KEY REFORMS AND CHALLENGES FOR THE LUXEMBOURG HEALTH SYSTEM

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Summary: Luxembourg has the highest per capita health spending in the WHO Europe Region and the highest share of patients seeking care abroad in the European Union (EU) in 2012. Major reforms in 2008 and 2010 aimed at cost-containment and increasing quality by establishing a single health insurance fund which includes maternity benefits and long-term care insurance. Furthermore, the strengthening of patients' rights and the development of a national e-health infrastructure has only recently occurred as the latter is only in its pilot stage and is not fully developed. This article gives an overview of this relatively little known health system in light of the Luxembourg Presidency of the Council of the EU.

Keywords: *Luxembourg, EU Presidency, Cross-border, Health Care Directive*

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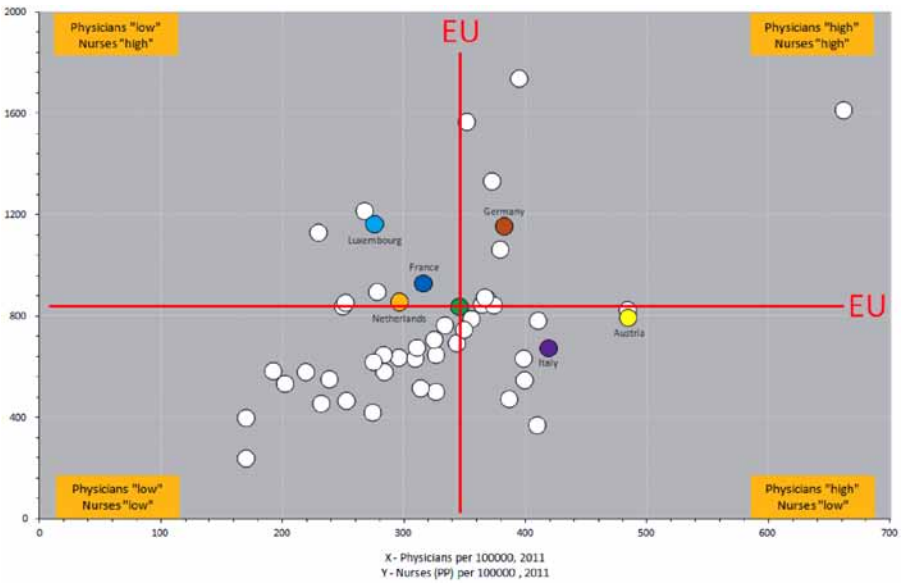
Introduction

The current Luxembourg Presidency of the EU has put the spotlight on the relatively little known health system in Luxembourg. This is long overdue, especially since Luxembourg is facing unique challenges of which some, perhaps in magnified form, reflect typical EU health policy challenges in many countries.

First, Luxembourg has the highest per capita health spending in the WHO Europe Region; at US$PPP (Purchasing Power Parity) 6341 it is almost twice as high as the EU-28 average of US$PPP 3346 in 2012. However, in terms of health spending as a percentage of Gross Domestic Product (GDP), expenditures in Luxembourg (6.9% of GDP) are below those of neighbouring countries and the EU-28 average (9.6% of GDP in 2012[3]). This is mainly the result of the extraordinary performance of the Luxembourg economy. Second, several indicators demonstrate significant scope for efficiency gains in the delivery system. Third, Luxembourg is lacking capacity to train health personnel and is facing shortages in some specialty care, which also necessitates a generous policy towards receiving care abroad.

After large reforms in 2008 and 2010 overhauled some key organisational features, the Bettel-government is expected to continue with its reform agenda, for instance, with regard to hospital financing. This article gives an overview, key reforms, and the challenges facing the Luxembourg health system.

Figure 1: Number of physicians and nurses per 100,000 population in the EU-28, 2011 or latest available year



Source: [3]

A key role for government

Regulatory responsibilities for the health system are split between the Ministry of Health and the Ministry of Social Security. Both Ministries cooperate closely and share responsibility for the organisation, legislation and financing of the health system. This includes implementing health policy, ensuring that health is considered in all aspects of policy, and coordinating actors and activities in the system. The Ministry of Health plans and organises the delivery of care, authorises large hospital investments, and directly co-finances public health programmes. The Ministry of Social Security develops social policy and legislation, and oversees the compulsory health, accident and long-term care insurance schemes. The Ministry of the Family is responsible for licensing and inspecting long-term care facilities.

The health, maternity and long-term care insurance schemes are managed by the National Health Fund (*Caisse nationale de santé;* CNS). CNS was created in 2008 by merging three existing sickness funds and is now the single payer fund for health and maternity benefits and long-term care insurance. In April 2015, it covered 773 060 insured individuals (67% were residents and 32.9% were non-residents commuting to Luxembourg) and offers a standardised benefit basket.[2,3]

According to government plans, the basket of services covered must increasingly be based on the effectiveness, quality and economic efficiency of diagnostic and therapeutic interventions. When it was created, it was envisaged that CNS would play a stronger role in cost-containment by pooling resources better and through stronger purchasing. This strategic goal was further emphasised under the health reform law in 2010 (entitled "Promoting quality and efficiency"), which equipped CNS with a standardised accounting system for hospital services and a new e-health infrastructure, which also aimed to improve the quality of health care.[4]

Predominantly publicly funded, low OOPs

The overall budget of the health insurance system is determined annually by CNS for the following year based on multiannual expenditure forecasts. The financing of health insurance is based on a system of contributions from the working population, employers and state budget transfers. While the state contributes 40% of health insurance funding, the remaining 60% is equally shared between the insured population, and employers. The same system of shared contributions is applied to the long-term care insurance scheme. The private share of health expenditure, mostly out-of-pocket (OOP) payments and voluntary health insurance (VHI), saw an increase from 9.1% in 2008 to 15.5% in 2012, driven, in particular, by government cost-containment reforms in 2010, which introduced more cost-sharing. Most of the OOP payments by households are for cost-sharing for services provided under the national health, long-term care and accident insurance schemes (68.2% in 2012). It should be noted that approximately 56% of the resident population has complementary insurance for cost sharing services (CMCM), and therefore receive an additional payment above the base reimbursement rate set by CNS for certain hospital care and other specified treatments (dental care and eye disease). Representing about 30% of private expenditure, co-payments covering accommodation and meal costs in long-stay, residential facilities are a significant element of private household expenditure.

> "pooling resources better and stronger purchasing

Low on doctors, high on nurses

In the non-hospital sector, providers practise without direct supervision and are reimbursed using the tariffs and conditions laid down in the medical procedure frameworks and in the negotiated contracts between professional groups and CNS. In general, CNS negotiates agreements with professional groups in almost all fields of health care services. Once an agreement is reached, providers licensed to practice in Luxembourg are obliged to adhere to the tariffs and reimbursement rules of CNS, which are generally fee-for-service (FFS). The Ministry of Health does not act as an active purchaser in the ambulatory sector. Every applicant meeting the conditions for a licence is free to open a practice and be automatically contracted by the health insurance scheme and therefore remunerated.

The health system has a proportionally lower than average numbers of physicians, while the numbers of nurses are relatively high. In 2011, there were 2.8 practising doctors per 1000 inhabitants in Luxembourg (**see Figure 1**). This is below the EU-28 average of 3.5 (2011) and lower than in the neighbouring countries, Belgium, France and Germany. In 2012, 29.6% of all practicing doctors were general practitioners (GPs). Most doctors work as self-employed medical practitioners, with most specialists dividing their time between their private practice and hospital work. In general, GPs work in private consulting practices; while specialists are based in hospitals (although they are not salaried employees of these institutions) and also consult from their private practices.

Lack of training in some areas

The comparatively low number of physicians may be explained by the fact that several health professions, such as medicine, dentistry and pharmacy, cannot be trained in Luxembourg. Tertiary education is not available for medical graduates (except for post-graduate training in general medicine), dentists, veterinarians, pharmacists, physiotherapists and speech therapists. This results in a dependency on foreign-trained health professionals and complicates sustainable health workforce planning. However, it is possible to obtain professional qualifications in nursing, midwifery, care work and social assistance in Luxembourg.

Weak gatekeeping

In Luxembourg, there is no referral system to medical specialists, meaning that patients are free to choose to visit any GP without registration and face no obstacles to directly visiting medical specialists. Unsurprisingly, according to the PHAMEU monitor Luxembourg was among the few EU-15 Member States with a "weak" primary care system, together with Ireland and Austria,[5] contrasted by "strong" primary care in neighbouring countries. In 2011, Luxembourg had 6.6 outpatient contacts per person, which is below the EU-28 average and neighbouring countries (France 6.8, Belgium 7.4, and Germany 9.7).

Table 1: Hospital indicators in Luxembourg and selected countries, 2011

	Bed occupancy rates in acute care hospitals (%)	Beds in acute care hospitals per 100,000 population	ALOS for acute care hospitals
Austria	85.5	544.7	6.6
France	75	353	5.1
Germany	79	530.8	7.9
The Netherlands	48.6	333.9	5.8
Luxembourg	71.5	396°	7.3
EU 15	76.6*	345*	6.5

Source: [1]

Notes: * indicates 2010 data, ° national data for 2012.

High percentage of care provided abroad

As some specialised care is not readily available within Luxembourg, a generous policy on seeking treatment abroad is in place. Referrals to institutions for complex treatments and diagnostic procedures, for which an adequate quality of care cannot be guaranteed in Luxembourg, require prior approval by CNS. This approval has to be granted if the treatment cannot be carried out without undue delay in Luxembourg, and if the treatment is categorised as essential and not available in the country. In 2012, costs for care abroad amounted to €363 million for CNS, representing 19.1% of total costs of the health-maternity benefit scheme. This share has been fairly stable in the last few years ranging between 18% in 2010 and reaching an all-time high of 19.4% in 2014. Furthermore, a total of 17 545 cases have received care abroad (with Germany being the lead destination with 58%, followed by Belgium with 25% of referred cases), representing 16% of all patients. This is the highest percentage of all EU Member States seeking care abroad, followed by Italy (12%) and Hungary (10%), far above the EU-28 average of 4% (2013).[4,6]

Room for efficiency improvements in hospitals

In the hospital sector, services are financed on the basis of a global budget as established by CNS based on the Hospital Act of 1998. A dedicated hospital plan must address the health needs of the country, as identified by national survey data, while ensuring that hospitals function efficiently and stay within the budget. The latest hospital plan (2009) applies to thirteen hospitals, both public and private.

The number of hospital beds has gradually reduced since 2004, with acute care beds falling steadily from 5 in 2004 to 3.9 per 1000 inhabitants in 2012, and are now close to the EU average. The average length of stay (ALOS) in acute hospital care has stabilised in Luxembourg to 7.5 days, well above the EU average of 6.4 in 2011 (**see Table 1**). This is partly explained by missing incentives for hospitals to reduce ALOS as they are financed from global hospital budgets. In addition, physicians are paid on a FFS basis and thus earn more by treating more. The bed occupancy rates in acute care hospitals have stabilised at a relatively low level of 71%. This is well below the average in all neighbouring countries and the EU average (76.6%) in 2011. All in all, these indicators seem to suggest room for efficiency improvements in hospital care. Recognising this, the government is looking for the most appropriate way of introducing a diagnosis-related group (DRG)-based hospital financing scheme, which in theory should incentivise hospitals to become more efficient and reduce individual over-utilisation of hospital services.

A future with e-health and empowered patients

Luxembourg has invested considerable effort in strengthening its e-health capacities, e.g. by establishing an e-health agency and introducing the Shared Health Record (*Dossier de Soins Partagé, DSP*). DSP was adopted in 2015. Currently in its pilot phase, it applies mostly to patients with chronic diseases before being extended to all insured individuals. It contains patient health information that is meaningful for promoting safety, continuity of care, coordination of care and efficient use of health care services. Patients can access their DSP online and authorised health providers automatically receive key medical data if needed.

> no referral system to medical specialists

Furthermore, patient empowerment was strengthened by a new law in 2014 that gave patients the right to receive all available information about their health status and diagnosis, as well as an examination plan and treatment options to make an informed choice. In line with the European cross-border care directive of 2011, patients are now able to access probable treatment costs and options in Luxembourg and abroad via the newly established patient information service which is operated by CNS for questions relating to costs and by the newly established Health Mediator for questions on treatment options available within the country. A robust hospital information system, collecting data on in-patient services, their quality, safety and performance, is currently being built, which should make this information available to patients in the future and enable informed planning of hospital facilities. Both reforms will strengthen Luxembourg's aim to have personalised medicine high on the political agenda.

Good health outcomes, but at high costs

Luxembourg had the highest per capita health spending among European countries in 2012 but the country seems to get a return on this investment. The indicators of life expectancy and infant mortality are among the best in Europe, although risk factor burden as high obesity and overweight level is reason for some concern. The population enjoys good access to a broad range of health services with relatively little cost sharing. This is reflected in a low level of unmet need compared to other countries (Eurostat 2015). Furthermore, Luxembourgers have access to an above EU average level of acute beds, staffed with one of the highest proportions of nurses among EU countries. Only the number of doctors ranges below the EU average. Despite constant population growth, mainly driven by immigration (from 363 450 inhabitants in 1980 to 537 039 in 2013), population size remains limited, meaning that certain tertiary specialties are not available in Luxembourg. In these cases however, Luxembourg employs a generous policy to allow patients to receive care abroad.

Health system gains can mostly be made by improving efficiency. For example, more can be done with the proper use of Health Technology Assessment (HTA) to rationalise the benefit basket, especially for coverage of pharmaceuticals. A stronger gatekeeping function and expansion of competences in primary care could also prevent unnecessary and expensive specialist visits. Furthermore, hospitals have a high ALOS combined with low occupancy rates, which may reflect inefficient use of these resources. Some of the planned future reforms, particularly the set up of a robust health information system on hospital services will allow hospital performance evaluation. Efficiency gains could follow the introduction of DRGs and greater use of HTA, but careful implementation will be required.

References

1 WHO Regional Office for Europe. *Health for All Database,* 2015. Available at: http://www.euro.who.int/en/data-and-evidence/databases/european-health-for-all-database-hfa-db

2 CNS. *Annual Report* 2013. Luxembourg: CNS, 2013. CNS. Rapport annuel 2013. Luxembourg, 2014. Available at: http://cns.lu/files/publications/CNS_Rapp_2013_NET_.pdf

3 CNS. Financial situation of the maternity benefit insurance scheme- presentation *Internal Document.* Luxembourg: Ministry of Social Security. CNS. Comptes annuels et bilan de clôture de l'année 2014 de l'assurance maladie-maternité. Luxembourg, 2015. Available at: http://cns.lu/files/publications/DECOMPTE_AM_2014.pdf

4 Inspection Général de la sécurité social. *Rapport 2013 sur la sécurité sociale* [Annual Report 2013 of the social security system]. Ministry of Social Security, Luxembourg, 2015. Available at: http://www.mss.public.lu/publications/rapport_general/rg2013/rg_2013.pdf

5 Kringos D, Boerma W, Bourgueil et al. The strength of primary care in Europe: An international comparative study. *British Journal of General Practice* 2013;742.

6 European Commission Directorate General for Health and Consumers (SANCO), 2015. Special Eurobarometer 425 "Patients' rights in cross-border healthcare in the European Union". Available at: http://ec.europa.eu/public_opinion/archives/ebs/ebs_425_sum_en.pdf