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Policy Brief

Capacity planning in health care

A review of the international experience

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Introduction

Health systems in most high-income countries aim to provide a comprehensive range of services to the entire population and to ensure that standards of quality, equity and responsiveness are maintained. Although approaches vary widely, responsibility for developing the overall framework for financing and organizing health care usually lies with the central government, while governance of the health system is often shared by central and regional authorities.

In this policy brief, we review approaches to capacity planning, a crucial component of health care governance. By concentrating on a selection of countries as diverse as Canada, Denmark, England, Finland, France, Germany, Italy, the Netherlands and New Zealand, we aim to show a range of approaches to health care financing and organization, since both of these factors have an impact on approaches to capacity planning.[a]

In most countries, health care capacity planning takes place at national, regional or local level, reflecting the various tiers of government within health systems, but the distinction between these levels is not always clear-cut. For example, regional and local authorities may oversee entities that differ greatly in terms of population size, legal and political mandates and organizational structures. In most of the countries we reviewed, health care capacity planning has been devolved to regional level (often reflecting devolution of overall responsibility for the organization of health care), with Denmark and Finland regarding local authorities as important actors.

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Table 1. Lead responsibility for capacity planning

Country	*Lead responsibility for capacity planning*
Canada	Planning is the responsibility of the provinces/territories, guided in some cases by national frameworks, with participation from local authorities
Denmark	Regions and municipalities plan different areas of health care autonomously, with some central supervision
England	National and regional planning is directed by the central government with the participation of local authorities
Finland	Planning is the responsibility of municipalities and hospital districts (formed by municipalities)
France	Regional hospital agencies plan hospital care within a centrally determined framework in consultation with regional stakeholders
Germany	*Länder* (state) governments plan hospital capacity on the basis of national and regional legislation in consultation with regional stakeholders
Italy	Regional governments plan health care (mainly hospital care), using a national health plan as a guide
Netherlands	Regional provider organizations plan acute hospital care (subject to approval from the central government)
New Zealand	Responsibility for planning is shared by the central government and the DHBs

Regional/local planning entities may overlap with regional/local political structures (e.g. the regions in Denmark[b]), or they may be regional/local bodies established exclusively for health care, such as the regional hospital agencies in France and the district health boards (DHBs) in New Zealand (Table 1).

The Netherlands departs from this general picture in that it has largely liberalized health care capacity planning. Thus, while the central government remains responsible for the overall health system, neither it nor its regional and local tiers are directly involved in health care planning. The gradual

[b] In January 2007, Denmark's 14 counties were merged into five regions and the number of municipalities was reduced from 270 to 98. The administration of the health system is a core responsibility of the regions.

withdrawal of government planning began in the 1980s and reflects a political climate that favours regulated market forces over central command and control. Since the introduction of universal compulsory health insurance in 2006, planning of acute health care has been devolved to regional hospital associations (in collaboration with health insurers), and the central government's approval must only be sought for plans involving larger investments, such as new hospital developments.

The active involvement of provider organizations in the planning process is characteristic of both France and Germany, two countries with a strong corporatist tradition. Involvement of the public and other stakeholders such as health professionals, usually through consultation, forms an integral part of the planning process in England, Italy and New Zealand. In Denmark and Finland, public involvement in planning mainly occurs through representation by elected members of regional and municipality boards.

Health plans and types of planning

With the possible exception of the Netherlands, all countries employ health plans as major planning tools. In line with the various tiers of administration involved in capacity planning, health plans are developed at national, regional and/or local level.

Conceptually, planning is associated with two different functions: strategic planning and operational planning.[1]

Strategic planning involves framework-setting and defining the principles of the health system and its general thrust, and is most frequently undertaken by authorities at the highest level of health-system governance, such as the central ministry of health (England, France, Italy and New Zealand) or the respective regional or local tier in decentralized systems (provincial/territorial governments and regional health authorities (RHAs) in Canada and federal states in Germany (hospital care only)). In contrast, Denmark and Finland have devolved the strategic planning to regional and local authorities. The degree of involvement of lower-level administrations in strategic planning is largely determined by their levels of autonomy and their decision-making powers.

Operational planning refers to the translation of the strategic plan into activities, which might cover the whole range of operations involved in health care provision, including the allocation of budgets and resources, the organization of services and the provision of staff, facilities and

Box 1: Vertical integration of health care planning in Italy

Responsibility for health care planning in Italy is shared by the central government and the regions. The Ministry of Health sets the basic framework and, with the involvement of the regions, develops a three-year national health plan. The plan sets out the national health strategy, including a definition of the health care objectives, targets and performance indicators. A benefits package (*Livelli Essenziali di Assistenza*), which must be made available to all residents in the country, is centrally defined and regularly updated.[2] Once finalized, the national health plan is binding on the RHAs and its implementation is monitored by the Ministry of Health.

Regional health departments translate the national plan into regional health plans. Within the boundaries of the national framework, the regions are free to organize care according to their own needs and to define their own objectives, provided that they meet the targets set out in the national plan. Not all of the national objectives are binding, however, and it has been suggested that the regional health departments mainly adopt those targets that suit their regional needs and political agendas,[3] which illustrates the challenge of central target-setting in a largely decentralized health system.

equipment. This function is most often carried out by regional authorities but can also involve local authorities, such as the RHAs in Canada, the municipalities in Denmark and Finland and the primary-care trusts in England. In some countries, regional/local planning is directly informed by national health plans, and regional authorities are required to integrate national directives with regional health plans ("vertical integration"). This is generally the case in England, France (pages 33–36), Italy (see Box 1) and New Zealand (pages 51–55), as well as in Canada, where the RHAs have to adopt and implement health plans developed by the provincial or territorial governments (pages 9–16).

Regional and local planning in Denmark and Finland is primarily operational. In Denmark, different tiers of the system are responsible for different sectors of health care: the regions plan hospital care and some primary-care services, while the municipalities plan rehabilitation, long-term care and other primary-care services. While there is little vertical integration of planning at present, this might change in line with a redistribution of responsibilities expected to occur as a result of a recent administrative reorganization.[2]

Table 2. Planning scope and sectors

Country	*Scope and sectors*
Canada	Planning of hospital care (public and private providers); no planning in ambulatory care
Denmark	Planning for all areas of care, including ambulatory care provided by self-employed doctors and public hospital care
England	Planning of hospital and ambulatory care provided by the National Health Service
Finland	Planning of care provided in public hospitals and some planning of ambulatory care provided by self-employed doctors
France	Planning of hospital care only (public and private hospitals)
Germany	Planning of hospital care only (public and private hospitals)
Italy	Planning of hospital care only (public and private hospitals)
Netherlands	Limited planning of (acute) hospital care
New Zealand	Planning of hospital care provided in the public sector and ambulatory care provided by self-employed doctors

Planning scope and sectors

In all of the countries we reviewed, planning focuses on hospital care. Systematic planning in the ambulatory sector is seen only in Denmark, England, New Zealand and, to some extent, Finland (Table 2).

Countries vary in the extent to which planning applies to both public and private (for-profit and not-for-profit) providers, usually reflecting varying traditions with regard to whether or not private providers qualify for the public reimbursement of the services they provide. Hospital and health plans in Canada, France, Germany and Italy cover both public and private hospitals; hospitals, including those owned and operated by private enterprises, need planning permission if they wish to expand their facilities. In contrast, planning in Denmark, England, Finland and New Zealand mainly applies to public facilities.

Planning of hospital capacity

The planning of hospital capacity involves several dimensions: capital investment in existing facilities and new developments; investment in expensive equipment and technology (such as magnetic resonance imaging

scanners); service delivery; and allocation of human and financial resources. Given the variety of approaches to health care organization, it is not surprising that the intensity of the planning devoted to each of these aspects varies between countries. Most countries plan the number of hospitals, but the scope and level of detail differ, with some health plans outlining only the number and locations of facilities, generally on the basis of the existing infrastructure. Others take planning much further, determining, in detail, the number and designs of specialty departments and their geographical distribution within a defined area.

Traditionally, bed capacity has been the preferred unit of planning for hospital care, and this remains the case in countries such as Finland, Italy and New Zealand, and in most Canadian provinces/territories and the German *Länder*. In contrast, England and France have recently departed from this approach, moving towards planning with respect to service volume and activity (see the French case study on pages 33–36).

Capital-investment planning

Major capital investment in hospital infrastructure is usually regulated and planned separately from operational procedures and (where these apply) operational budgets. In Denmark, Finland, Germany (mainly public hospitals) and Italy, new hospital developments and major restructuring projects are funded and planned at regional level, i.e. by regional councils, hospital districts, *Länder* ministries of health and regional health departments, respectively. In France, New Zealand and the Netherlands, new hospital developments require the approval of the central government. In most countries, regional (and sometimes national) authorities are also involved in financing major investments, whereas in the Netherlands hospital developments are entirely financed privately. The growing importance of private investment can also be seen in other countries: in Canada, for example, hospital investment is frequently supported by charity funds associated with individual hospitals.

The process of capital-investment planning varies between countries, with many applying different mechanisms for long-term and short-term investments. Thus, in Finland, long-term investments (for periods of up to 10 years) are planned and overseen by the hospital districts, whereas short-term (and usually smaller) investments are put forward at sub-district level and only require the approval of the respective hospital district. In England, smaller amounts of capital investment are planned by local primary-care trusts within a framework set by the United Kingdom Department of Health.

Larger amounts of capital investment (up to £25 million (€37 million)) require the approval of the Department. The Department has also been directly involved in some private-sector procurements, for example through the private finance initiative (PFI) scheme whereby private consortia (usually involving large construction firms) are contracted to design, build, and in some cases manage, new projects.[4] Projects that involve investment of more than £100 million (€148 million) require the approval of the Treasury.

Developments in health care capacity planning

This brief overview of the experience of health care capacity planning in nine countries illustrates how approaches to planning strongly reflect the institutional, legislative and regulatory framework of a country's health system, and this, in turn, reflects the wider political, social, economic and cultural context. Consequently, capacity planning is often inadvertently influenced by contextual changes. One example is provided by Denmark, where reform of the administrative system is under way and involves a redistribution of health care responsibilities between the regions and the municipalities.[5] These developments are likely to have a substantial impact on capacity planning in the health care sector, for example with regard to the distribution of specialist services.

Capacity planning is also affected by administrative decentralization in the health sector. Thus, regionalization in Italy has transferred major responsibility for planning from the centre to the regions. Similarly, in France, responsibility for planning and organizing hospital care has been transferred from the central Ministry of Health to the regional authorities.[6] However, the French Government has retained an overall steering role.

Conversely, some countries with a strong tradition of decentralization have experienced increased levels of central government involvement in predominantly regional and local matters. Again, Denmark's example can be seen as representing an attempt to increase the supervisory role of the central government in planning and delivering health care through its subordinate body, the National Board of Health. In Finland, the central government's influence on local health care decision-making has gradually become more prominent over the past decade via earmarked budgets and the financing of particular projects for implementation by the municipalities. The trend towards increased central involvement in these two countries reflects a heightened awareness of – and a decline in – the (political) acceptability of regional inequalities in health care. There is also discussion in Finland about whether the role of the existing Social Welfare and Health

Care Target and Operational Plan should be strengthened with a view to developing a central steering tool. This plan was first introduced in 1999 and is prepared by each newly elected national government for a four-year period. It is developed under the auspices of the Ministry of Health in cooperation with municipalities, nongovernmental organizations and the health care professions. By developing and communicating targets to which all health-system stakeholders contribute, its role has so far been mainly strategic.[7]

Health care reforms as they relate to financing mechanisms and the introduction of new models of health care delivery may also have an impact on planning. Germany, for example, like other countries, introduced diagnosis-related groups to fund hospitals; it is expected that this change in financing will have an impact on approaches to hospital planning at the *Länder* level.[8] In Finland, the introduction of private-provider commissioning in a predominantly public primary-care sector may lead to further developments in planning methodologies. The health insurance reform that took place in the Netherlands in 2006 is likely to reshape the provider landscape by introducing individual contracts between private health insurers and providers. In this context, an interesting case is represented by New Zealand: following experiments with markets and competition, in 2000 the government introduced health plans and planning frameworks, after having abolished them in the 1990s.

These examples illustrate the challenge, for governments, of reconciling the responsibility for providing equitable, affordable and accessible health care with policies such as decentralization, competition and provider pluralism, which are intended to encourage responsiveness and enhance efficiency. The diversity of approaches to planning (or, in some sectors or countries, not planning) reflects the difficulty of balancing local, regional and central decision-making on the one hand with provider competition and regulation on the other.

1. Canada

Background

Canada's health system is governed at federal, provincial/territorial and regional levels. The 13 single-payer, universal schemes (known as Medicare) covering health services in each territory/province defined by the federal Canada Health Act 1984 are predominantly financed from general federal and provincial taxation. Care is provided through private (for-profit and not-for-profit) and public ("arm's-length" or state-run) organizations.[9]

Health care is a provincial responsibility. The federal government, through its health department, Health Canada, transfers funds to the provinces to support the provision of health care – on the understanding that the provinces adhere to the principles of the Canada Health Act (1984). It also funds and administers health services for specific groups, such as the armed forces, veterans, immigrants and registered First Nations people, and addresses national health issues by providing grants to the provinces or community groups and by funding health research.

Health care capacity planning is largely a responsibility of the governments of the three territories and ten provinces. In recent years, planning has been further decentralized through the creation of RHAs in all but two territories (Yukon, Nunavut) and two provinces (Ontario, Prince Edward Island[c])[10]; the first province to introduce RHAs was Quebec (1988). The process of decentralization has involved devolution (transferring planning, budgeting and decision-making authority from the provincial level to the RHAs) and (re-)centralization (shifting of the planning and governance of health care from individual institutions or agencies to the RHAs). At the same time, efforts have been made to develop national planning on key issues such as health workforce supply. However, provincial independence has made it difficult for the federal government to introduce national programmes that have the support of all provinces and territories. Instead, the federal government has entered into bilateral agreements with individual jurisdictions, a practice that has been called "asymmetrical federalism" and which has been most common in the province of Quebec.

[c] A different approach to regionalization has been chosen in Ontario, leading to the introduction of "local health integration networks" (see below). The province of Prince Edward Island established RHAs in 1993 but in 2005 abandoned its regionalized structure of health services, including the RHAs.[10]

Actors in the planning process

The federal government has no constitutional role in health care planning. National planning initiatives take place under the auspices of the Conference of Federal/Provincial/Territorial Ministers of Health and the Conference of Federal/Provincial/Territorial Deputy Ministers of Health (both held annually), which are informed by intergovernmental advisory committees and working groups. "Arm's-length" intergovernmental agencies are also involved in sector-based planning: among these are the Canadian Agency for Drugs and Technology in Health, Canada Health Infoway and the Federal/Provincial/Territorial Advisory Committee on Governance and Accountability.[9] The Canadian Institute for Health Information supports the planning efforts of all jurisdictions by providing information on health and health services.

System-wide planning takes place at the provincial level, with each ministry of health running a policy and planning branch responsible for regular advice on planning. The provincial ministry of health is responsible for determining the overall direction, priorities, expectations and standards for the provincial health system within the context of legislation and the provincial government programme (see Box 2). The ministry develops the planning, policy, legislative and standards framework within which health authorities plan and organize health services.

Various initiatives have been designed to strengthen the provincial planning process, for example through increased use of evidence and information, systems management and information-technology infrastructure. The establishment of RHAs has been viewed as perhaps the "single most important initiative in system-wide planning".[9]

RHAs are "autonomous health care organizations"[10] responsible for health care administration in a defined geographic region within a province or territory. Most of their boards of governance are appointed by the provincial minister of health. Only in a few provinces do RHAs have elected boards of directors, and only a few boards (e.g. in British Columbia) include representatives from health care providers. RHAs are responsible for the allocation of resources and the delivery of community and institutional health services within their regions. Operating at a level that is intermediate between the health ministry and the providers, RHAs have a planning mandate for enhancing coordination and continuity of care across a multitude of health care organizations and providers within a geographical area.[9]

Box 2: Health goals in British Columbia

In 1997, the Government of British Columbia defined a total of six health goals, which have provided a policy framework and have guided health care provision in the province since.[11] Provincial health goals set out the basic principles of health care provision, including accessibility, affordability, sustainability, quality, management and accountability, and the working environment. Health goals inform the strategic health plan developed by the ministry of health;[12] the strategic plan further disaggregates health goals into health objectives and sub-objectives, which specify the direction and contents of the strategy. The strategy does not include targets.[d] The current strategy requires the provincial health officer to report annually on progress achieved in population health, as measured against the health goals. Likewise, the ministry of health prepares an annual report on the performance of the health system. The strategic plan of British Columbia also outlines what the RHAs are required to produce in order to measure performance and report on results, i.e. a three-year health plan, annual capital plans, annual budgets and business plans.[12]

The degree of decision-making power held by RHAs differs among the provinces/territories. In some provinces, RHAs operate within specific, provincially determined administrative and fiscal constraints (Nova Scotia, Manitoba, British Columbia), while others have greater autonomy (Alberta, Saskatchewan, Prince Edward Island).[10]

RHAs across Canada differ greatly in size, structure and density, with the number per province/territory varying between 5 and 18, covering populations ranging in size from 1000 to almost 2 million. The scope of services covered also varies. All RHAs are generally responsible for overseeing hospital care, and most organize and provide long-term care, community health services and public health programmes. Many also have some direct role, as the owners/managers of some providers, in delivering services such as (the majority of) acute-care facilities and have contracts with other providers, e.g. some private providers for the provision of

[d] Goals and objectives are relatively broad – e.g. goal 4 reads "British Columbia will have an adequate supply of health care services" and objective 4.1 reads "To ensure the supply of health care practitioners will be adequate and distributed equitably throughout the province"; sub-objective 4.1.1 reads "To maintain approaches and programs to encourage an appropriate number and mix of health service providers who are educated, recruited, and deployed throughout British Columbia to meet the population's health care needs".[5]

Box 3: Health plan of the Calgary Health Region

The 2006–2009 health plan for the Calgary Health Region describes "at the strategic level the actions it will take in carrying out its legislated responsibility with primary focus on delivery of quality health services" (p. 3), while providing services to a population of 1.2 million in more than 100 locations, including 12 acute-care sites, 40 care centres and a variety of community and continuing care sites.[13] The plan describes the availability of facilities and bed numbers/spaces and outlines trends and future requirements based on a regional health-needs assessment. It also defines activities, measures, baseline indicators, targets and individual strategies for each sector of care and provides links to other planning documents that specify activities and strategies for each sector, such as the mental health strategic plan, the rural health plan and the long-term care capacity plan.

specialized ambulatory care services. In this sense, RHAs act as both purchasers and providers.[9] However, RHAs are not responsible for physician services,[e] prescription drugs, cancer care and some specialized services that are funded and administered centrally by provincial/territorial governments; these services are excluded from RHA planning.

The RHA normally prepares a three-year health plan that set out the strategic direction and priorities (including capital and capacity requirements) for the region. In some provinces these plans are supplemented by additional agreements between the ministry and the RHA (e.g. in Quebec, these are referred to as "management agreements"). The health plan is guided by the provinces' RHA legislation, directions by the respective ministry of health, the ministry's business plan and the provincial government expectations as communicated by the minister of health.[13] Box 3 provides a summary of the key features of a three-year regional health plan, using the 2006–2009 health plan for the Calgary RHA as an example.

RHAs receive funding from the provincial/territorial governments, usually through global budgets that are based on historical spending levels for the population served. RHAs translate their priorities into budgeted plans submitted to provincial governments on an annual basis; these are occasionally supplemented by multi-year plans. Budget submissions may be required

[e] The majority of both specialists and general practitioners work on the basis of fees for service schedules and working arrangements negotiated directly with the provincial ministry.

before the provincial budget is finalized or submitted after funding is announced in the provincial budget. In some provinces, health institutions such as university hospitals and provincial agencies support the regional planning process by providing plans and annual reports to the RHAs and ministries of health.

The planning process at RHA level usually involves representatives of the health professions through various consultation processes. The regulatory bodies of the health professions are jointly responsible, with the RHAs and provincial governments, for ensuring quality in the provincial health systems. Other bodies, such as universities, health foundations and research-funding agencies, also contribute to the planning process. Formal public hearings[f] and other types of public consultation provide opportunities for the public to participate in the planning process.[14]

Investment in, and the distribution of, infrastructure for public health care are planned at both the provincial/territorial and the federal levels of administration.[9] Most provinces have defined, specific frameworks for major investments in infrastructure and expensive equipment and technology. Some of the decision-making on infrastructure is delegated by provincial ministries to the RHAs, but most major investment decisions will be made in conjunction with the appropriate ministry, since health ministers are ultimately accountable for the long-term planning of the overall health system within their respective jurisdictions.

The acquisition of expensive technology such as computed tomography scanners and magnetic resonance imaging scanners is mainly funded by provincial and territorial governments as part of their commitment to provide diagnostic services as an insured service under the 1984 Canada Health Act. Hospitals' financial capacities to purchase expensive equipment through their budgets are often limited, as most of them run deficits. Although many hospitals have set up charitable foundations to raise funds for the acquisition of technology, provincial ministries of health usually contribute to larger investments; thus, capital plans require approval by the respective ministry.[f]

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[f] Most of this medical imaging equipment is located in hospitals, but some is in free-standing clinics, mainly private-for-profit clinics that obtain the bulk of their funding from private sources. This funding includes out-of-pocket payments and private insurance monies, as well as a small amount of public revenue from workers' compensation-board payments (and, in some cases, revenue from provincial governments for the servicing of Medicare patients for a set number of hours per week).[2]

RHAs plan bed capacity, although not in great detail. For example, the health plan of Calgary merely outlines the existing bed capacity and roughly indicates how many beds will be added through future capacity investment.[13] However, between 1995 and 2000 a substantial number of hospitals across Canada were closed, merged or changed to provide other types of care (as part of a wider process of cost containment and rationalization), highlighting an increasing need to use the existing capacity more efficiently.

Recent developments

To date, there has been no comprehensive and systematic evaluation of the impact of regionalization. However, in 2002, the Kirby Committee presented a report on the federal role in Canada's health system, which also included a review of RHAs.[10] While it attested that RHAs had done "a commendable job for integrating and organizing health services for people in their regions" (p. 63), it also identified several weaknesses in RHAs' planning and budgeting of resources and highlighted some gaps in reporting. It noted that, in some cases, the annual budgets/plans were very general, resembling guidelines rather than plans, and lacked specific targets and formal spending caps on specified services. It suggested that, to improve transparency and enhance accountability, annual agreements with the provincial government should clearly define the consequences for RHAs that fail to manage their budgets or to achieve their performance targets (see also Box 4).[10] At the same time, the report acknowledged that RHAs had been unnecessarily constrained by budgets and priorities set by the provincial government, leaving little flexibility at the RHA level. One other major challenge for RHAs relates to the fact that control over physician remuneration or prescription-drug funding and administration has remained a provincial/territorial responsibility, which greatly inhibits efforts to enhance the integration of services. The report therefore recommended devolving further responsibility to the RHAs.

Several provinces have introduced numerous changes to the structure of their RHAs. By 2002, British Columbia had reduced its original network of 52 health authorities and 11 RHAs to 5 RHAs (which now administer a total of 16 health-service delivery areas) plus one provincial health authority responsible for province-wide services.[9] In 2005, the least-populous province in Canada, Prince Edward Island, abandoned the regionalized structure (established in 1993) of its health services.

In 2006, Ontario introduced a system of 14 local health integration networks responsible for planning, integrating and allocating funding for

Box 4: Accountability of RHAs in Alberta

Alberta's nine RHAs work within an accountability framework that includes capital planning, needs assessment, service planning and business planning.[15] In 2003, for the first time, the Government of Alberta published a rolling three-year capital plan outlining its commitments to major capital and infrastructure projects. In 2005, the Government of Alberta issued a revised version of the *Health Capital Planning Manual* to ensure and enhance effective capital planning and decision-making, while providing RHAs with greater responsibility and autonomy for decisions relating to capital investment. The Manual also introduced a regulatory framework for alternative capital funding, for example through public–private partnerships (in Canada also known as "P3s").[9] As part of the accountability framework, the provincial government agrees annual target volumes with two RHAs for a number of province-wide services, such as organ transplants, open-heart surgery, major trauma and burn care and complex neurosurgery. The targets are determined on the basis of health status, the incidence of health conditions and health trends; the ability of the RHAs to achieve the targets and associated health outcomes is monitored annually.[10]

local health services, including hospitals, community-care access centres, home care, long-term care and mental health, within specific geographical areas. The implementation of local health integration networks is a gradual process, but it is envisaged that, by 2008, they will (i) have developed and implemented accountability and performance management agreements with local providers to improve health care service planning and delivery across the province; (ii) have developed and implemented strategies for responding to community concerns and requirements, and will be working with local providers to specifically address local health needs; (iii) be responsible for evaluating and reporting on their local health-system's performance; and (iv) allocate funds to local health providers, as well as provide advice to the provincial ministry of health about local capital needs.[16] Planning will be transferred from the provincial to the regional level.

Other provinces have recently begun to develop similar approaches for strengthening local responsibility for health care delivery, which often includes the planning of health care capacity. In Quebec, 95 local service networks were established in 2004 across 18 regions. These organizations share collective responsibility for the populations within their respective geographical regions. In Alberta, locally governed community health centres receive a

significant proportion of their funding through contracts with their respective RHAs; they also participate in relevant executive planning and partnership committees at RHA level.

In recent years, federal and provincial policy has focused on reducing waiting times and improving access to health care; this development has contributed to an increasing interest in capacity planning. In 2004, the Wait Times Reduction Fund was established at federal level to boost existing provincial and territorial investments and to assist jurisdictional authorities in their diverse initiatives to reduce waiting times. The Fund is primarily used for jurisdictional priorities such as the following: training and recruitment of additional health professionals, clearing of backlogs, building of capacity for regional centres of excellence, expansion of appropriate ambulatory and community-care programmes and the development of tools for the management of waiting times.

The jurisdictional authorities have agreed to collect and provide information on progress in the reduction of waiting times by the following means:

- by developing comparable indicators of access to health care professionals and diagnostic and treatment procedures;
- by using evidence-based benchmarks for medically acceptable waiting times – beginning with cancer, heart conditions, diagnostic imaging procedures, joint replacements and sight restoration – through a process to be developed by federal, provincial and territorial ministers of health;
- by using multi-year targets to achieve priority benchmarks; and
- by using annual reports, issued by provinces/territories to their citizens, outlining progress achieved in meeting the multi-year waiting-time targets.

The issue of waiting times illustrates, to some extent, the increasing interest in national planning in certain areas of the health sector.

2. Denmark

Background

A key feature of the tax-funded Danish health system is the high level of decentralization in the organization of health care. Services are almost entirely publicly provided and there are only a few private for-profit hospitals (mainly in Copenhagen). Planning is largely undertaken at the regional and municipal levels, and involves contractual agreements between the respective authority (council) and provider associations (primary care). This is now likely to change following the 2007 structural reform, which merged the former 14 counties into five regions with between 0.6 million and 1.6 million residents each. The number of municipalities was reduced from 271 to 98.

The structural reform also involved partial redistribution of responsibilities: the regions have assumed responsibility for most areas of health care, and the municipalities are in charge of preventive medicine, health promotion and (non-hospital-based) rehabilitation.[17] There is an expectation that the creation of larger regions is likely to reduce both administrative costs and geographical differences in taxation[9] and in the provision of health care; in addition, the larger catchment areas should be able to respond more flexibly to future challenges in the health sector. It is also anticipated that central authorities such as the National Board of Health will have a stronger role in regulating and supervising health care, counterbalancing the powerful position of the regions and ensuring uniform standards across Denmark.

Actors in the planning process

Central government determines the overall framework for the planning and delivery of health care, mainly through legislation. The Ministry of Health and its subordinate body, the National Board of Health, supervise the organization and delivery of health care at the regional and municipal levels and issue recommendations for selected health issues. There is no national health plan; however, the regions and municipalities develop plans for their respective areas of responsibility.

Until recently, central supervision of planning (focusing mainly on hospital-based care) was largely informal and not defined in law. The role of the National Board of Health was generally limited to discussing the regional distribution of specialist care with county councils, medical associations and

[9] In contrast to the previous system of local taxation at the county level, regions do not levy taxes but are allocated funding through state grants, with some contributions from municipalities.

provider organizations and issuing recommendations. Although counties were not required to adhere to such recommendations, in practice they usually implemented them.

However, since January 2007, regions and municipalities have been required to enter into a formal agreement in six areas that involve particular coordination between services organized by the regions (e.g. hospital care) and those provided by the municipalities (e.g. rehabilitative care).[17] These agreements will now have to be approved by the National Board of Health, whose overall role has been strengthened considerably. Approval will depend on whether these agreements meet a battery of requirements covering aspects such as needs assessment, quality standards, training and research requirements. The specific requirements and procedures relating to approval are currently under development.

While there is little systematic planning at national level, some priority-setting is undertaken through annual political agreements between the national government and the regions. Thus, the Ministry of Health and the Ministry of Finance jointly set targets for health care expenditure following negotiations with Danish Regions (a body that represents the joint interests of the regions) and the National Association of Local Authorities. However, these targets are not legally binding. Annual budget negotiations also determine resource allocation, including the recommended maximum levels for local taxes, the levels of state subsidies to be transferred to the regions and municipalities, the amount of redistribution between municipalities, and the sizes of grants earmarked for priority areas. It has been noted that the central government is increasingly using these negotiations as a means of influencing the direction of health care development.[18]

As noted above, the regions and the municipalities are the main actors in the planning, organization and provision of health care. They are required to produce a health plan every four years (i.e. in parallel with the election cycle) covering all areas of the health care sector (*regions*: hospital and primary care provided in private practice; *municipalities*: rehabilitation, home-based nursing care, public-health nurses, dental health care for children). The health plans cover all preventive and curative care and include, to some extent, planning with regard to the interface between health and social care. The planning process varies between regions but normally involves meetings, seminars and joint committees focusing on specific subjects.

Regional health plans usually include an assessment of the population's health and health care needs. They also describe the range of services available and evaluate the nature and level of cooperation between municipalities and with other regions.

Plans are then submitted to the National Board of Health for comments; recommendations from the Board are not binding.

Planning in the hospital sector

The regions regulate and plan hospital care primarily through detailed budgets specifying the volume, nature and costs of hospital activities.[h] Each region determines the range of services to be provided by each of its hospitals. The ability of regions to plan hospital capacity is, however, increasingly being influenced by the movement of hospital funding towards activity-based funding, which makes the hospital-service volumes less predictable. At present, municipalities are not involved in hospital planning. However, it is anticipated that their involvement might increase as a result of the redistribution of responsibilities following the administrative reform.

The National Board of Health plans the distribution of expensive equipment and the provision of specialized and highly specialized services; these services affect approximately 10% of all hospital patients. Specialized interventions are provided at one hospital per region (though not necessarily the same hospital for all specialized services) and highly specialized services are provided at one to three hospitals in the country (depending on the service). Like all public hospitals, hospitals performing specialized and highly specialized activities are operated and financed at regional level.

Until recently, private for-profit hospitals had not been involved in planning. To qualify for public reimbursement, private hospitals have to enter into an agreement with Danish Regions. Under the new system, private and public hospitals are required to apply to the National Board of Health if they wish to offer specialized or highly specialized services. The National Health Board determines the degree of centralization for each specialized intervention and location, taking into account the volume of services provided and the availability of other services that are required in order to be able to perform

[h] Hospitals receive a budget based on a contract with the region. In addition, hospitals are increasingly paid on a fee-for-service basis. Safeguards such as volume ceilings and case-mix systems have been introduced to ensure that expenditures remain under control. Diagnosis-related groups are used for payments between hospitals and between regions.

that intervention.[i] This requirement can potentially apply to both public and private providers. However, the National Health Board currently does not regulate private providers' provision of specialized or highly specialized interventions, to encourage private providers to enter the market. All private hospitals, for example, are allowed to offer coronary bypass surgery, but only five public hospitals are allowed to do so.

Planning at the regional and municipal levels has become increasingly complex as the Government's commitment to increasing patient choice has allowed patients to seek care in hospitals outside the boundaries of the respective region of residence. Planning is also affected by national waiting-time guarantees, which require hospitals to give preference to specific interventions.

Regional differences and inequalities that were previously tolerated as regional diversity are increasingly becoming less accepted, and this is reflected in the positions adopted by both central government and Parliament. The Government has now launched several initiatives in order to improve the standard and equality of health care, reducing the power of the regional tiers in the health sector by either legislative means or through agreements made centrally.[i] For example, maximum waits were reduced from two months to one month. This could have a negative impact on financial certainty for the regions, as the volumes of patients and services required may become less predictable.

i This is called "specialist function", referring to the provision of specialist services for conditions that are rare, complex and require high levels of resources such as technology and equipment.

i An example is a directive implemented across regions and requiring each hospital patient to be assigned to a single contact person for the entirety of the treatment during the course of a stay in hospital.

3. England

Background

Health care is predominantly funded from general taxation, with an additional element consisting of national insurance contributions paid by employers and employees. Publicly financed care is provided mainly by salaried doctors and nurses in government-owned hospitals (National Health Service (NHS) trusts and foundation trusts[k]) and by self-employed general practitioners. Some publicly financed care is also provided by private and voluntary providers. The National Health Service covers all residents and uses a mixture of public, private and voluntary providers.

The planning and delivery system in England is hierarchical. The Department of Health is responsible for developing the overall policy framework for all health issues. Strategic health authorities (SHAs, created in 2002) provide local strategic leadership. Primary-care trusts (PCTs, also established in 2002), which are responsible for geographically defined populations, purchase health services to match local health needs. They do this mainly through contracts with general practices run by self-employed general practitioners and through service-level agreements with hospitals (increasingly based on payments for activities). PCTs may also provide some primary and community services directly. About 85% of the total NHS budget is now allocated by the Department of Health to PCTs. In 2006, SHAs and PCTs were reduced in number, from 28 to 10 and from 302 (originally) to 152, respectively, in line with an ongoing organizational restructuring of the NHS.[19]

Actors in the planning process

Planning in the NHS has gradually been devolved from the Department of Health to the SHAs and PCTs. The Department of Health retains a steering role. It sets the framework for planning, outlines the national health targets and defines the principles, standards and priorities for health care delivery to be met by the NHS. It also reports biannually to Parliament and the public about the health service's financial performance and progress made towards achieving the targets set out in the Government's three-yearly review of ministerial budgets (known as the Spending Review). In line with the Spending Review, planning frameworks are developed for a period of three years.[20] Their purpose is to ensure that local provider activity contributes to the national targets and to other policies such as expansion of patient choice or movement of care into the community. Planning also takes into account statements of best practice (issued centrally), such as National Service

[k] Foundation trusts are NHS hospitals that have greater financial and management autonomy.

Frameworks or guidelines developed by the National Institute for Health and Clinical Excellence.

The current planning framework (2005/06–2007/08) sets out the standards for health care that all organizations delivering NHS care have to achieve.[20] Specifically, it describes the level of quality that health care organizations, including NHS foundation trusts and private and voluntary providers of NHS-funded care, are expected to meet in seven areas: safety; clinical effectiveness and cost-effectiveness; governance; patient focus; accessible and responsive care; care environment and amenities; and public health. For each of these areas, the framework defines a principal outcome, core standards (achievement of which is binding) and developmental standards (where progress is expected to be made). The standards are to be met in addition to existing commitments and targets as defined in the preceding planning round[21] and in a set of national targets based on the 2004 Spending Review and the Public Service Agreement for 2005–2008 (Box 5).[22]

The Department of Health develops an annual operating framework based on the three-year planning framework. This specifies the priorities in service delivery and the national targets corresponding with the overall planning framework. It also takes account of the general health-reform agenda, as set out in key policy documents, which includes expansion of patient choice or the gradual introduction of activity-based funding of hospital care (known as "payment by results").[19,25,26] In addition, the operating framework defines the parameters within which local organizations are expected to work to ensure that the relevant NHS provider organizations, and PCTs in particular, work towards achieving the national targets through plans for local delivery (see below). The most recent 2007/08 operating framework specifies a timetable that sets out the main stages of the ongoing reform with respect to local planning.[27]

From 2003, PCTs have been required to produce three-yearly local delivery plans (LDPs), which show how targets set by the Department of Health will be achieved. The process is outlined below.

- The Department of Health allocates funds to the PCTs.
- The PCTs are expected to work in partnership with a wide range of stakeholders, including local authorities, NHS trusts, NHS foundation trusts, other NHS organizations, and private and voluntary organizations, to develop an LDP that also includes a workforce plan. The LDP aims to address local needs and incorporate the national priorities specified in

Box 5: Department of Health Public Service Agreement, 2005–2008

First issued in 1998, public service agreements are intended to ensure value for money from public resources and to enhance transparency and accountability by giving the public a clear sense of the Government's direction and ambition. Departments are required to report (publicly, twice a year) their performance in relation to the targets.

The 2005–2008 Public Service Agreement for the Department of Health identifies four priority areas, which are translated into national targets, as outlined below.

- *Improve the health of the population*: increase life expectancy at birth in England to 78.6 years for men and to 82.5 years for women by 2010.
- *Support people with long-term conditions*: offer a personalized care plan for vulnerable people most at risk; reduce emergency bed days by 5% by 2008.
- *Improve access to services*: ensure that by 2008 no one waits more than 18 weeks from a general practitioner referral to hospital treatment; increase participation of problem drug users in drug treatment programmes by 100% by 2008.
- *Enhance patient/user experience*: ensure that individuals are fully involved in decisions about their health care, including choice of provider; support vulnerable older people to live in their own homes; reduce methicillin-resistant *Staphylococcus aureus* levels and other health-care-associated infections.[23,24]

the Department of Health's Public Service Agreement. It is closely aligned with local authority planning time scales and contains a financial strategy and a plan that describe how resources are to be deployed.

- The SHAs bring together the LDPs of the PCTs and the business plans of the NHS trusts in order to produce an SHA-level (aggregate) delivery plan for the respective region, detailing the health and service improvements planned for the three-year period.
- The SHA-level LDPs form the basis of the management relationship between the NHS and the Department of Health and represent a means of monitoring local progress against the national targets.
- The LDPs are aligned with the Government's spending-review cycle and are updated every two years, with a one-year overlap (i.e. year 3 of the

existing plan becomes year 1 of the new plan, e.g. 2003–2006 and 2005–2008).

There is no central planning of hospital services at the national level per se. However, through the Healthcare Commission,[1] the Government closely monitors the performance of NHS organizations and the achievement of national targets at the local and regional levels.[28] For NHS organizations that fail to meet the national targets or other existing commitments, the Department of Health has reserved the right to initiate recovery action, which, in the worst-case scenario, might result in the replacement of senior management in the relevant organization.

Hospitals (NHS trusts) calculate their anticipated volume of activity on the basis of the previous year's activity levels and waiting lists, complemented by estimates of the activity levels required to meet the 18-month waiting-time target. They negotiate the anticipated volumes of activity with the PCTs, and these figures are then set out in a service-level agreement between the organizations. Negotiations between hospitals and PCTs can be lengthy and complex, depending on the number of PCTs involved and the quantity and types of services under discussion. Service-level agreements between hospitals and PCTs are submitted to the SHAs and are fed into their local delivery plans.

Capital-investment planning

Responsibility for the planning of major capital investment has been significantly revised in recent years. Major investments can be initiated by the Government directly, as illustrated by the commitment made in *The NHS Plan* to increase the number of new hospital buildings by an additional 100 by 2010.[25] New guidelines on approval procedures and investment thresholds came into effect in 2003. NHS trusts and PCTs carry the main responsibility for identifying the need for investment and for developing a so-called "full business case" to justify the financial commitment. The process of developing a business case is guided centrally by means of a defined set of planning steps (see below).[29]

[1] The Healthcare Commission carries out an annual health check in which it assesses and rates the performance of each NHS trust in England. In doing so it looks at a wide range of areas, from the overall quality of care (including safety of patients, cleanliness and waiting times) to how well trusts manage their finances. Results are published on the Commission's website (http://www.healthcarecommission.org.uk).

Planning procedures for capital investment vary according to the size of the investment. In general, NHS trusts and PCTs may invest up to £10 million in building schemes, information technology and expensive equipment without prior approval from the SHA or the Department of Health. However, the amount that may be spent depends on performance. Thus, trusts that have achieved top ratings ("excellent" or "good") in the Healthcare Commission's annual performance assessment can spend up to £10 million without prior approval, whereas trusts performing less well (with ratings such as "fair" or "weak") may only spend up to £1 million without prior approval.[30] For investments that require financing through lease transactions, the threshold for approval may be lower. Investments between the lower limit as defined by performance and a budget volume of up to £25 million require SHA approval. This threshold applies to all investments into facilities, information technology and investment projects funded through the PFI (Private Finance Initiative). SHAs may also spend up to £5 million on investments that they have identified themselves.[30] All investments above a threshold of £25 million require approval from the Department of Health. Investments of more than £100 million require approval from the Treasury (the ministry of finance).[30]

NHS foundation trusts have greater freedom where capital investment is concerned. In particular, they are allowed to raise capital by borrowing from the private (and public) sector and to reinvest any surplus generated from their activities.[29] Monitor,[m] the independent regulator of foundation trusts, allocates a "prudential borrowing limit" to each foundation trust: this limit is based on an estimation of the trust's ability to pay back a loan. Borrowing from private financial markets is supported by a "loan facility" established by the Department of Health, which provides foundation trusts with a statement of their financial viability. The loan facility also provides access to long-term public-sector loans. The terms of these loans are similar to those used in the commercial sector.[29]

Special regulations apply to PFI-funded building schemes, as set out in the NHS (Private Finance) Act 1997. The PFI scheme was introduced in 1992 to encourage private investment in the financing of public projects that would otherwise be dependent on public revenue or public borrowing. Under the NHS PFI scheme, consortia of private investors are invited to bid for investment projects involving both the building and management of non-

[m] Monitor was established in 2004. Its main role is to grant "high-performing" NHS trusts licences to operate as foundation trusts and then regulate those trusts to ensure that they operate within the terms of their licences.

clinical aspects of hospitals, often lasting for periods of 30 years or more. Of the 57 hospital developments that were operational by 2006 (against the target of 100 set out in the *NHS Plan*), 48 were financed through the PFI scheme.[29]

Responsibility for the approval of PFI schemes lies with the Health Spending Team at the Treasury.[31] Although much of this responsibility has been delegated to the Department of Health, the Treasury retains the authority for approving PFI schemes that are novel in some way or potentially controversial, regardless of the capital value. For a PFI scheme with an expected value of £25 million or more, the NHS trust involved is required to prepare a "strategic outline case" in cooperation with the main commissioning SHA (or PCT). Strategic outline cases ensure that larger investments are consistent with local health needs, local health strategies and available local resources.[31] They are then peer-reviewed by other SHAs operating as part of a technical group coordinated, and guided, by the Department of Health. The technical group reports to the Department's management board, which in turn gives a recommendation for prioritization to ministers.[32]

Once a scheme has been chosen for prioritization, the NHS trust and the SHA together prepare an "outline business case", which must be approved by the relevant NHS Executive Regional Office.[31] The outline business case should demonstrate that the preferred option for investment has been rigorously appraised in the following areas: assessment of alternative financing schemes (e.g. through establishing a public-sector comparator); analysis of monetary and non-monetary costs and benefits; and involvement of the relevant (clinical) stakeholders in the scheme's development. Approved outline business cases must be published by the NHS trust within a month. Formal procurement procedures are regulated under European Union public procurement rules and involve formal advertisement of the project in the *Official Journal of the European Communities*.[33] NHS trusts are advised to explore the market for potential bidders and to evaluate the possibility of involving private investors. After an expression of interest, potential bidders are invited to negotiate – a process involving several stages of specification and selection. For schemes with a capital value of £25 million or more, formal invitations to negotiate require approval from the Department of Health.[33]

Final submissions are assessed by an evaluation team comprising the NHS trust management, commissioning SHAs and/or PCTs, clinicians' representatives and the NHS trust's legal, financial and technical advisers. The evaluation is made against criteria that include aspects such as design

and services, affordability, capital costs, risk allocation, value for money, non-financial factors, payment mechanisms, contractual terms, guarantees, contingency plans and flexibility/options.[33] Following the selection of a preferred bidder consortium, detailed aspects of the scheme are negotiated between the trust, the financiers and the project company. On this basis, the NHS trust is required to develop a full business case, which must be approved by the Department of Health and the Treasury (where appropriate) before the project can proceed to a financial conclusion. The PFI contracts then require certification by the Secretary of State or a senior civil servant acting on his/her behalf. This contract forms the "externally financed development agreement", as regulated under the NHS (Private Finance) Act 1997. It is recommended that NHS trusts appoint a monitor to ensure that contractual arrangements are fully observed and implemented.

4. Finland

Background

In Finland, health care planning is characterized by a high degree of decentralization, whereby the responsibility for planning and organization of health services is largely devolved to the municipalities. The municipalities organize primary care and, through hospital districts (20 in total; each of which consists of several municipalities), secondary and tertiary care. Municipalities can join any hospital district and can also purchase services from other hospital districts or private suppliers.[n]

Until 1993, municipalities were required to provide regional health authorities annually with rolling five-year plans in order to qualify for state subsidies. These plans were strongly regulated and fed into a national health plan developed by the National Board of Health. However, the Board was abolished following the 1993 state-subsidy reform, as was central planning. Since then, municipalities have each received a lump-sum subsidy for health care from central government. The subsidy is calculated using different numerical formulae for each of following five service categories: care of the elderly and long-term hospital care; consultations with primary-care physicians and nurses; other types of primary care, such as preventive services and occupational health care; specialized care; and mental health care. In theory, municipalities can use subsidies for any purpose, even if it is unrelated to health care (e.g. to subsidize education or local business).

There was some concern that devolving responsibility for health care planning and delivery might increase regional inequalities in terms of access to health care; however, there is no indication that existing differences between regions have intensified following the 1993 reform. Hospital districts have managed to use their strengthened position more effectively, expanding the role of secondary care in relation to other sectors of health care. Since 1993, almost all of the net increase in the number of physicians has been allocated to specialist care.

In February 2005, the Government proposed to reform the municipal structure with the aim of creating "a sound structural and financial basis ... for the services that municipalities are currently responsible for in order to secure the organization and provision of such services in the future with due

[n] In practice, municipalities rarely leave or join a new hospital district. They may purchase specialist services from external service providers but this usually accounts for a small proportion of specialized services.

regard to the required standard of quality, effectiveness, availability, efficiency, and technological advancement".[34] The proposal addresses concerns about the financial difficulties faced by municipalities in meeting the health and social needs of an ageing population, as well as the availability of a health care workforce. The reform envisages the merging of municipalities to create a larger population base for service delivery. Once under way, the reform is expected to change the legal and administrative framework of public services significantly, and this is likely to have a major impact on the organization of health care.[35]

New approaches to the organization of health care are currently emerging in various regions across the country: these often take the form of "health care districts", which are intended to integrate various aspects of primary and secondary care (and, frequently, social care for the elderly). Initiatives vary widely at present, but it is expected that efforts will be made towards harmonization, for example, by merging the Primary Health Care Act (1972) and the Specialized Medical Care Act (1989), which could provide a common framework for the integration of care.[36]

Actors in the planning process

Responsibility for the planning and organization of health services is largely devolved to the 416 municipalities. The role of the central government, represented by the Ministry of Social Affairs and Health, is limited mainly to establishing a general framework for the organization, and principles, of health care, largely through national legislation. Central government disseminates comparative data on health and health services and non-binding recommendations to the municipalities ("steering by information"). In 2006, the Ministry of Finance commissioned an evaluation of this strategy and its impact on selected social service sectors, including health services.[37] The study identified various challenges, in particular the occasionally insufficient level of coordination between different channels of communication and the potential tension between steering through information and other regulatory mechanisms (e.g. framework setting and financial steering mechanisms).

In 2002, the Government initiated the National Programme for Safeguarding the Future of Health Care. Its main rationale was to prepare for major challenges associated with the demography of an ageing population, technological development, emerging public health threats and the demand for upgrading of workforce skills. As part of the Programme, the Ministry has become increasingly involved in directing developments in local service

delivery, and has done so mainly through targeted funding of individual projects.°

However, there has been concern about the efficiency of the project-based approach: it may lead to fragmentation of "bottom-up" project activity at the local and regional levels, and it may lead to a failure to address sector-wide reforms. Discussions aimed at redefining the role of the (existing but underused) Social Welfare and Health Care Target and Operational Plan are underway, as the Plan has so far served to outline broad strategic goals but has had little impact on the actual provision of services. This document could be developed into a framework for a nationally uniform reform agenda for implementation at the local and regional levels.

Hospital planning

Decision-making in the hospital sector is the responsibility of the councils and executive boards of the hospital districts. The councils and the board members for the hospital districts are elected, following municipal elections, on a four-year cycle, and their composition reflects the proportion of votes cast for each political party. The main mechanism for planning involves annual negotiations and agreements between the hospital districts and individual municipalities. The actual process of decision-making and planning varies between hospital districts and municipalities, reflecting size differences in terms of geographical area and population, the numbers of facilities, and other factors.

Hospital districts cover populations of between 100 000 and 1.2 million residents and are responsible for the provision of all inpatient and outpatient specialized health care within a region. Hospital districts plan hospital care, including bed capacity for inpatient services. There are only a few general standards for capacity planning in the hospital sector and no national norms for bed capacity. Hospital output is mainly calculated as episodes based on diagnosis-related groups, which replaces the previous system of calculating bed-days.

In 1997, the National Research and Development Centre for Welfare and Health (STAKES), hospital districts and two foundation hospitals launched the Hospital Benchmarking Project, which has subsequently been rolled out

° Since 2003, hundreds of such projects have been initiated. These have mainly focused on five key areas: primary health care and preventive medicine; access to treatment; the availability and expertise of personnel; functional and structural reform; sustainable financing of health care.

to cover almost all of the publicly delivered specialist health care in the country. Benchmarking data have been included in the national statistics since 2006 and are used to identify areas for improvement in units and services as they relate to technical efficiency.[38] They include individual-level data on costs, diagnoses and procedures during an entire care episode (which might include several inpatient admissions and outpatient visits). The development of the project is ongoing, and there are also plans to provide benchmarking information on the cost-effectiveness of services.

In large hospital districts, planning is performed by sub-districts that comprise several municipalities. However, hospital districts and sub-districts may have conflicting interests: sub-districts might be aiming to expand hospital capacity in their areas, whereas hospital districts might be trying to reduce excess capacity (requiring sub-district cooperation) and to concentrate activities across sub-districts in order to increase efficiency. This approach to decision-making often causes tensions between hospital districts and municipalities, as municipalities usually have a preference for providing access to specialized care at the nearest hospital.

Hospital districts also negotiate with municipalities or groups of municipalities (the so-called "steering by agreement" approach) regarding targets for the services that they have to provide. Targets apply to outpatient and inpatient services and are usually based on historical figures for service utilization, including the number of surgical interventions, the number and length of inpatient stays and the number of outpatient consultations; some areas also include projected changes in demography and morbidity. Many targets are defined on the basis of case classifications, using diagnosis-related groups. Target agreements increasingly incorporate quality indicators; however, the use of quality indicators is still evolving. It is important to note that the agreements do not constitute a formal contract.[7]

Capital-investment planning

Capital investment is planned by the hospital district administration in consultation with its member municipalities through hospital district councils and executive boards. The planning of long-term investments (i.e. those lasting for approximately 10 years) is usually initiated and drafted by the hospital district, being based on an assessment of the existing infrastructure and often being in accordance with the 10-year property maintenance/renewal programme. The programme document is an operational plan, prepared by the hospital district, aimed at maintaining an adequate infrastructure in terms of hospital facilities. This plan will also take account of projected demographic

changes in the population (in terms of age distribution and mobility and morbidity patterns) and will also attempt to anticipate technological changes (e.g. trends in length of stay or new ambulatory procedures). It forms the basis for decisions about the level of investment made jointly by the hospital district and its member municipalities.

Short-term investments are often proposed by sub-districts within a hospital district, prioritizing the needs of the hospitals in their area. Hospital districts then decide whether these investments fit into the existing long-term investment plan. The final decision on any major investment is made by the hospital district council.

Planning in primary care

There is no uniform legislation or standard for planning in the primary-care sector, and municipalities use a variety of planning and resource-allocation methods. Some large cities use formulae similar to the one used for the allocation of state subsidies for primary-care resources.

Recent developments that are changing the delivery of primary care are likely to affect planning in future. In some cities, pilot projects have been launched to increase the involvement of alternative care providers in the delivery of primary-care services. Novel approaches include the creation of internal quasi-markets in the public sector, outsourcing of some primary-care functions (typically on-call and telephone-based front-office services) and the purchasing of entire primary-care packages from for-profit providers/companies for a defined geographical area. If rolled out widely, these approaches are likely to necessitate new types of service planning; indeed, new methods for regulating the integration of public and private providers are currently being trialled. However, there is little conclusive information as these developments have yet to be evaluated.

5. France

Background

The French health system is financed mainly through a combination of social health insurance (SHI) – *Sécurité Sociale* – contributions and tax revenues; it provides comprehensive coverage for all residents. Health care is delivered through a mix of public and private providers, with ambulatory (generalist and specialist) care being provided mainly by office-based physicians. Hospitals are private or public; the public hospitals are regional, general or local depending on their size and level of specialization.[6]

The system is gradually being decentralized to regional level, and the running of the health system mainly with regard to hospital care and public health, including financing within the SHI system, has largely been devolved from central government to the regions. Many planning activities have been transferred from the central Ministry of Health to the regional authorities,[39] and regions have been given substantially increased power, with 22 RHAs (*agences régionales d'hospitalisation*, ARHs) now being responsible for hospital funding. This process has not been applied to ambulatory care, although there are plans to expand the role of ARHs to allow them to oversee health care in a given region. Because of concerns that the process of decentralization may have increased the potential for regional inequalities, the Ministry of Health has retained control of some areas in the health sector, e.g. cancer screening and treatment and screening for hepatitis C. The Ministry also defines an explicit set of services that the regions are required to implement (see below).

Actors in the planning process

Responsibility for the planning of resources and capacity in the health system is shared by the central government, represented by the Ministry of Health, and the ARHs. Other corporatist actors such as the federations of private and public hospitals, professional organizations, health insurance funds and representatives of the public also participate in the planning process and can play an important role during consultations.

Planning largely takes place at regional level and involve regional health conferences and ARHs. The Ministry of Health has a guiding role: it generates a catalogue of health services that the regions have to incorporate in their plans. This catalogue is based on an assessment of needs at national level and on national (sometimes politically driven) priorities. At present, the catalogue includes services in major areas such as general medicine, surgery,

perinatal care, rehabilitation, intensive care, medical imaging, psychiatry, palliative care and care for defined population groups such as older people, children and adolescents, as well as for selected conditions such as chronic kidney failure and cancer.

Regional health conferences *(conférences régionales de santé)* bring together all of the regional actors involved in organizing, funding and delivering health care, i.e. health insurance funds, hospital federations, health care professionals and patient representatives. Conferences assess regional health needs, and discuss and define regional priorities for service delivery and the strategy for implementation. For example, 10 regions have identified care for "underserved populations" as an additional priority, leading to the creation of about 300 centres providing 24-hour access to care.[P] Conferences are held in each region, and their outcomes feed into the regional planning process. They also inform the national health conference and the Ministry of Health on regional issues and health needs.

The actual implementation of the strategy takes place mainly through the Regional Strategic Health Plan (*Schéma Régional d'Organisation Sanitaire*, SROS) developed by the ARH in consultation with the regional actors listed above.[39] The SROS is the most important tool in regional planning and focuses on hospital planning and on expensive treatment and technology provided in hospital settings. SROSs set out the overall strategic goals for health care delivery, define priorities, objectives and targets and determine quantitative targets and the distribution of health care facilities within a region (see below).

Since 2003, SROSs have incorporated the previous "National Medical Map" (*Carte Sanitaire*). The medical map was a quantitative planning tool of the Ministry of Health that divided each region into health care sectors and psychiatric sectors and defined norms for bed/population ratios for major disciplines within a geographical area. It was based on national averages and included data on expensive equipment (for diagnostic and treatment) used in hospitals or elsewhere, as well as data on rehabilitation and long-term care.

However, in contrast to previous national planning norms, the purpose of the SROS is to better tailor health care delivery to the needs of the local population. An SROS covers a period of five years. The third generation of regional planning ("SROS 3") began in June 2006, covering the period 2006–2010.

[P] "Underserved population" here refers to populations in undersupplied geographic areas and socio-economically marginalized population groups with limited access to health care.

Strategic planning requires ARHs to assess population health care needs on the basis of regional health care utilization data and demographic data focusing on mortality and morbidity. Data for each region are analysed and compared with those for other regions in order to identify demand and oversupply/undersupply. Expert estimates of future trends in demand and technological change – largely based on epidemiological data and trends observed in other countries (mainly the United States) – are taken into consideration for these assessments. The experts are usually opinion leaders in their fields and are selected by the ARH; their impact on planning is suggested to be considerable. It has been argued that their influence might also perpetuate vested interests, since they usually represent hospital departments that are at the centre of the planning process.

Hospital planning

Hospitals in France are regulated within a unified framework that applies equally to private for-profit, private not-for-profit and public providers. Services are reimbursed by the SHI provided that they are authorized by the Ministry of Health, irrespective of the nature of the provider.

ARHs are generally responsible for planning services and for authorizing hospitals to deliver services within the SHI system; they also oversee any changes to the existing hospital infrastructure, including restructuring and mergers. The only exceptions are new hospital developments (both private and public) and comprehensive emergency centres, which have to be authorized by the Ministry of Health.[q]

As indicated earlier, SROSs are the key instruments of hospital planning, determining capacity by specifying the number of facilities in each region and sub-region for each area of care (including general medicine, surgery, maternity care, accident and emergency care, neonatal care, radiotherapy, cardiologic intensive care and psychiatric care, as well as expensive technical equipment such as magnetic resonance imaging scanners). They define the volumes for certain types of service, with future volumes being compared with previous ones. Service volumes refer to units such as numbers of patients, sites, days (lengths of stay), procedures performed and admissions. They are expressed as minimum or maximum numbers of services or as rates, showing

[q] There are only a few new hospital developments going ahead in France at present. Examples include the Pompidou hospital in Paris. The emphasis is on hospital restructuring through the conversion of acute-care facilities into rehabilitation or long-term-care facilities. Hospital conversions are overseen by the regional authorities, as they are believed to be in a better position to do so and better equipped to meet local demands.

the increase/decrease in numbers relative to previous volumes (see, for example, the SROS for Île de France[40]).

The rationale behind planning being based on service volumes, rather than bed/population ratios (as in the previous national medical map system), is to limit oversupply, which is considered to be a persistent problem in regions such as Paris and the south of France. Apart from being a means of controlling expenditure, planning based on service volumes is also intended to improve the performance of providers and, ultimately, service quality.

Since 2005, SROSs have also formed the legal basis for target agreements (*contrats d'objectifs et de moyens*) between the hospitals and the ARH in the respective region. Target agreements define the responsibilities of each hospital with regard to the number and type of facilities, and they specify the volumes of services to be performed. Agreements are typically negotiated for a period of three to five years and require hospitals to obtain authorization from the ARH for the services they provide (including expensive health technologies). Contracts also require an evaluation of existing capacity and service volumes, which must be undertaken at least 14 months before the existing contract expires.

Target agreements have been criticized by the Hospital Federation, which argued that the definition of service volumes restricts hospital flexibility in responding to changes in demand (e.g. in cases such as the closure of a hospital in the vicinity). Non-adherence to target agreements has not been penalized so far, but the introduction of financial penalties is being discussed at present. A new model contract for SROS 3, negotiated between the Ministry of Health and the Hospital Federation, took effect in April 2007.

6. Germany

Background

The German health system is funded largely through Social Health Insurance (SHI) based on contributions from employers and employees; 88% of the population is covered by SHI, about 10% by complementary private health insurance and less than 1% are without any form of health insurance.[41] Service users have a free choice of (contracted) providers, both in ambulatory and hospital care and (since 1996) also of sickness funds.

Hospitals are owned and operated by a variety of public, charitable/religious and private for-profit organizations. Ambulatory care is provided mainly by office-based primary and specialist-care physicians who have been granted a monopoly to provide care outside hospitals, although this has been gradually changing in recent years.[41]

The proportion of private for-profit hospitals has been growing steadily in recent years and is expected to increase further. In 2005, 26.6% of all hospitals were owned by private for-profit organizations, compared to 23.7% in 2002. At the same time the share of beds in private for-profit hospitals rose from 8.9% to 12.4%, reflecting a more rapid increase in the average number of beds in private than in charitable and public hospitals.[42]

Decision-making in the health sector in Germany is shared between the federal government, the states (*Länder*) and corporatist actors (see below). Responsibilities are set out in the Social Code Book (*Sozialgesetzbuch*), the regulatory framework for the German social health insurance system. In line with the overall approach to decision-making, capacity planning is characterized by decentralized responsibilities involving a large number of actors. Thus, central planning is rare, with most planning activities taking place at the *Länder* level.

Planning is most prominent in the hospital sector, whereas ambulatory care is generally not subject to planning; the only exception is the regulation of the maximum number of physicians per specialty permitted to practise in a defined geographical area.

Actors in the planning process

The federal government is generally responsible for setting the overall legislative framework; however, regulation at this level is restricted to a few specific areas, such as quality assurance. Here, the Federal Joint Committee

(*Gemeinsamer Bundesausschuss*), the highest decision-making body in the German self-governing health system,[1] negotiates and defines minimum volumes for selected (elective) surgical procedures (including those involving certain cancers, organ transplants and knee-joint replacements); these procedures must be performed in a hospital to qualify for reimbursement. These provisions are legally binding for all specified services provided by hospitals within the statutory system (i.e. provided to patients who are covered under SHI). While federal regulation of this type is still rare and limited mainly to measures of quality assurance, there is an expectation that the Federal Joint Committee will become increasingly involved in future.

Federal legislation requires that hospital planning is a responsibility of the *Länder*. According to the federal Hospital Financing Act of 1972, each *Land* has to secure the financial sustainability of all hospitals referred to in the hospital plan (see below) within its territory and has to ensure that hospital care meets the needs of the population at affordable costs, while respecting provider variety. The Hospital Financing Act also introduced the "dual-financing" principle in the acute hospital sector, i.e. investment costs are financed at the state and federal levels (through taxation), whereas operating costs are paid for by the health insurance funds or private patients (who are typically reimbursed by private health insurers).

Within the boundaries of federal legislation, each *Land* has developed a hospital regulatory framework that includes *Land*-specific hospital legislation, a hospital plan and investment programmes. Thus the nature, scope and approach to planning may vary considerably from *Land* to *Land*. Also, the units targeted in the plans may differ, ranging from institutions to departments and, in some *Länder*, down to determining the precise number of beds.

Importantly, planning is closely associated with hospital financing and, as such, applies to all hospitals providing services to SHI-insured patients irrespective of their ownership or status (public, private non-profit or private for-profit). All hospitals that are included in a *Land* hospital plan qualify for funding for

[1] The Federal Joint Committee was established in 2004 and is responsible for defining the benefits covered by the statutory system and defining the quality standards for ambulatory, inpatient and intersectoral health care. It represents the federal association of statutory health insurance funds, the federal associations of provider groups (SHI physicians, dentists and hospitals), patients' organizations and independent members nominated by either the payer or the provider.

long-term investments from the state government. Inclusion in the plan is also a precondition if a hospital is to qualify for reimbursement through SHI.[5]

Capital investment is provided through lump-sum grants (*Pauschalförderung*) and specific grants (*Einzelförderung*). Grants are awarded in accordance with targets and procedures specified in the corresponding *Länder* legislation. However, while all hospitals that are included in a state hospital plan are eligible for funding, the actual level of funding will depend on the *Länder* governments' budgets and political priorities (described below, in detail, for the federal state of North-Rhine Westphalia).

The corporatist actors involved in the financing, or provision, of hospital care usually have active roles in the hospital planning process. Thus planning frequently comprises lengthy negotiations between the respective *Land* authority (e.g. the Ministry of Health) and representatives of the regional associations of hospitals, the regional associations of statutory sickness funds, the regional association of SHI physicians and representatives of private health insurers.

The introduction of diagnosis-related groups in hospital financing (gradually phased in from 2003) is expected to have an impact on planning scope and procedures in the hospital sector. A 2003 survey of experts involved in hospital planning found that 39 out of 57 respondents anticipated a general restructuring of available services across the regions, with some hospitals or hospital wards perhaps having to be closed as a result of increasing competition and cost pressures.[8] The introduction of diagnosis-related groups was intended to enhance efficiency in the hospital sector and has supported an ongoing trend towards specialization and regionalization. This has the potential to undermine the central objective of *Länder* hospital planning, which is to secure provision of care according to population need. Therefore hospital investment may need to be reconsidered in the light of conflicting objectives.

Hospital planning in North-Rhine Westphalia

In North-Rhine Westphalia (NRW),[1] hospital planning is regulated by the

[5] Long-term investments are defined as investments in hospital buildings, maintenance and restructuring as well as investment in equipment (used for more than three years). Operational costs and short-term investments of under three years are borne by the health insurance funds. Only recently, health insurance funds have been required to contribute 1.1% of the hospital investment budget.

[1] With a population of about 18 million and 54 cities and districts, North-Rhine Westphalia is the largest of the 16 German *Länder*.

NRW Hospital Act (*Krankenhausgesetz*); its latest revision was passed in 1998. This Act determines the nature and scope of the NRW hospital plan, which defines the status and projected development of hospital and training facilities in providing the population with accessible and effective care based on their needs.[43]

The NRW Ministry of Health is responsible for developing the hospital plan (updated every two years), which defines the overall framework for hospital planning in consultation with the relevant stakeholders, including the regional hospital association, health insurance funds, representatives of the Protestant and Catholic churches,[u] the association of private health insurers, the three tiers of administration, i.e. city, district and municipal (*Städtetag, Landkreistag, Städte- und Gemeindebund*), and, in NRW, the regional authorities (the so-called *Landschaftsverbände*). Stakeholders are organized into the Committee for Hospital Planning of the *Land* (*Landesausschuss für Krankenhausplanung*), a forum for discussion and consensus-building between the stakeholders. The Committee also gives recommendations on priority areas and the structure and organization of care.

Since the introduction of dual financing in 1972, the process of hospital planning and the terms for investment financing have been modified substantially, strengthening the positions of hospitals and health insurance funds. Planning of hospital care is also affected by the 10 health targets of NRW, which were developed for the first time in 1995.[44]

The NRW plan sets out a framework for hospital planning (*Rahmenvorgaben*), defines the priority areas (*Schwerpunktfestlegungen*) and develops models for regional planning (*regionale Planungskonzepte*).[45] The framework outlines the general planning principles and their legal basis for all areas of hospital care. For example, the principles include appropriateness, efficiency, effectiveness, accessibility, quality and plurality of providers, and ownership. The framework also defines a general set of quantitative indicators, such as regional distribution, admission numbers, bed occupancy rates and lengths of stay, for use as a basis for determining bed capacity. The planning concepts include the Hill–Burton formula for calculating bed capacity in each specialty: ((population × admission rate × average length of stay × 100) ÷

[u] In Germany, the Catholic and Protestant churches have traditionally played a considerable role in the provision of health and social care. In NRW, the majority of the hospitals are owned and operated by churches. The two churches are also often involved in the social sector as representatives of the public.

(occupancy rate × 100 × 365)).[v] The actual calculation of bed and treatment capacity requirements is described in detail in the regional planning models.

The Hill–Burton formula applies to most areas of hospital care, except some highly specialized and expensive treatments, such as highly specialized perinatal and obstetric care, organ and bone-marrow transplantation, cardiac surgery, treatment of severe burns and severe brain damage, treatment of certain infectious diseases, certain specialized treatments for substance abuse, clinical pharmacology, stroke units, epileptic surgery and quadriplegic care.[46]

The hospital plan also details the organizational structure of care provision in selected priority areas (such as obstetric care, transplantation and palliative care) by, for example, defining the types of providers required to cooperate, and specifying approaches to the integration of care across the health/social care interface. There has been a general move towards the regionalization of hospital care, particularly in areas subject to the new federal law establishing minimum service volumes[w] for selected elective services from 2002.[47] The trends towards specialization and regionalization have been further accelerated by the introduction of diagnosis-related groups, as noted earlier.[8]

Hospitals receive a formal notification (*Planungsbescheid*) of whether they have been included in the hospital plan by a fourth layer of administration (*Bezirksregierung*), specific to NRW, which operates between the district and the *Land*. The notification also specifies the bed and treatment capacities required per specialty, as well as the range of services that the hospital has to provide, including the hospital's teaching and training obligations and its responsibilities with regard to internal and external quality control. The hospital can formally object to the terms and conditions set out in the notification within a certain time frame, but, if it does not object, then the terms are

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[v] Bed occupancy is set normatively and varies across *Länder* and specialties. In NRW, the rates range from 68% (maternal care) to 90% (psychiatric care), reflecting differences in average length of stay; rates are determined following negotiations between the Ministry of Health for the respective *Land* and various stakeholders. Lower rates are meant to indicate a concession to the hospitals, allowing for a higher number of beds to be held "in reserve" in specialties with high average turnovers (because of shorter lengths of stay), which are more difficult to plan for. This concession may be one reason for the relatively slow decrease in the number of hospital beds in Germany.

[w] As of 21 March 2006, minimum service volumes have been defined for liver transplantation (20 procedures per hospital and year), kidney transplantation (25), complex surgery for oesophageal (10) and pancreatic cancer (10), bone-marrow and stem-cell transplantation (25) and knee-joint replacements (50).[47]

binding. The notification also forms the legal basis on which funding for investment can be claimed from the *Land*.

In NRW, as in some other *Länder* (e.g. Bavaria and Baden-Württemberg), specialized care is generally organized into three tiers, with the least-specialized services being provided at basic facilities and tertiary care being organized at the regional or state level. Each hospital has to provide basic maternal care (Level 1), with more-complex cases being serviced by one of the 26 obstetric–neonatal centres (Level 2) or one of the 16 perinatal centres (Level 3). Obstetric–neonatal centres include at least one obstetric facility and at least one paediatric clinic, with a minimum of four beds for neonatal intensive care, and a neonatal emergency ambulance service to provide for timely transfer of neonates, delivered in basic facilities, in cases where there are complications. These services can be organized through a network of participating hospitals and clinics. An obstetric–neonatal centre is required to service a minimum of 3000 births per year within a 50 km radius. A perinatal centre has to provide at least 10 beds for intensive neonatal care and has to service a minimum of 5000 births, the majority of which are expected to be high risk.

The three-tier system was introduced in 1989 following recognition that infant mortality in Germany was higher than in other industrialized countries. According to the NRW hospital plan for 2001, the three-tier system is perceived to have improved the provision of care. Yet despite the availability of specialist care in obstetric–neonatal and perinatal centres, one-third of all high-risk births occur in non-specialized hospitals, raising concerns about the appropriateness of the system. Services such as the neonatal emergency ambulance are intended to address this problem.[46]

7. Italy

Background

Health care in Italy is financed largely through national and regional taxation and is delivered through a national health service (*Servizio Sanitario Nazionale*). Responsibility for the organization and funding of health care rests with the 19 regions and two autonomous provinces. They are equipped with substantial legislative, administrative and regulatory powers, and successive government policies have increased their autonomy.[3] Individual regions have, however, exercised this autonomy very differently. Northern regions have generally been more successful in creating effective structures of health care delivery, management and monitoring than regions in the south, reflecting (and exacerbating) political, cultural and health-system differences between regions.[47]

Regions raise revenue for public services, including health care, through regional taxes and user charges. A fiscal equalization mechanism (the National Solidarity Fund) allows for the transfer of national funds (currently 25.7% of national value-added tax revenue) to the regions to support those that are unable to raise sufficient funding.

Regional health departments oversee the delivery of health services provided through local health units (see below), public hospital trusts and private accredited hospitals within their region. They set the legislative framework within which providers operate and monitor their performance with regard to quality, appropriateness and efficacy of service delivery. They are responsible for assessing the health needs of their population and for managing the financial resources allocated by the Ministry of Health and raised through regional taxes.[x]

Within the regions, local health units (*Aziende Sanitarie Locali*, ASLs; until 1992, *Unità Sanitarie Locali*) are responsible for organizing the majority of the health services. ASLs provide health care through public acute-care and rehabilitation hospitals, through "health districts" responsible for primary care and through "health promotion divisions" concerned with health promotion, community care and disease prevention.[48] ASLs enjoy substantial autonomy in managing resources and organizing services, and are guided by a planning framework defined by the central and regional health departments. The total number of ASLs was gradually reduced from 659 (in 1978) to

[x] The allocation of national funds involves a complex formula that takes account of the size and age distribution of a population, as well as morbidity, inter-regional mobility, perinatal and infant mortality and historical expenditure on health care.

195 (in 2007), reflecting pressure to increase administrative efficiency; the number of units per region currently ranges from as many as 22 (in Lombardy) to just 1 (in Valle D'Aosta and Trento).[49]

Within the *Servizio Sanitario Nazionale*, health care is also provided through free-standing public hospital trusts, usually large hospitals with high levels of specialization (and which include university teaching hospitals), and private providers (including private not-for-profit and for-profit hospitals, non-profit social care providers for home care, and radiological laboratories); private providers require accreditation by the regions to be eligible for public reimbursement.[47]

Actors in the planning process

Health care planning is shared by the central government and the regions. The Ministry of Health sets the basic framework and develops a three-year national health plan through its Health Planning Department. A benefits package that must be made available to all residents in the country (*Livelli Essenziali di Assistenza*, Essential Level of Care) is centrally defined and regularly updated.[2] The national health plan sets out the national health strategy and defines health care objectives, targets and performance indicators: examples include the promotion of healthy behaviour and lifestyles, the combating of major diseases, the protection of vulnerable groups, improvement of the environment and improvement of the quality of care (as in the 1998–2000 national plan).[3] Each objective is broken down into targets (areas prioritized for intervention) that have to be implemented by the regional authorities. Many targets are linked to specific quantitative indicators[y].[49]

Budgets and strategies, as well as objectives, targets and indicators, are negotiated with representatives of the regional health departments. The regions also propose specific topics and strategies for inclusion in the national plan. Once finalized, the national health plan is binding for the RHAs, and its implementation is monitored by an observatory established at the Health Planning Department of the Ministry of Health.

Regional health departments then translate the national health plan into regional health plans. The regions organize care – within the boundaries of

[y] In the 1998–2000 plan, only two out of five objectives (namely, "promoting healthy behaviour and life styles" and "combating major diseases") included quantified targets. Other targets were fairly non-specific in terms of determining the activities that ought to be achieved. From the year 2000, most targets were based on mortality.[1]

the national framework – according to their own needs, and they define their own objectives. However, there is some concern that, since not all national objectives are binding, regional health departments can pick and choose selected national health targets and adopt only those that suit their regional needs and political agendas.[3] Another major concern stems from the limited abilities of the national and regional health authorities to monitor the implementation strategies used to achieve targets, because of the paucity of data.[3]

The ASLs and free-standing hospital trusts are required to develop three-year strategic plans consistent with the objectives outlined in the regional health plans.[48] Within the ASLs and the hospital trusts, general managers appointed by the corresponding regional health department are responsible for ensuring that the objectives of the strategic plan are met within an agreed budget. Both the plan and the budget are negotiated between the ASL or hospital trust and the regional health department. The ASLs, in collaboration with the regional health department, choose provider organizations from those accredited by the *Servizio Sanitario Nazionale* on the basis of comparative evaluations of quality and cost. Contractual agreements are then negotiated between the providers and the ASLs. The agreements specify the volumes, prices and quality of the services to be offered by each provider, and also include penalties for exceeding the agreed volumes.[49]

The regional health departments plan the capital investment, expensive health technologies and bed capacity. Planning for hospital capacity usually includes both public and private (for-profit and not-for-profit) facilities.[z] Services provided in the ambulatory sector are not usually planned, although the influence of regional planning on ambulatory services may grow. Also, the constant pressure for cost containment has facilitated organizational change, such as the contracting out of services, and this may have an impact on planning in future.

The regional health departments are accountable to the national Ministry of Health. Regional health plans and their implementation are also discussed by the Standing Conference of the State, the Regions and the Autonomous

[z] All public and private providers have to be accredited. Regional health departments grant accreditation to new providers on the basis of two criteria: (i) an assessment of the quality of the organizational, managerial and technological infrastructure of the provider and of the skills and practices of the health professionals; and (ii) an evaluation of the value added by the new provider to the region's ability to provide the agreed package of core within a certain budget. Accreditation of a provider, however, does not automatically mean that the services will be publicly funded.[2]

Provinces. The conference is led by the Ministry of Regional Affairs and brings together the 21 presidents of the regions and autonomous provinces. It is primarily concerned with political negotiations, with regard to strategies, objectives and budgets, between the centre and the regional administrations.

8. The Netherlands

Background

The Dutch health system is undergoing a major restructuring process following the 2006 reform that made health insurance compulsory for all residents. Under the new framework, all residents are entitled to the same comprehensive core-benefits package, which they purchase from private health insurers.[oo] Residents can take out voluntary health insurance to cover additional services. Health services are generally delivered through private providers in both the ambulatory and hospital sector. Hospitals have traditionally been owned and operated by private not-for-profit organizations. Since the 2006 reform, however, private-for-profit providers have been allowed to enter the market. At present, these consist mainly of so-called independent treatment organizations, which offer some elective services, but it is expected that the proportion of private for-profit providers will increase in future.

A key feature of the Dutch system is its strongly decentralized approach to policy and decision-making in many sectors, including health care. The Government defines the legislative framework, but most of the decisions concerning health care are subject to negotiation between corporatist actors, including representatives of the health professions, the insurers and, sometimes, patients, as well as national or regional bodies.

The Netherlands has also developed a unique type of regulated health care market in which the Government has overall responsibility for the health system while the organization of health care is left to the market, albeit subject to supervision by the Government and its subordinate bodies (e.g. the Netherlands Board of Healthcare Institutions, *College Bouw Zorginstellingen*). The 2006 reform allowed further expansion of the autonomy of providers and insurers in the organization of health care. However, it is at the Government's discretion to overrule the decisions of corporatist actors if the system fails to deliver.

Actors in the planning process

Capacity planning became a major issue in the 1970s, this having been prompted by concerns about control of expenditure in the social system and a public perception that facilities were poorly allocated.[50] In response, the Government developed detailed health plans (mainly for the hospital sector) based on norms, such as those for the number of beds per specialty. The Hospital Provision Act of 1971 enabled the Government to regulate all

[oo] Private health insurance funds include the former social health insurance funds.

construction of hospitals and health care institutions and to delegate implementation to the provincial health authorities.[bb]

Since the mid-1980s, planning has been viewed as something that has stifled development and innovation in the health care sector (see the 1987 Dekker Report[cc]). Capacity planning has gradually been replaced by a more market-oriented approach focusing on framework-setting and market regulation rather than top-down planning. Today, planning at national level is limited to just a few areas: the construction of new hospitals, for example, still requires official authorization. This shift in policy is mirrored by the changing regulatory role of the Ministry of Health, which is moving from authoritative steering to strategic framework-setting, regulation and supervision. Its previously active involvement in health care planning has largely been replaced by performance assessment and quality assurance, supervised by the Inspectorate of Health Care (*Inspectie voor de Gezondheidszorg*).

Hospital planning

Until recently, provincial governments were responsible for developing plans for hospital care: each such plan included an assessment of existing facilities and an outline of the organization of services for the period of the plan.[50] The Health Care Providers Admission Act of 2006 (WTZi) devolved the planning process to regional health care provider organizations, which are required, in collaboration with health insurers, to develop plans for (acute) hospital care. Plans then have to be approved by the Government, especially where major initiatives, such as new construction projects, are concerned. So far, there is little reliable information on the details and quality of these regional plans, or on the effectiveness of this new provider-based planning process.

Hospital developments and restructuring require authorization by the Ministry of Health, and this process is expected to play an increasingly important role in the regulation of hospital providers. The authorization procedure generally follows a case-by-case approach and is subject to negotiation involving regional actors, such as regional insurers and hospital associations. It is

[bb] There are three tiers of government in the Netherlands: central, provincial and local/municipal.

[cc] In 1987, the Dekker Committee published the report *Willingness to Change* (Commissie Dekker, Bereidheid tot Verandering. Rapport van de Commmissie Structuur en Financiering Gezondheidszorg, The Hague 1987). The Committee had been appointed by the Government to evaluate the structure and financing of the Dutch health system. The Report included recommendations aimed at controlling the growth of health care (in terms of volume) and proposed the reformation and deregulation of the health insurance system.

unclear how, and to what extent, factors such as needs assessment determine successful authorization.

All investments in the hospital sector are financed from private sources, and the provider usually has the financial responsibility. Thus hospital managers have a strong incentive for developing detailed business plans that project future operations, utilization levels and investment needs. Interventions from the regulator, i.e. the Ministry of Health and its subordinate organizations, although theoretically possible, are rare. Given the novelty of the system and its potential impact on providers and the organization of health care, it is difficult to predict whether government intervention will increase in future. However, there is a possibility that regulation might have to be strengthened if the increasingly privately organized health system should fail to deliver quality care in an affordable and equitable way.

Investments in health technology are not centrally planned, and there are few restrictions on the acquisition of expensive technologies by hospitals. Technologies such as new therapies and pharmaceuticals have to be authorized jointly by the Health Care Insurance Board (*College voor Zorgverzekeringen*) and the Ministry of Health in order to qualify for reimbursement under the statutory insurance system. Officially, the main criteria for approval are costs and efficacy, and cost-effectiveness analyses, carried out by the *College voor Zorgverzekeringen*, plays an important role in the decision-making. The implications for health care costs are evaluated by the Netherlands Organization for Health Research and Development. Cost-effectiveness, however, may not be the only criterion involved, since other interests (such as public opinion and professional preferences) can influence the outcome of the decision.

One of the few situations in which the Government still plays a central role in relation to planning is through the Special Medical Procedures Act (2000), which was previously used to regulate a broader range of medical interventions and is still applied to selected services and health technologies. These services either require permission from the Ministry of Health or are initiated by the Ministry through a directive requiring a hospital to provide a certain service. Hospitals need such permission to provide services concerning organ transplantation (including haemopoietic stem-cell transplantation), radiotherapy, some forms of neurosurgery, open-heart surgery, implantation of automatic defibrillators, cardiac-rhythm surgery, percutaneous transluminal coronary angioplasty, genetic counselling, in-vitro fertilization and neonatal intensive-care units. Services for which directives might be issued include

services provided in paediatric intensive-care units, services for the treatment of haemophilia, trauma care, pain rehabilitation, treatment relating to cochlear implants and services delivered in treatment centres for patients with the human immunodeficiency virus/acquired immunodeficiency syndrome.
The Ministry can also request hospitals to support special teams for organ donation. Both permissions and directives usually involve needs assessment. These interventions constitute an "ultimate sanction" whereby the Government can influence service provision, usually with the aim of facilitating a balanced distribution of new technologies in health care.

9. New Zealand

Background

New Zealand's health system is financed through general taxation, supplemented by user charges for specific services and compulsory social insurance for injuries and accidents. The New Zealand Public Health and Disability Act 2000 devolved the responsibility for organizing and planning most health and social care services from central government to 21 newly created regional authorities, the DHBs, and it abolished the Health Funding Authority, which was previously responsible for health care resource allocation and service purchasing at national level.[51]

Most DHB members are elected by popular vote. They are accountable electorally to the local community and statutorily to the Ministry of Health.[dd] DHBs are responsible for managing financial resources and purchasing publicly funded health care and long-term care for their region. They own and operate public acute-care and mental health hospitals, which provide most secondary and tertiary care.[52] There are also some private hospitals that are contracted by DHBs or operate independently (mainly in the areas of elective surgery and laboratory services). DHBs also purchase an increasing proportion of primary-care services through contracts with non-statutory, "primary health organizations" (PHOs), operating on a capitation basis, which were established in 2002 following the introduction of the 2001 Primary Health Care Strategy. The 81 PHOs organize the publicly funded areas of primary care and subsidize low-cost access to general practitioner services covering 93% of the population (July 2005). PHO membership is voluntary for patients and providers. However, the Government has created a powerful financial incentive for primary-care providers to join a PHO by providing additional funding (set aside within the Primary Health Care Strategy) – to address persistent inequalities in health care provision and utilization – that is channelled through the PHOs.

DHBs are supported by four newly created "shared service agencies" in areas such as contract negotiation, contract monitoring and needs assessment.

Actors in the planning process

Following the 2000 reforms, health care governance has been shared between the central government and the DHBs. In 2000, the central

[dd] Each DHB comprises up to 11 members, the intention being to reflect the composition and ethnic diversity of the respective community, to include a mixture of professional skills and to represent ministerial preferences (through the appointment of up to four members). Each board has to establish advisory committees for community and public health, hospitals and disability support.

government developed the comprehensive New Zealand Health Strategy: it mapped out a vision for health care provision for a 10-year period, and created a policy framework within which the DHBs operate. This national health strategy set out the principles, goals and objectives for the health system and highlighted selected areas for prioritization, such as cancer prevention and treatment, diabetes, obesity, smoking and Maori health. It does not detail how specific objectives should be met or how services should be provided. The only exceptions are some priority areas for which the Government has developed additional strategies ("tool kits") and, in some cases, specific action plans. "Tool kits", however, provide policy guidance rather than binding rules or objectives, so targets are rarely quantified and are usually not incentivized.

The national health strategy is embedded within a legislative framework and is linked to other health-sector strategies and with wider intersectoral strategies that affect population health (such as those intended to strengthen families or promote road safety). DHBs and the Ministry of Health are required to coordinate their activities with those of other agencies.

The overall framework includes an operational policy framework that sets out the accountability obligations of the DHBs. These include the production of a five-year strategic health plan, an annual statement of intent, an annual operational plan and regular monthly and quarterly reports measuring progress against the annual plan. Strategic plans have to be developed every 5–10 years, involve public consultation and require Ministry of Health approval.[52] The statement of intent is the main accountability document provided by a DHB to Parliament. It outlines the DHB's work towards promoting the health of its population, and it includes measures of performance. Underperforming DHBs or individual members of underperforming DHBs can be penalized by the Ministry of Health. The Ministry also has the power to direct DHBs, to appoint a Crown Monitor to report to the Minister on the performance of the board, to replace the board with a commissioner, to dismiss board members and to replace the chair or the deputy chair of the board.[52] It has been suggested that the degree of central control risks undermining the planning and decision-making autonomy of DHBs, and may thus inhibit rational planning and prevent DHBs from being held accountable for their actions.[53]

A district's annual operational plan forms the basis for funding agreements between the DHB and the Ministry. It defines the directions and priorities for health care provision within the respective geographical region and

Box 6: The Canterbury DHB annual plan

Canterbury's district annual plan identifies strategies in line with five "core directions":

(i) improving the health status of the community;
(ii) identifying better ways of working together;
(iii) developing innovative models for service integration;
(iv) developing Canterbury's health care workforce; and
(v) leading hospital and health care services in New Zealand.

Strategies were defined collectively through public consultations. The plan provides an overview of the actions necessary to achieve strategic objectives; each action is linked to a time frame, to indicators for outcomes and to measures of performance. It also provides information on adaptation of the national strategic priorities, health care financing and the management of financial resources.

generally includes all areas of health care (i.e. hospital, ambulatory and community care). District annual plans vary considerably, in part reflecting variation in local needs and in the ability of districts to organize and manage health care services effectively and efficiently (see Box 6 for an example).

Annual operational plans require the DHB to undertake a health-needs assessment for the resident population to identify factors that might adversely affect health and to assess the contribution of health care to health outcomes.[54] The level of detail in such assessments varies, however, as does their utilization in service planning and priority setting; it is suggested that despite the aspirations for health-needs assessments, they have so far had relatively little impact on planning and purchasing decisions.[53]

DHBs negotiate annual agreements with non-statutory PHOs and contracted private hospitals and other independent providers.[52] For public hospitals that are part of a DHB (i.e. serving as their provider), the DHB negotiates internal service-level agreements and makes contracts with the provider parts of other DHBs. Contracts and service-level agreements define the types and volume of services to be provided (sometimes including provision targets in areas that are considered to be undersupplied), financing arrangements and, in some cases, quality indicators such as "pay-for-

performance" contracts for selected PHO services (currently under development). While not directly involved, the Government can still affect contracting arrangements by providing additional financial incentives in order to increase performance in defined areas. DHBs are required to report to the Ministry to ensure equal treatment of providers in both the public and private sectors.[52]

In 2006, the Government proposed a framework for coordinating collective decision-making in cases where decisions made by one DHB might have resource implications for other DHBs.[55] The framework applies to new health interventions, capital investment and service reconfigurations that have cross-regional or national implications. It also allows for collective consideration of proposals for disinvestment.

Given the many structural changes that have taken place in the country's health system in the last 15 years, and the relatively new approach to decentralized purchasing, there has been little overall planning or regulation of new technologies. However, a major national review of the location and scale of highly specialized hospital services was carried out in 1997,[52] and the four main DHB providers of these services (Auckland, Wellington, Christchurch and Dunedin) are currently attempting to coordinate the views of all DHBs on the use and location of expensive health technology.

Major capital investment is separately regulated and outlined in the *Guidelines for Capital Investment* (2003).[56] The Ministry of Health's National Capital Plan sets out the long-term investment requirements of the public part of the health system, identifying and prioritizing major capital investment (for example, new hospitals or hospital extensions) for a period of 10 years. At district level, each DHB must provide a Strategic Asset Financing Plan covering the following five years and an annual Strategic Asset Management Plan to ensure that investment decisions are well informed. Capital investment by a DHB requires approval from the Ministry of Health and the Treasury if:

- the investment exceeds NZ$ 10 million (€5.3 million) or 20% of a DHB's total assets;
- the investment requires Crown equity support (i.e. a government capital subsidy);
- it potentially affects the performance of the DHB; or if
- it has been identified by the Ministry of Health and/or the Treasury as being of high risk.

Investment in information systems and communication technology requires approval from the Ministry of Health if:

- the investment exceeds NZ$ 3 million (€1.6 million);
- it the investment is not consistent with the health-sector Information Systems Strategic Plan; or
- if the investment is not supported by a Regional Capital Group[ee] (any investment exceeding NZ$ 500 000 (€267 000) requires support from the Regional Capital Group).

Investments in technology of between NZ$ 500 000 and NZ$ 3 million (€1.6 million) require approval from the Ministry of Health.[56]

[ee] A Regional Capital Group has been introduced in each region of the country, to improve the coordination of decision-making among DHBs: they are composed of representatives from each DHB within the respective region.

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This policy brief is intended for policy-makers and others interested in the issue of health care capacity planning.