

Decentralization and coordination of health care provision in Norway: which lessons for Belgium?¹

Fred Schroyen (NHH—Norwegian School of Economics, Bergen, and HEB—Health Economics Bergen)

In this note, I will explain the organization of the Norwegian health care system and assess two recent reforms that were aimed to (de)centralize the provision of health care. I then draw some lessons for Belgium. I start by giving some facts and figures.

1. Facts and figures

Norway is a vast country in Europe's periphery. It has more than 12 times the size of Belgium but less than half of Belgium's population.² People live mainly along the coastline. In 1970, the primary and secondary sector stood for 15.5% and 50%, resp., of total employment. These days, these figures are reduced to 3.5% and 22%, while the tertiary sector has a share of 75%. The contributions to GDP are 2% (P), 40% (S) and 60% (T). That the secondary sector contributes more to GDP than to employment is due to the oil sector. Since the mid 90s, Norway's GDP per capita has started to exceed that of Belgium.

Still, in many respects, Norway is not that different from Belgium. It is a young nation³ with a representative democracy, and two official languages. It operates an extensive welfare state. Though not an EU member, through the EEA agreement Norway benefits from many of the advantages of full EU membership and is bound by Common Market law.

During the last 4 decades, Norway was run either by the Labour Party or by a centre-right coalition. In 2005, the center-right coalition government was replaced by a center-left coalition of the Labour Party, the Socialist Left Party and the Centre Party. The Norwegian economy is a market economy with the state having important stakes in several industries and sectors. There is a strong emphasis on redistribution, both *ex ante*, through a very uniform school system and a very narrow wage distribution, and *ex post* through taxes and transfers. The discovery and exploitation of the oil and gas fields on the Norwegian continental shelf since the mid 70s has been the country's economic blessing. Today, mainland GDP is only 77% of total GDP. Government proceedings from taxes and exploitation rights on oil are collected in a sovereign fund which is valued today at about 400 bn €. Up till now, politicians have managed to comply with the rule never to take out more than 4%—the fund's expected yearly real rate return.

Table 1 presents some socio-economic and health indicators for Norway and Belgium, while Figure 1(a) shows the geographical distribution of GDP per capita in Norway. The relative high figures for the South-West part of the country are due to the oil sector. It is clear that without an extensive redistribution of resources, Norway would be a very unequal country to live in.

¹ Thanks to Jan Erik Askildsen for useful comments.

² Almost 320 000 km², excluding Spitsbergen. Norway has around 4.9 million inhabitants.

³ Norway was under Danish rule till 1814, when it formed a union with Sweden. It became completely independent from Sweden in 1905.

Using life expectancy as a crude measure for the output of health production, both countries score about the same. But total health expenditure per capita in Norway is almost 25% higher than in Belgium. This is surprising because physician density is in both countries around 4 per 1000, and Norway has almost 3 beds less than Belgium per 1000 inhabitants. The sheer size and geography of the country is an important explanatory factor. It means that it is much more expensive to guarantee access to high quality health care for all citizens. For example, for small villages on islands along the coast in Northern Norway, an air ambulance is the only means of bringing patients in time to the hospital. That ambulance cars have to drive for 100km to fetch a patient is not uncommon. These geographical challenges, together with the policy goal of universal access to health care, explain why the responsibility for the provision of care is assumed by the state: no private hospital would find it profitable to settle in one of the northern counties.

Table 1. Some socio-economic and health indicators for Belgium and Norway.

| | Belgium | Norway |
|--|---------------------|-------------------------------------|
| Population (in 1000) | 11 007.0 (2011) | 4 949.8 (2011) |
| GDP per capita (€ PPP) (2009) | 31 925 | 51 898 (total) 40 251 (mainland) |
| Av. earnings per production worker (€ PPP) (2009) | 31 698 | 37 709 |
| Gini coefficient | 28 (2005) | 258 (2000) |
| Life expectancy at birth | 77.1 (m) – 82.6 (f) | 78.2 (m) – 82.7 (f) |
| Life expectancy at 65 | 21.1 (m) – 25.3 (f) | 21,4 (m) – 24.9 (f) |
| Total health expenditure per capita (€ PPP) (2008) | 3635 | 4553 |
| Public share in THE (%) | 76% (1996) | 84%(2008) |
| Total health expenditure as a % of GDP (2008) | 11.1% | 8.5% |
| Practicing physicians per 1000 (2007) | 4.0 | 3.9 |
| Hospital beds per 1000 (2007) | 6.7 | 3.8 |

Sources: OECD Health Data, Statistics Norway, and Wikipedia.

2. The organization of the health care system⁴

Like in other Scandinavian countries, Norway's health care system is mainly a public one, both in terms of finance and in terms of provision. Around 84% of total health expenditure is paid for by the Treasury. The remaining 16% comes from out-of-pocket payments. The public health care system is organized along two lines: primary health care is the responsibility of the municipalities; specialist health care is the responsibility of the Regional Health Authorities.⁵ I will first sketch the organization of primary care.

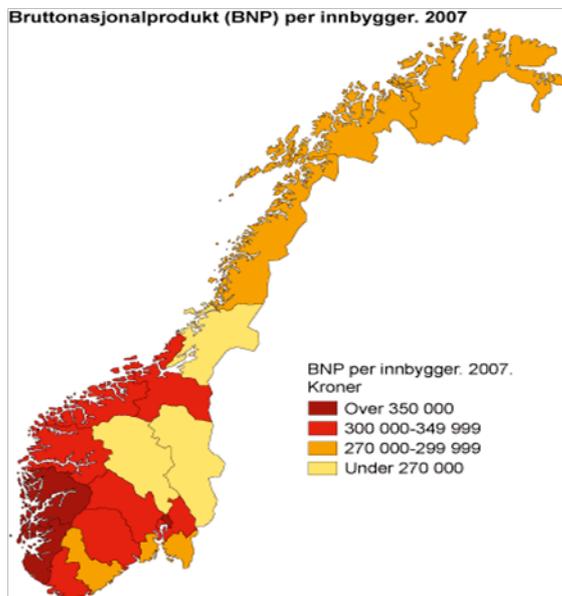
Through the Municipalities Health Services Act of 1987, each of the 434 municipalities is responsible for preventive health care and all primary health care and social services. In particular, they provide general medical practice, physiotherapy, care for the elderly, medical emergency call services. In big cities, the municipality runs one or several emergency centers with doctors, nurses, and ambulance personnel addressing any emergency calls.

⁴ A much more in-depth description may be found in Johnsen (2006).

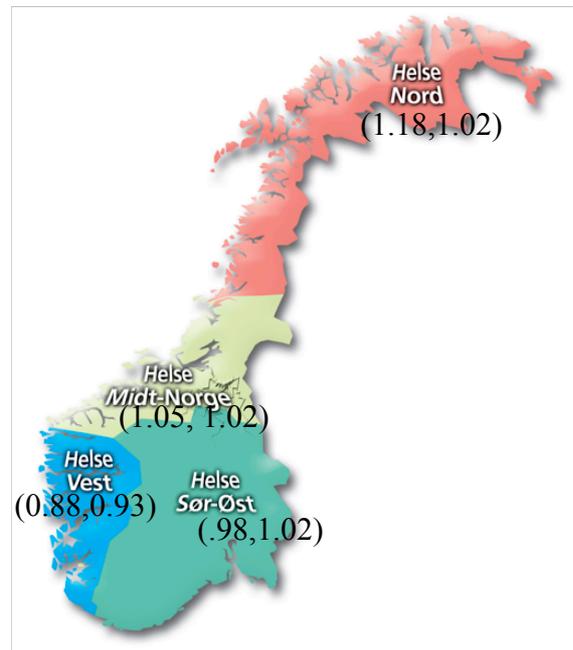
⁵ Long-term care for the elderly also belongs to the responsibility of the municipalities. Dental care is private, except for children for which free public dental care is provided by the counties. I do not consider these forms of care in the rest of this note.

Figure 1.

(a) GDP per capita (NOK) in 2007



(b) The four Regional Health Authorities.



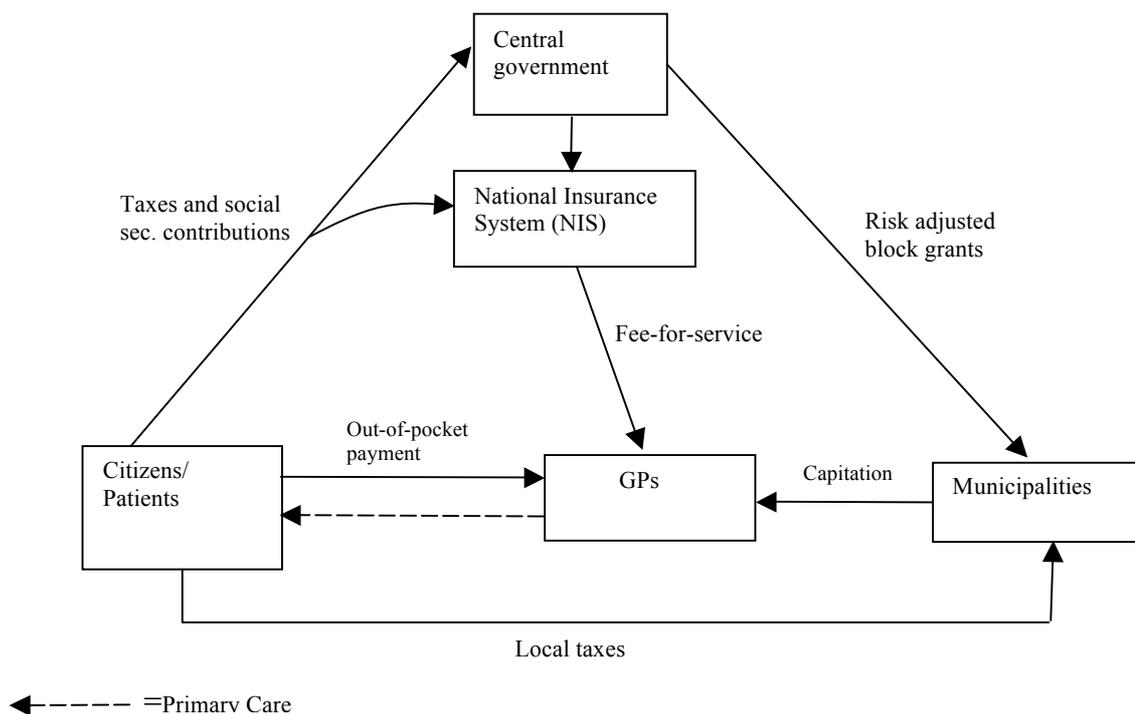
Since June 2001, Norway practices a Regular GP system, whereby each citizen has the right (but not the obligation) to belong to list of a GP of her choice. Up to twice a year, she can ask to be transferred to another GP's list—provided there is room on that list. The advantage of belonging to a list is that a patient has easier access to her GP (lower waiting time for a consultation) and pays a lower copayment. GPs act as gatekeepers to secondary health care. In general, the only way for a patient to see a specialist is by a referral by her GP or the doctor at the medical emergency centre.

Although municipalities are responsible for GP services, only a minority of GPs are employed by the municipality. The majority is self-employed and works under contract with the municipality. GPs that participate in the municipality's list system are paid a capitation grant, and per consultation an out-of-pocket payment by the patient and a fee-for-service by the National Insurance System (NIS).

In Figure 2, I have adapted the 'blueprint' triangle presented by Schokkaert and Van de Voorde (2011, fig 3) to the Norwegian primary care sector. The integration of the purchaser-provider relationship means that it is impossible to identify a third-party payer who has no responsibility for care provision.

The central government allocates grants to the different municipalities based on demand and cost determinants for municipal services (including—but not restricted to—health care). Municipalities also collect income and property taxes from their residents. Since GPs receive a capitation fee per citizen on their list from the municipality, they are incentivized to provide quality.

Figure 2. The 'blueprint triangle' for primary health care in Norway.



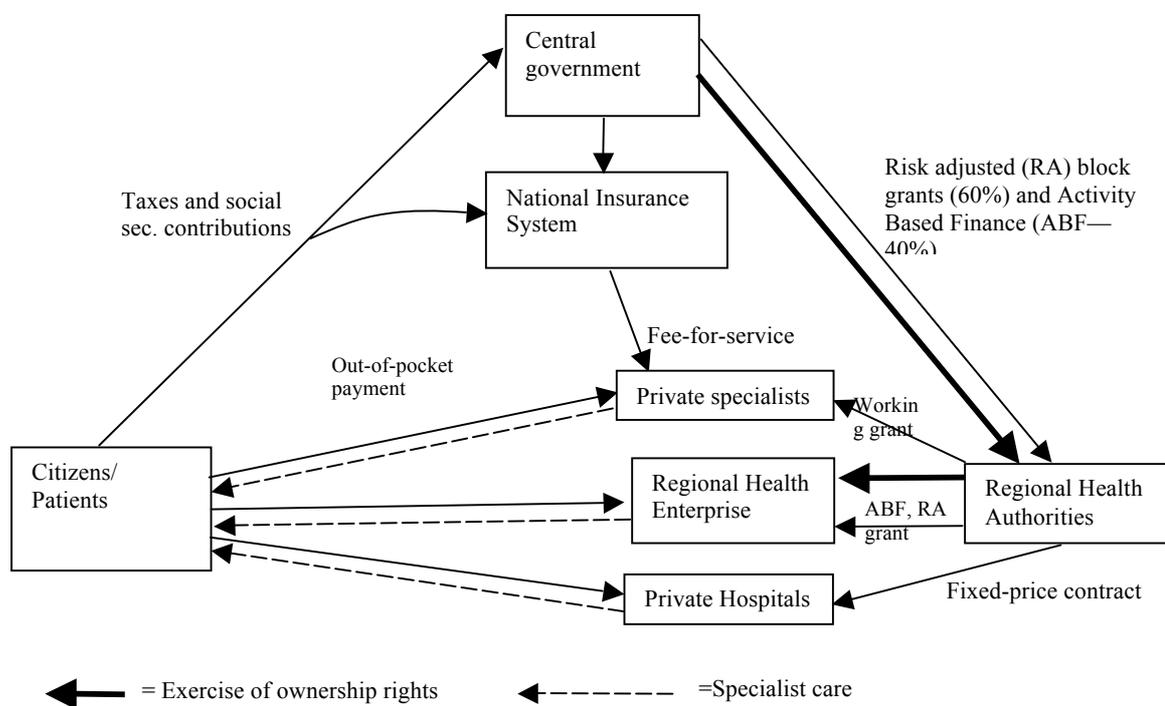
Since January 2002, the responsibility for specialist care is assumed by five *Regional Health Authorities* named according to their geographical location: South, East, West, Mid-Norway and North; South and East merged in June 2007 to South-East. As the single shareholder for each RHA, the Minister of Health exercises her ownership rights by participation in the general assembly. She appoints the board of directors who in turn appoints the CEO. Figure 1(b) locates the four RHAs. In brackets, I have added for each health region (i) the ratio of cost per inhabitant of somatic specialist care to the per capita cost for the whole country, and (ii) the same ratio for DRG point production (2009 figures — source: Helsedirektoratet 2010). Cost per capita in Region North lies 18% above the country average, while the corresponding figure for Region West lies 12% below that average. On the other hand, per capita DRG production in Region North lies only 2% above that for the whole country. This corroborates my earlier statement that health care is more costly to provide in the north than in the rest of the country.

A comparison with Figure 1(a) also makes it clear that *interregional solidarity is a prerequisite for universal access to specialist health care*. I should add that the existence of implicit transfers across the health regions, as exemplified by Figure 1, is hardly subject of public dispute in Norway. What does make the newspaper front pages is any evidence that exists of unequal access to health care (along dimension of income, gender, ethnicity, region, etc).

Each of the RHAs owns a number of Health Enterprises (HE). A single Health Enterprise may consist of somatic hospitals, psychiatric institutions, rehabilitation institutions, hospital pharmacies. The HEs are run by a CEO and an executive board, as are the hospitals themselves. Initially, there existed 43 HEs, but later restructuring has reduced this number to 31. Though the HEs are the RHA's main tool to provide specialized health care in the region, it also enters into contractual agreements

with private hospitals, for example for providing a certain number of elective procedures. Figure 3 displays the 'blueprint triangle' for the specialized health care in Norway.

Figure 3. The 'blueprint triangle' for specialized health care in Norway.



The central government, through its yearly budget, allocates risk-adjusted grants to the four RHAs. These grants are conditional on the size of the population residing in the region and its age composition. In 2010, 60% of an RHA's income was made up of this grant. The remaining 40% comes through the Activity Based Financing (ABF) scheme. This is a prospective reimbursement scheme that covers 40% of the costs of somatic specialist health care services. Based on historical cost and activity data, the relative costs of the different DRGs are computed. Per DRG point that is produced within its region, the RHA receives a reimbursement of 40% of this rate.⁶ The fact that the RHAs are reimbursed below marginal cost gives them incentives to exert cost reducing effort. Although the RHAs have full discretion how to finance the different RHEs they own, in practice they apply principles similar to the ones on which their own income was based: needs-corrected block grants and ABF for somatic specialist care.

Specialists that have a contractual agreement with the RHA are paid an annual working grant to cover expenses related to equipment. On top, they receive a copayment from the patient and a fee-for-service from the NIS.

3. Patient rights and out-of-pocket payments

Patient out-of-pocket payments per consultation are relatively high: 136,-NOK (17,-€) when seeing a regular GP, 180,-NOK (22,5€) when seeing a GP specialized in general medicine, and 307,-NOK

⁶ In 2010, the unit price for one DRG point was around 36 000,-NOK (4 500,-€). The fee-for-service was therefore 14 400,-NOK (1 800,-€) per DRG point.

(38,-€) when seeing a specialist.⁷ But once a patient's copayment in a calendar year exceeds 1880,-NOK (235,-€), she gets exempted from further copayments for that year (and the GP receives the equivalent amount from the NIS). Specialist health care delivered when admitted to the hospital is free. Since GPs act as gatekeepers to specialist health care, copayments are not deemed necessary to ration this kind of care. Some co-payments are charged for polyclinical treatments. In case a patient chooses a private hospital treatment that is not encompassed by a contractual agreement between the RHA and the private hospital, the patient pays the full cost.

A salient characteristic of specialized health care in Norway is the existence of waiting lists for elective treatments. For example, within somatic care in 2009, the median waiting time was 49 days. In the same year, 1/3 of the hospitalized patients had to wait for more than 2 months for admission (Helsedirektoratet 2010: 166). Thus, while in-hospital treatment is free, patients often 'pay' in the form of a waiting time.

Patient choice for primary care is restricted in the sense that (i) she can switch GP at most twice a year, and (ii) she needs a referral to see a specialist. A patient that is referred to specialist hospital care has the right to free choice of hospital, not only within the health region she belongs to, but also across health regions. She also has the right to get an evaluation of her medical condition and an assessment whether this condition qualifies for a treatment within an individual specific time limit. Patients have, in other words, the right to be evaluated for a priority class. Four classes can be distinguished:

- 1 Acute care (requiring immediate treatment);
- 2 Elective treatment with an individually specific maximum waiting time;
- 3 Elective treatment without an individually specific maximum waiting time; and
- 4 Other treatment.

Each Regional Health Authority has issued medical guidelines to categorize patients and to assess the maximum waiting time to treatment. Upon referral of a patient, the hospital has to inform the patient within 30 days to which priority class she is allocated, and in case of class 2, a deadline within which treatment will be initiated. In case this deadline is trespassed, the patient may demand treatment elsewhere, in a private hospital, or abroad, at the cost of the Health Enterprise that failed to initiate a timely treatment.

Patients can consult a national information service (www.frittsykehusvalg.no—free hospital choice) that lists per treatment the hospital assessments of the expected number of weeks that lowest priority class patients (i.e., class 3) will need to wait for further diagnosis, polyclinical treatment and/or hospital admission. The service also provides information about four hospital quality indicators: (i) the percentage of 'corridor patients', i.e., patients that due to space constraints may have their bed placed behind a screen in a corridor, or in other rooms that are not defined as bedrooms; (ii) the number of hospital infections as a percentage of the number of hospitalized patients, (iii) the number of operations that were postponed as a percentage of the total number of planned operations, and (iv) the percentage of patient reports that are sent to the patient's GP within 7 days of dismissal.

4. An assessment

The current health care system in Norway is the result of two reforms to make the provision of health care more efficient but at the same time preserving the right to equal treatment. In primary health care, the Regular GP reform of 2001, gave patients the right to be attached to a specific GP of their own choice. In specialized health care, the Hospital Reform of 2002 transfers the ownership of public hospitals from the counties to the RHAs.

⁷ These are the 'office hours' rates for 2011. Evening rates are about 60% higher.

For both types of health care, a distinguishing feature is that the provider and the payer are intertwined. Municipalities have the responsibility to provide access to primary care, and enter into contractual agreements with GPs for provision of this care. Likewise, the RHA are responsible to provide access to high quality specialist care, which is provided by the HEs they own, and by private hospitals with which they have entered into a contractual agreement. Both public entities are financed through risk-adjusted grants from the central government.

The Regular GP reform has received a positive evaluation (Goddager, Iversen and Lurås, 2007). After the introduction of the patient registration system in 2001, waiting times to see a GP show a clear downward trend, and the share of patients receiving the opportunity to see their GP the same day when making the call, has increased steadily.

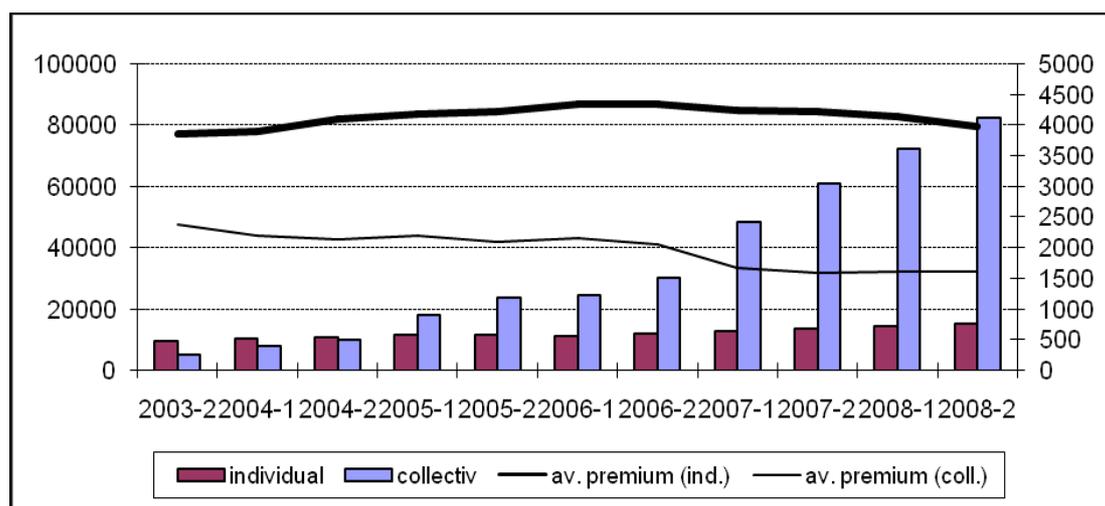
The 2002 Hospital Reform consisted of two components: (i) it established the four RHAs as legal entities that are owned by the Minister of Health, and (ii) it transferred the hospital ownership rights from the 19 counties to these RHA. The arguments for the centralization of provision are the low population density in some counties, and the possibility to exploit increasing returns to scale in the provision of specialized care. But what has been seen as problematic is the double role of the RHAs (and for that matter of the counties before the reform): these entities *order* specialized health care on behalf of the population, but they also own the entities (i.e., the HE—the hospitals) that *provide* that type of care. This absence of a purchaser-provider split may be a good argument for cost efficiency and reaping scale economies, but it is questionable whether an integrated model makes the budget constraints sufficiently hard, especially with the general assembly of the RHAs and parts of the board of directors being made up of elected politicians.

Magnussen *et al.* (2007) show that although planned activity growth for the RHAs is reduced to nearly a zero rate, reflecting a desire of the government to contain overall health care costs, actual activity growth has been in recent years around 4.9%, indicating that the RHAs do not manage to stick to the policy goals of the government. This is also reflected by the fact that each year the RHAs have received supplementary funding from parliament, on average at 3% of total costs—the reform has not hardened budget constraints. A positive development is that both technical and cost efficiency measures have improved, but it is difficult to say to which extent this is due to the new ownership structure, or to the more intensive use of the Activity Based Financing scheme described in section 2. Increasing interregional equity in the supply of hospital services (quality of treatment, waiting times, prioritization) was another aim of the reform. Data from the National Patient Register indicate that during the first three years after the reform, the regional variation in waiting times indeed has been reduced. On the other hand, several studies have concluded that regional variation in the use of hospital services has not seen a significant reduction. Askildsen *et al.* (2010) have compared the prioritization practices in the five health regions with the medical guidelines on prioritization. They find no evidence for centralization of ownership to have led to more equal prioritization practices across the health regions, though they do find a convergence in prioritization practices within RHA. They conclude that centralization of ownership is not sufficient to guarantee equal access to specialized health care across regions, but that the new management structures work well to implement more equality of access within the regions.

In recent years, Norway has witnessed the development of a market for private health insurance. This can be seen as an expression of dissatisfaction with the current state of the public health care sector by (part of) the population. Figure 4 shows the evolution of the number of insurance policies and the average premium levels (1 NOK= 0,125€). In addition to the 98 000 people covered by the end of 2008, one should add another 55 000 that were covered by Vertikal Helse, a representative for Lloyds of London. It is especially the collective (and employer paid) contract segment that has grown fast. These policies guarantee treatment in a private Norwegian or foreign hospital within 28 days (or less).

Aarbu (2010) finds that the presence and length of waiting lists, together with people's income, are the main drivers for private health insurance demand. The rising living standard and the fact that health care is a normal good means that more and more people are no longer willing to face the risk of having to wait months for surgery. Though there may be good arguments for having a mixed health care system,⁸ the fear that private markets for health insurance and health care may crowd out the legitimacy of the publicly provided and tax financed health care sector is a serious one.

Figure 4. The Norwegian market for private health insurance (2003-2008)
 Number of contracts (left axis) and average yearly premium (right axis — in NOK).
 Source: Hagen and Schroyen (2009).



5. Lessons for Belgium?

The Belgian health care sector has evolved very differently from the Norwegian one. Most providers of health care are private, and there are explicit third-party payers present—the sickness funds. Moreover, Belgium does not face the geographical challenges that exist in Norway. What both systems have in common are (i) income based contributions to finance health care, (ii) risk-adjusted government payments (to the Regional Health Authorities in Norway, to the sickness funds in Belgium), (iii) highly qualified medical personnel, and (iv) patients that are looking for the best type of care. So what can be learned from the Norwegian experience?

Should Belgium move into the direction of an NHS type of system, then one of the lessons from the Norwegian reform is that it is important to restrict the political influence to the determination of the overall goals, but leave it to the regional provider authorities to reach these goals in the most efficient way. Any political influence at the provider level will soften budget constraints and lead to inefficiencies. This calls for a purchaser-provider split.

Irrespective of the organizational structure, I believe it is important that a sector that makes up 10% of a country's GDP, and that is mainly tax-financed, should be as transparent as possible to all the stakeholders: regulators, managers, physicians, and not least, citizens/patients.

Transparency is a necessary condition for controlling or regulating the sector, and for its users and providers to make the right choices. This means that good data material should be collected and made available. I conclude by giving four examples of data material that is collected or considered to

⁸ See, e.g., Marchand and Schroyen, 2005.

be collected in Norway, thereby implicitly asking the question to which extent similar initiatives exist in Belgium:

1. In 1997, Norsk pasientregister (NPR—Norwegian patient register) was established. It included de-individualized data on all patients that wait for treatment or that have received specialized care treatment in a particular year. Its aim is (i) to make management decisions on informed grounds, including the correct remuneration of the hospitals (ABF); (ii) to allow the establishment and quality check of illness registers and registers on hospital quality indicators, and (iii) to contribute to medical and medical-administrative research. Since 2007, parliament decided the register should be transformed into a coded register with personal identification, such that treatments that exceed one year, or that take place in different hospitals can be traced back to the same patient, and such that the data can be linked to other datasets using the national registration number.
2. On the basis of NPR, the Norwegian Health Directorate runs the SAMDATA project. SAMDATA is the acronym for "SAMmenlikningsDATA for spesialisthelsetjenesten"—comparable data for specialized health care. It produces key figures for the entire sector, as well as sector reports for somatic health care, mental health care, and interdisciplinary substance abuse care. The key figure report contains for all regions and hospitals detailed information on cost and activity levels, sources of finance, personnel and bed capacity, waiting times.
3. At the time of writing, a committee of experts appointed by the government has evaluated the information available to patients and GPs about hospitals (cf the national information service www.frittsykehusvalg.no discussed in Section 3). It concluded that this information is insufficient to make an informed free hospital choice, and urges to supplement it with objective information on diagnose and treatment quality (e.g., survival time after cancer treatment), and patient evaluations of hospital treatment. All information should be made available on an easily accessible 'health portal' (Teknologirådet, 2011). Fortunately, Belgian hospitals have very short waiting lists, but they do differ in their use of supplementary fees. Clear information on these supplements would obviously belong to such a health portal.
4. All annual reports, balance sheets and profit and loss accounts of the Regional Health Enterprises are electronically available. At the time of writing, a check of the web page of Helse Bergen (one of the HEs in Health Region West) showed that this information was already available for 2010, while the most recent annual report for the Antwerp hospital group ZNA electronically available is that for 2008, and the key figures date back to 2007.

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