventive as curative phases. The approach is crossing professional and organizational boundaries. It requires teamwork and a structure that is homogeneous yet made up of different professionals: doctors, nurses, administrators, and administrative personnel who work in different areas but use an interdisciplinary approach. It also requires that each department plans its work from a multidisciplinary perspective.

Hospital at home
Hospital at home is the provision of hospital care in the comfort of the person's own home. Patients are regarded as hospital inpatients and remain under the care of their treating doctor in the hospital and receive the same treatment that they would have received had they been in a hospital bed. Patients may be able to receive all their hospital care at home or they may have to stay in hospital and then receive hospital care at home in the latter part of their treatment.

One-stop-shopping
The growth area in community care is the home-care sector, as there is increasing interest in, and need for, services provided outside institutions. Community home care may take many forms, ranging from physician visits, specialized nursing care and homemaker services to meals-on-wheels programs and adult day care. As these services tend to be provided by many different organizations, some provinces have begun to offer one-stop-shopping by organizing these services around one access point. For various reasons this concept is also important for hospitals. Hospitals will have to make sure their services are included in the 'service package' provided in these sectors. At the same time hospitals should develop 'one-stop-shops (single patient visits to access multiple services)' for their own services, making it easier for patients to get what they need.

Control room
Given the complexity of modern hospitals and the trend to unique patient treatments and one-stop-shops a hospital control room will become essential. This will act as the operational nerve center and coordinate and program all access to clinical services including beds and serve as a channel for all related information.

24-hour hot line
Hospitals should establish a 24-hour hot line for health care advice. Callers are provided with the advice and assurance they need to care for themselves at home or, if they need further help, are directed quickly to the right service at the right time. Information and advice about the most common illnesses and a range of treatments is also available on the internet.

Management
The next big improvements in care will not only come from new science, but also from the better organization of existing services. The need to maximize the efficient use of resources will drive changes in the organization and delivery of health care. There is not just a new situation to address, but a situation of accelerating change and greater uncertainty. Management addresses this by new types of management information, governance issues and involvement of its local communities.

Management information
Health care organizations will compete on the basis of current, quantifiable and competitive data. Information on internal operations as well as information on market developments will be essential.

Corporate governance
Corporate governance will have to be developed further. Major themes for the future are: redefining the role, position and working methods of governing bodies; professionalization of non-executive board members; positioning of medical staff; and improving quality of planning and information.

Clinical governance
Clinical Governance will be introduced in order to share management responsibilities between managers and clinical professionals. It is a decentralization process, first constructing relevant information systems and later resource management programs.

Community involvement
Hospitals are embedded in their local communities, providing services, employment opportunities, investments and various other benefits to the community. Hospitals should intensify and maintain their community relations and behave as corporate responsible businesses. Hospitals should also consider maintaining a fundraising arm or foundation to provide an ongoing fund pool for capital purchases.

Hospitals as information management system
The hospital evolves into an organization including multiple campuses and services of diverse types (clinics, procedure centers, nursing centers of varying acuity, hospital in the home, et cetera) supported by a mix of facilities and services. These diverse health services are bound together by an information system serving both patient and organization requirements. The bricks-and-mortar hospital is no longer the central focus of care, for the information management system will become the new focus of care. This system, and the management of it, becomes the ‘virtual’ hospital/health system. The core business of the new hospital organization is two-fold: (1) managing patient-based information between the various actors that deal with the patient, such as clinics, procedure centers, or diagnostic services and (2) assuring appropriate quality and cost of the activity centers of the organization.

Spread of services
To a large degree, the geographical distribution of hospital facilities is influenced by two factors. The first is the concentration of the population, the second factor is funding for hospital development. Geographical regions with a rural base tend to build a larger network of smaller hospitals throughout the regions, many of which are now closing or being converted to community health centers. Recent population shifts will put more pressure on the existing distribution of hospitals, particularly in highly

urbanized areas. In rural areas primary care will have a dominant position, its status is high and cooperation with local hospitals and community care is well developed.

General practitioners
If general practitioners are free to practice where they preferred there is a tendency to have an oversupply of physicians in urban areas, and a chronic shortage in rural and northern areas. In response, supply restrictions in urban areas can be introduced, a incentive systems for rural doctors can be set up or a mandatory time period in rural practice for outside physicians can be adopted..

Labor
In combination with low birth rates and low salaries the problem of recruiting personnel will be the most pressing during the next decade. The biggest threat to the health care systems is the growing shortage of nurses and other health professionals. The growing workforce shortage will have impacts on hospitals. The attractiveness of careers in health care, especially hospital care has changed in the past two decades, focussing more and more on disease protocols, regulatory compliance, and documentation.

Recruitment
Hospitals, facing a growing recruitment issue, need to be more active and creative in promoting their activity towards younger generations, specific interests groups (re-entering women, elderly, volunteers, et cetera). Promotion should take into account the characteristics of the health workforce. The health workforce is mobile, multi-skilled and motivated. The workforce is well educated and involved in continuing education, training and re-skilling. Much of the workforce is part time, and some engage and disengage with particular services as required. They are employable, rather than employed, for life.

Reallocation
The aging of the population requires a reallocation of resources to care for the elderly, whether this is given in hospitals, primary care or community care. The dramatic change in the utilization of health care necessitates large structural changes. These include the closing of small surgical units for emergency cases, closing of small departments of pediatrics and reducing the units for infectious diseases. Problem is that many of the reduced medical areas are popular to young doctors and nurses, while geriatrics and care of the elderly are less popular. Moving personnel from high status acute, somatic, specialized hospital care to primary care, long time, rehabilitation and care of the elderly is not an easy undertaking, particularly in competition with an expanding market outside of the sector also with large needs of recruitment.

Modifying professional roles and tasks
The shift towards de-institutionalized chronic care has also profoundly influenced the nature of the primary care provider. The doctor’s role in healthcare is, and always has been, to diagnose and prescribe treatment. Nurses administer treatment and evaluate the results, functioning as the eyes and ears of the absent doctor. They are not intended to be unqualified doctor substitutes. But as care shifts away from the hospital and the difference between diagnosis and evaluation becomes less clear, nurses are becoming ever more important. Rethinking the traditional division of tasks is needed to make the treatment more patient friendly and to reallocate human resources in the face of personnel shortages.

Mobility
Increase the exchange of knowledge and skills between the personnel of different departments and hospitals. To this end, employees may go to work in another hospitals (in a group), either temporarily to train or conduct research, or on a longer-term basis. Aiming to encouraging career prospects between hospitals, working conditions should be made as uniform as possible. The simplification of titles and qualifications, a clear allocation of powers and responsibilities, motivational evaluations and training opportunities are the key features of a modern staff policy in the hospitals.

Nursing strategies
Future roles for nurses in developing and leading services are considered in the areas of nursing, midwifery, and health visiting. Experience from the United States and Europe suggests that there is still opportunity for making better use of nursing staff in specialist role – for example, in anaesthetic departments and outpatient consultation settings and as surgical assistants.

Ongoing education
Employees should be aware of the latest developments. By regularly attending seminars in Belgium or abroad and using the knowledge they acquire they will be able to improve their particular hospital and network. This includes the use of internet, e-learning.

Quality & evaluation
Transparency is of paramount importance in view of the ongoing trend towards privatization and liberalization. Transparency provides the proper setting for thorough quality standards, which will benefit both patients and hospitals. Not only will this lead to enhanced safety, but it will also result in streamlined and effective organizations.

Accreditation
Accreditation is recognized nationwide as a symbol of quality that indicates that an organization meets certain performance standards. The standards address the organization's level of performance in key functional areas, such as patient rights. The standards set forth performance expectations for activities that affect the quality of patient care. Health care organizations should seek accreditation because it assists organizations in improving their quality of care; enhances community confidence; provides a staff education tool; enhances medical staff recruitment; expedites third-party payment; often fulfills state licensure requirements; may favorably influence liability insurance premiums; enhances access to managed care contracts; and may favorably influence bond ratings and access to financial markets.

Benchmarking
The overall objective of (international) benchmarking projects in healthcare is to develop a concept that on the one hand allows a comparison of hospitals in order to find out the critical success factors that are enabling hospital performance. On the other hand the concept will facilitate a transfer of the identified parameters from one organization to another.

(Electronical) hospital report cards
A system cannot be improved unless you first measure how well it is performing. By publishing a comprehensive hospital specific report card (including clinical utilization and outcomes, patient satisfaction, financial performance and conditions and system change and integration), quality of care is measured and greater accountability is promoted.

Diagnostic Related Groups
In eight member states different service definitions and groups (like Diagnostic Related Groups, DRGs) are already being used to some extent in determining, financing and describing the services delivered. The variation of definitions is considerable. Variants of DRGs from the USA are in use in the Nordic countries and Spain. Similar systems based on national development work are in use or under development in the United Kingdom (e.g. Health Related Groups), Australia, Belgium, Germany and France and soon in the Netherlands.

Information technology
Information technology creates the potential for great improvements in the health system, such as more informed consumers and providers, better integration and coordination of care, the ability to study outcomes of care, and the development of a complete, portable medical record. It will also create new risks: privacy, the heightened expectations of consumers, a revolution in workforce requirements, and new inequalities between those who can use the new technology and those who cannot or will not.

Electronic medical records
All medical information about a patient will be stored electronically and accessed whenever, wherever, and by whoever needs it. The system will include information from patient, physician, pharmacist, case managers, et cetera.

Health information
The health information systems should have details on services, drugs and appliances, diseases and their treatment, costs, access to finance and individual eligibility to government and other assistance. The systems will have intelligence capacity to enable risk assessment, consideration of cost effectiveness, performance evaluation, and research and analysis. Consumers have access to all the

information they desire, including information on waiting lists and performance indicators for physicians and hospitals.

Research
In the next few years, more data will be collected from diverse input sources, including clinicians, patients, other clinical data sources, and administrative systems. The analysis of health care data will be a growth industry. This will lead to better understanding of the impact of clinical interventions and in particular how clinical interventions affect outcomes.

e-learning
More and more hospitals are embracing the groundbreaking advantages of e-learning for health care professionals. e-learning occurs when educational content is delivered and supported by electronic networks, such as the internet, intranet, broadcast media (e.g., satellite) and other content delivery mechanisms. e-learning is considered to be a powerful tool to recruit and retain health care workers. e-learning is a cost-effective way to deliver real-time learning to their employees. The advantage of e-learning is that it provides the right content at the right time. It can cater to any size audience, anywhere in the world.

E-commerce
There are considerable opportunities to apply e-commerce to the health sector. Online technologies can assist the sector to expand its reach, deepen its quality and usefulness, and improve the efficiency of delivery. The health sector is also well placed to take advantage of export opportunities such as the delivery of online health education and telemedicine consultations. Therefor, the web will become the foundation for new health care industry infrastructure that supports complex, multiparty transactions among consumers, providers, insurers, and medical suppliers. These efforts will be driven by the need to control costs, improve information flow, and gain transaction efficiency.

Trends and their impact on hospitals
(taken from the Change Foundation)

Overview of drivers of change and their likely impacts on hospitals for the next 10-25 years.[176]

Key drivers	Relativity	Probability
Consumer attitudes and behaviors • hospitals will continue to place more emphasis on customer service and partnership attitudes • hospitals have begun and will continue to grow their alternative medicine services • hospitals have begun and will continue to shift their business focus toward prevention and wellness • consumers expect core services to be available in their communities • some consumers begin to discriminate between the quality of different hospitals and choose the one with quality, without regard to location	Very important	Degree of uncertainty
Socio-demographic trends • hospitals will need to develop additional means to address the health issues of the aging, the elderly, women and diverse ethnic cultural groups • hospitals will also increasingly need to pay attention to the needs of younger families • hospitals will need to move toward better integration of all services particularly for the elderly • user-friendly services will need to be increased to serve a more culturally diverse population	Important	More certain
Values in a 21st century democracy • increasing need for more diverse health care delivery settings • hospitals will need to shift attitudes and behaviors towards partnerships with patients • increasing need for flexibility towards changing values within a culture • alternate streams of revenue available	Important	More certain
Work and the nature of organizations • downsizing, staff reductions, flatter organizational structure characterize hospital organization • traditional health care professional, organizational and worker roles will need to be redefined • the strong trend from inpatient to outpatient and outreach to home workplace will continue to grow • there is a movement toward decentralized multipurpose facilities from traditional centralized facilities • there is increasing pressure to outsource • there will be continued emphasis on 'hi-tech', but growing emphasize on 'hi-touch' as well	Important	uncertain

[176] The Change Foundation (2000)

Overview of drivers of change and their likely impacts on hospitals for the next 10-25 years (continued).

Key drivers	Relativity	Probability
Science and technology • hospitals will continue to be bastions of high-tech • genetics will lead to new 'medicine' of prevention and new modes of intervention • science and technology will support less intrusive interventions and in locales closer to home and in home or workplace. Hospitals may expand range of delivery sites in response to opportunity or organize new delivery partnerships • surgery will be less invasive, requiring less, if any time in hospital • hospitals will be increasingly tied into science and technology and the research and development cycle • increasingly need to manage information and knowledge • hospitals increasingly needed to provide expert resource to boarder health care community • increased need for change management skills with acceleration of application of science and technology	Very important	Degree of uncertainty
Information technology • the trend toward non-traditional, multi-purpose facilities is expected to increase as access through the internet and telecommunication allows flexibility in service delivery • hospital will always need to invest heavily in IT services in order to satisfy the demand for state-of-the-art technology • hospitals will rely more on clinical telesurgery, teleconsultation, and teleconferences • hospitals will electronically link patient record systems • there will be an increase in 'virtual' facilities • hospitals will need to increase investments in training and off-work time for education	Very important	Degree of uncertainty
Economy • hospitals have an increased opportunity to leverage their presence as economic drivers • absolute dollars will increase in acute patient care institutions, but their relative position in the health care budget may decrease	Less important	More certain
Government • hospitals are particularly perceived as monopolies (costly and non-responsive to change) • hospitals will be held more accountable for quality and financial management	Less important	More certain
Environment • increased prevalence of antibiotic resistant organisms leading to higher cost of treatment • globalization of disease, leading to presentation to new diseases and new interventions	Very important	Very uncertain

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