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European hospital reforms in times of crisis: Aligning cost containment needs with plans for structural redesign?

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ABSTRACT

Hospitals have become a focal point for health care reform strategies in many European countries during the current financial crisis. It has been called for both, short-term reforms to reduce costs and long-term changes to improve the performance in the long run. On the basis of a literature and document analysis this study analyses how EU member states align short-term and long-term pressures for hospital reforms in times of the financial crisis and assesses the EU's influence on the national reform agenda. The results reveal that there has been an emphasis on cost containment measures rather than embarking on structural redesign of the hospital sector and its position within the broader health care system. The EU influences hospital reform efforts through its enhanced economic framework governance which determines key aspects of the financial context for hospitals in some countries. In addition, the EU health policy agenda which increasingly addresses health system questions stimulates the process of structural hospital reforms by knowledge generation, policy advice and financial incentives. We conclude that successful reforms in such a period would arguably need to address both the organisational and financing sides to hospital care. Moreover, critical to structural reform is a widely held acknowledgement of shortfalls in the current system and belief that new models of hospital care can deliver solutions to overcome these deficits. Advancing the structural redesign of the hospital sector while pressured to contain cost in the short-term is not an easy task and only slowly emerging in Europe.

1. Introduction

The current financial and sovereign debt crisis has accelerated questions of efficiency and sustainability in the healthcare sector at large. A decline in tax revenues and the volume of social security contributions against the background of pre-existing cost drivers of increasing demand for health services due to ageing societies, higher patient expectations and costly medical innovations presents a challenge to the maintenance of the current scope of service provision in many EU member states. It has therefore given new impetus to reform efforts for cost savings and efficiency gains in the hospital sector [1]. Early analyses of the impact of the crisis on health systems anticipated the use of short-term measures to control costs and the need to

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improve efficiency in the long run [2,3]. Both contributions have suggested specific reforms for the hospital sector, such as reduction of overcapacities, change of payment systems, or better co-ordination of care.

Although reforms are not limited to the hospital sector, there is a need to take a closer look at hospitals for several reasons. First, they are prone to (short-term) cost control measures because of the considerable share (20–50%) of the overall health budget they consume [4] and, second, the assumed potential for reducing inefficiencies due to variances in cost and outcomes [5,6].[1] Third, because hospitals are still the central nod in the provision of care, any reform of specialised or pathway type of care arrangements will involve hospitals. Moreover, the move from hospital-centred systems to integrated care systems will require a different type of hospitals to serve the needs of European populations. In that regard, to plan the right long-term policy decisions is of equal importance. Short-term reforms are not sufficient to address underlying cost drivers, more profound reforms are needed to secure sustainability [2,3]. Secondly, strategic decisions (e.g. capital spending) will impact on the way hospital *and* non-hospital care is delivered for the decades ahead, for example, patients are increasingly treated within pathway care models that transcend different in- and outpatient arrangements [7].

Two kinds of reforms are discerned in the analysis. Following up on Schneider [2], short-term reforms are aiming at reducing health expenditure while leaving the structures – the logics of organisation and regulation – of providing, financing and paying services – in the health systems unchanged. Examples include, delaying investments, reducing administrative costs and lowering the remuneration for providers and producers [2]. In contrast, we regard long-term reforms as those reforms aiming at increased performance of health systems in the long run by altering the structures, relationships and institutions within existing systems. Structural reforms involve for example the move to deinstitutionalised care provision or new models of provider payment to contain the rise of expected health costs, to adapt services to changing needs and expectations and to secure a sustainable base for financing care in the future. As stated above, both, short-term and long-term reforms are important, even more so, as the current financial crisis exacerbates the problem of immediate budget constraints and questions the sustainability of health care system on the background of increasing future needs in the long run.

The aim of the study is to analyse how EU member states align short-term and long-term pressures for hospital reforms in times of the financial crisis and to chart the ways the EU is influencing the context of these national reforms. With the help of a literature and documentary analysis this paper first assesses what kind of hospitals reform strategies have been embarked on in EU member states during the current crisis. Second, we describe current EU policies linked to the current hospital reform agenda and assess the potential influence of this process.

2. Methods

Our findings are based on a growing stock of published reports, scientific articles and policy documents that chart the implications of the financial crisis on health systems or on constituents thereof. Literature has been searched by screening the databases of Medline & WebofKnowledge, the volumes 2009 to mid-2013 of leading health policy journals and hand-searching the websites of institutions dealing with hospitals or the health effects of the crisis in Europe. Comparative works covering the entire EU as well as single country analyses written in English have been considered. The retrieved sources have been analysed for the data on hospital reforms using the framework applied in two linked WHO European Observatory studies on policy responses to the financial crisis for the entire health systems [10,11].

This framework charts the policy responses according to (1) the decision on the level of expenditure, (2) the policy domains to implement the envisaged changes and (3) their effect on health system goals. First, general decisions are taken to alter or preserve the level of public expenditure for health within the overall governmental budget when tax revenues decline in times of crisis. Governments are faced with the question whether or not to cut resources for the health sector (vis-a-vis other public domains) and if so, in which domains of the health sector (primary, secondary care, prevention, long-term care, etc.). Second, the policy tools to implement the envisaged general expenditure changes are subdivided according to financing and contributions, volume and quality of care and cost of care. Third, the effect of reforms can be analysed in relation to the fulfilment of health system goals. According to the WHO European Observatory framework these goals include health status, financial protection, efficiency, equity, quality, responsiveness, transparency and accountability. The described framework supports the description of health system responses according to the outlined three facets, however, does not imply a linear sequencing of actions [10].

Because we focus explicitly on hospital care services in EU member states we provide an overview of changes to expenditure levels, then we screen the reform efforts to establish how they are directly and/or indirectly affecting the operations of hospital services and discern them according to the WHO European Observatory framework [10] by:

- *Financing and reimbursement*: hospital budgets, user charges and provider payment.
- *Volume and quality of hospital services*: scope of the basic benefit package, waiting time.
- *Operational costs*: prices of medical goods, health professionals, capital investments, re-organisation of the hospital system.

[1] Some variance is accounted by factors outside the health care sectors (e.g. socio-economic situation of a country, lifestyle of population) and may reflect as well certain choices (inputs into the health care system). A considerable part of variance can be linked to variation in medical practice (even within countries).

Lastly, we describe the implications of reforms efforts for health system goals as far as they are already reported in the literature.

3. Hospital reforms in times of crisis

More and more hospitals are facing budget cuts and efficiency initiatives as a growing number of member states react to the continuing pressures on their economies. For some, immediate cuts were triggered as early as 2008/2009 as the crisis unfolded. Others followed or deepened their austerity measures for their health systems in 2010 [12]. Interestingly, some of the EU countries (Greece, Ireland, and Estonia) with the most pronounced cuts in general health spending between 2009 and 2011 had comparably higher health expenditure growth rates in the years since 2000 [54]. It is presumed that those health systems had problems already prior to the crisis and, therefore, were even more vulnerable to the implications of the crisis [62]. The work of Reeves et al. suggests that the level of debt, the strength of recession and political party colour (right vs. left) is not consequential for health budget cuts. Instead, they found an association between greater reductions in health budgets and the country receiving IMF loans, even after controlling for selection bias [66]. Although most countries have attempted to minimise financial impact there is clear evidence of budgetary reductions in the hospital sector in some member states. In some instances, a graduated approach was followed by reducing hospital volumes, prices and/or wages. Many also sought to realise efficiency and productivity gains in the operation of their hospital systems. However, the picture is diverse throughout the EU – countries facing similar economic difficulties have reacted differently in terms of their health budgets [66].

Moreover, the analysis of crisis-related implications is blurred by the fact that some reform projects existed prior to the crisis but were likely to be accelerated to bring forward improvements in the cost efficiency and effectiveness of service delivery [1,10]. Likewise, there is a growing debate – predominately US focused – whether the financial crisis being the single reason for the recent slowdown of health care expenditures or not. While some of the potential alternative explanations are typical for the US context, the introduction of Obamacare, move to paying physicians by salary, others, such as slower diffusion of technological and pharmaceutical innovations, cost sharing and increase of efficiency in providing services, may be valid also in Europe. This is in so far important to expect health expenditures to move to their original growth paths or not once economic growth resumes [55–58].

3.1. Policy tools aimed at hospitals

3.1.1. Financing and reimbursement of hospital services

Several countries report changes to the financing and reimbursement of their hospitals services. Scope and characteristics of measures differs widely between member states. In some instances, reforms have been moderate, like lowering growth rates, or indirect, such as the change of payment system. In other countries, Spain, Latvia, Greece and Portugal for example, changes have been direct and considerable involving sizeable reductions in the resources available. The latter two countries face cuts in response to the requirements of their bailout agreements. A detailed overview of reform introduced or planned can be retrieved from Table 1.

3.1.2. Volume & quality of hospital services

Only minor exclusions of hospital care services from the basic package were reported. In the Netherlands reimbursement for IVF treatments has been lowered. Portugal excluded cosmetic surgery from the package [10]. A plan for new Danish treatment guidelines aims to reduce the amount of surgery by encouraging alternative – and less expensive – methods of treatment where possible [13]. Beyond minor exclusions of hospital services from the basic benefits package, additional services are moved outside the hospital setting using outpatient facilities as described in Section 3.1.3.4 re-organisation of the hospital system.

Increases in waiting times as an explicit policy are reported for Estonia where the maximum waiting time for outpatient specialists' visits has been raised from four to six weeks [10], for Denmark where plans to lift the four weeks guarantee for patient to be treated in private hospitals exist [1] and Catalonia where the Ministry of Health indicated that the maximum waiting time of six months was going to be extended to twelve months [14,15].

3.1.3. Operational costs of hospital services

3.1.3.1. Prices of medical goods. Reducing the prices for pharmaceuticals, medical devices and other apparatuses has been reported as a common strategy to cut in the costs of health systems including hospitals. To lower the price paid for pharmaceuticals, Austria, Belgium, Ireland and Spain renegotiated the contracts with pharmaceutical producers. In France, Hungary and the Czech Republic greater use of generics has been stimulated. Malta and Slovakia introduced a reference price system and Romania reformed its system. Whereas in the Baltic states, Portugal, Slovenia, Catalonia, Greece, Spain and Poland a whole package of different measures to reduce costs of drug prescription has been indicated [10].

In the area of medical goods and equipment, Austria concluded long-term contracts for imaging scanners and other medical aids involving price reductions. Belgium introduced a new reimbursement scheme for implants and medical goods with lower prices. In the Czech Republic auctions were introduced for procurement of medical equipment and drugs in 2011. In Bulgaria reforms for the purchasing of medical devices are anticipated [10]. Moreover, Slovenia reduced the prices paid for goods and equipment by 20% [1].

3.1.3.2. Health professionals. Cutting the general salaries of health professionals including hospital staff has been applied in Cyprus, Greece, Ireland, the Baltic countries, Romania, Spain and Portugal [1,10]. Moreover, wage freezes have been adopted in the UK (excluding low wage earners), Portugal and Slovenia and a reduced rate of wage

Table 1
Reform (plans) on financing and reimbursement of hospital services.

Tools	Description of reform (plans)	Country	Reference
Hospital budgets	Reduced budget by 2% in 2011	Czech Republic	
	Reduced budget by almost 1% in first half of 2010	Slovenia	[1]
	Decreasing budget in absolute terms in 2011	Austria	
	Intended savings of €200 M in 2012	Portugal	
	Further 5% planned for 2013		[30]
	8% cut in 2012 foreseen	Greece	[16]
	Frozen budget for 2011	Hungary	[13]
	Lower growth 2.5% limit in 2011 instead of more than 4% previously	Netherlands	
	Lower growth 3% instead of 5%	Luxemburg	[1]
	Frozen NHS budget (incl. hospital sector)	UK	[61]
User charges	Co-payments increased or introduced for hospital services	Portugal	[50]
		Czech Republic, France, Ireland, Romania, Netherlands and Italy	[10]
Provider payment	Lowered tariffs paid to providers	Estonia, Ireland, Romania, Slovenia	[10]
	DRG prices reduced	France	[13]
	DRG system planned to be implemented	Bulgaria	[51]
		Czech Republic	[10]
		Cyprus	[52]
	Introduction of pay for performance in 2010	Netherlands	[13,43]
	Plans to introduce pay for performance	Italy	[10]
	Non-reimbursement of emergency readmission within 30 days	UK	[53]

increase was advocated in Denmark [10]. For Portugal and Catalonia, additional cuts in the remuneration of overtime are reported [10,15]. Greece was required to save EUR 100 M in the expenditures for wages and fees by the introduction of new payment system in 2012 [16].

The reduction of the number of health professionals through redundancies including direct dismissals have been stated for France, for some regions in Denmark, for some hospital managers in Portugal [13] and Catalonia [14]. Ireland, Italy, Greece [17], Slovenia, Portugal, Cyprus and Spain reduced number of personnel by non-replacement of terminated contracts or retired staff, and hiring cuts or freezes [13]. A few member states report that nurses are replaced by less skilled (The Netherlands, UK) or un-skilled (Slovakia) workers [18].

3.1.3.3. Capital investments in the hospital sector. Some countries have put on hold or revised their investment plans for the hospital sector; others however have put extra resources into the system to accelerate reform in a reaction to the crisis. Romania stopped plans to build eight new hospitals and Ireland reduced the number of planned new health facilities by 25% [10]. Spain reduced its investments by 25% in 2010 [13]. In the region of Catalonia, even all investments plans were abandoned [14]. In the UK, the building of a new hospital in North East England has been cancelled [13] and the NHS's general capital spending budget for 2011–2014 has been reduced by 17% [10,19]. In contrast, extra investments in the hospital infrastructure were made in Cyprus for the building of two new hospitals and in Germany as part of a general economic investment package [1]. In Latvia, commitment persisted to invest in aligned ehealth technology [10] as strategy to make healthcare provision more efficient and safe. Likewise, Greece and Portugal are pushed to implement ehealth applications following the agreed economic adjustment programmes [16,30].

3.1.3.4. Re-organisation of the hospital system. The broader re-organisation of hospital care provision involving ways of centralising hospital care provision and of reducing hospital infrastructure has also been a reform target. In some countries a reduction in hospital infrastructure (numbers, scale and capacity) is in prospect. Denmark centralised hospital services involving closure of hospital (departments) [10] and government plans exist to reduce the number of hospitals further from 35 to 20 in the next ten years [20]. In Greece, hospitals have been merged and some closed [10]. Latvia converted more than 1100 hospital beds to residential care beds. Furthermore, the number of Latvian hospitals has been reduced from more than 80 in 2008 to around 40 in 2010 including closing regional hospitals [1,10]. Pressured by the bailout contract, Portugal aims to exploit economies of scale by the re-organisation of hospital and primary care and decrease of hospital beds [10,21]. The number of hospital beds was reduced by more than 500 in 2009 in Ireland [22] and by approximately 1500 in Catalonia in 2011 [14]. The centralisation of emergency care and specialised care services has been reported as well for Finland; however this has less to do with the economic crisis and more a longer-term programme. Plans to reduce acute care beds in 2011 existed in the Czech Republic and in Romania (9000 beds) [1]. In the Czech Republic, such beds are envisaged to be used for rehabilitation and long-term care [23].

Second, the move towards non-hospital setting – either independent or combined with other re-organisation measures – has been reported only for Ireland, Greece, the Baltic states, and Slovenia. The stimulation of day care and outpatient services is achieved for example by redirecting funds (Lithuania) or restructuring hospitals in favour of day care clinics and outpatient facilities (Slovenia) [1,10]. Lastly, the improvement of integration of care providers has been supported for instance in the Netherlands [10], Portugal and Finland [1].

3.2. Implications for health system goals

Health policy reforms described above have implications for health systems' goals including among others health status, level of financial protection, efficiency, equity, quality and responsiveness [10]. Some are already reported for only a few countries, others are expected to take effect soon. In Latvia budget cuts and closing of inpatient facilities led to increasing emergency care provision in hospitals, hampering elective provision of care [1]. In Catalonia, hospital emergency service use has dropped by 3% in 2011 and in the first half of 2011 6% fewer surgeries were performed [14]. Discouraged doctors and nurses either emigrate or leave the health sector as reports from Ireland indicate [24]. Increases in waiting lists as an effect of responses to austerity have been reported for Ireland indicating a 9% increase of number of people on waiting lists between 2009 and 2010 [10]. In Catalonia surgical waiting lists increased by 23% (17,000 people) within the first half of 2011 [14,15] and increases in waiting times are reported from parts of Finland without specifying the degree [13]. Higher barriers to access health care because of co-payments, waiting times, or closing of hospital facilities were experienced by Italian patients in 2011 [25]. For 2010 an increase in admission to public hospital by 24% and at the same time a reduction in admissions for private hospitals is reported for Greece which is linked a reduce ability to pay for hospital care privately [26,27].

Moreover, further negative implications are discussed in the literature. This includes the fact that a reduction in the workforce in the absence of a productivity increase implies the risks of deterioration in patient throughput [25], quality, and increased workforce volatility. Specific concerns about a fall in quality of care and patient safety have been voiced by nurses in Austria, Croatia, Greece, Ireland, the Netherlands, Poland, Portugal and Slovakia [18]. Hence, it is a delicate balance to push for efficiency and not unwittingly create conditions for risks to patient care to escalate [28].

On the contrary, the Irish case is an example where as well positive effects on efficiency have been reported. Thomson et al. report that while budgets and staff have been reduced the level of day cases and day surgeries has increased in 2010 and the average length of stay went slightly down [24].

4. EU influence on hospitals

The line of demarcation on subsidiarity implies that member states are wholly responsible for the internal operation of their health systems. However, the EU is strongly promoting and influencing reforms by different means. The macro-economic context in which hospital policies develop is inevitably influenced by the EU [8]. The EU can also exercise other forms of leverage through an increasingly assertive EU health care agenda involving support options for hospital policies [29]. EU support comprises expert advice, stimulation of innovations and financial support primarily through its Cohesion Policy and Europe 2020 strategy.

The influence of the former, the EU's economic governance tools to encourage reductions in government debts and to coordinate national policies varies according to the conditions of the member states' economy and public finances. The economic adjustment programme underpinning bailout packages include specific requirements to ensure public finances are brought under control. The result in some countries will inevitably mean further austerity applied to current and future budgets. The health and hospital system have been specifically targeted in Greece and Portugal as described above [16,30]. In all member states stronger EU fiscal and economic surveillance of national public budgets was introduced with the 'Fiscal Compact Treaty'[2] and additional legislation [31] to reinvigorate the Stability and Growth Pact (SGP) and its stability targets.[3] These mechanisms are intended to push member states towards more budgetary discipline [8]. In addition, in the framework of the European Semester [31] reforms of the healthcare sector towards greater efficiency and sustainability have been addressed [9] and have been reiterated in the Annual Growth Survey 2013 [32]. Using these routes for financial consolidation the EU drives member states indirectly to reduce public expenses in the hospital sector.

In addition, tighter financial requirements for investors make it more difficult for hospitals to acquire investment through capital markets. EU-based investors have already reduced their project lending during the financial crisis. Moreover, the EU has just adopted new provisions for banks (Basel III/Capital Requirement Directive IV) and is currently in the phase of revising requirements for insurance (Solvency II Directive) and pension funds (IORP II Directive) involving among other measures higher capital buffers. It will lead to more costly and challenging acquirement of investment money especially for long-term investments such as hospital infrastructure projects [33]. Hence, the EU is not only pushing indirectly for cost saving measures in the hospital sector. Perhaps paradoxically, the EU simultaneously limits the ability of hospitals to react to austerity measures by discouraging long-term investments needed for re-organisation of infrastructure and other key attributes required to achieve efficiencies in care provision and administration.

The growing agenda at EU level for health systems change implies the availability of better tools to inform and stimulate hospital reforms in its member states. This includes, first, commissioning of comparative data and overview reports [6,12,34]. Second, sources of advice include a newly installed expert panel on health investments linked to health system and hospital reforms[4] [35,36] and a reflection process among member states coordinated by the Commission. The goal of the reflection process is 'to identify effective ways of investing in health, so as to pursue modern, responsive and sustainable health

[2] Treaty on Stability, Coordination and Governance entering into force January 1st, 2013 (not applicable to UK & Czech Republic).

[3] Among others general government gross debt lower than 60% and deficit spending lower than 3% of GDP.

[4] Initial mandates of work cover (1) integration of care, (2) public-private partnerships for care delivery and (3) health system performance assessment.

systems'. The reflection process entails five working groups on the representation of health in the Europe 2020 strategy, on the use of EU Structural Funds for health investment, on cost effective use of medicines, on integrated care models and better hospital management, and on measuring and monitoring effectiveness of health investments [37]. Third, EU sources for funding innovations in hospital care services (on a project basis) include EU Structural Funds, the framework programme for research (FP7/Horizon 2020) and the programme for action in the field of health. Hence, the EU's health system agenda has moved towards providing a more complete reference source for member states for ideas, guidance and financial support for 'changing healthcare'.

Despite ostensibly not being in the driver's seat as regards hospital reforms, the EU now has several instruments at its disposal to prompt, recommend or set economic incentives for national hospital reforms according to the status of member states' public finances. Nevertheless, except for the bailout countries, it remains largely at the discretion of the member state to take up incentives or not. The subsidiarity principle still holds in this sector to a very high degree.

5. Discussion

The current reform agenda on hospital services highlights several things. First, hospitals have been and continue to be one of several focal points of health care reform efforts during the current financial crisis [10]. Wide variances in operational effectiveness create pressure to deliver greater efficiency gains in the hospital sector [5,8]. Second, so far there has been a tendency towards short-term and quick-fix solutions to contain cost. This involves the reduction in payment for medical goods and staff salaries lowering the operational costs of hospital activity and cuts in hospital infrastructure maintenance and capital investments. Though they have some impact short-term, these measures are not likely to control future growth in spending [2]. Moreover, evidence from previous crises suggests that reductions in expenditure growth have always been only a temporary fix and that health spending growth resumes as soon as economies begin to grow again [38]. If, when, and to which degree future economic growth will be able to alleviate the effects of prior expenditure cuts remains to be seen as the current crisis is deeper and longer than any other crisis since the 1930. Thirdly, addressing the structural redesign of the hospital sector by changing financial reward systems or integrated care arrangements – beyond project status – is only reported for a few countries. Structural reforms inevitably face resistance at the front line and arguably at political level [39,40]. Reform of the hospital sector can prove to be high risk for some governments.

The framework on policy responses to the financial crisis [10,11] has been supportive in clustering the magnitude of hospital reforms and reform plans according to the described domains and helping to understand the potential implications of the reforms on health system goals despite limited reporting in this regard. Applying the framework only to the hospitals setting has raised questions, which reported reform tools to include or not because some are applicable outside the hospital domain as well (e.g. health professions, medical goods, capital investments). Reforms were considered as far as a direct link to the hospitals environment existed.

5.1. The risks and politics of short-term reforms

Short-term measures to control costs and increase efficiency involve nevertheless a difficult trade-off between sustaining levels of quality and service provision and potential negative (long-term) health systems outcomes [10,28]. Immediate reductions in hospital infrastructure (capacity) must go hand in hand with the establishment of alternative provision. If this is not the case, unjustifiable treatment delays or increased emergency care provision (such as in Latvia) can and will occur. Other examples of this difficult trade-off include cost-savings targeting professionals that can aggravate expected personnel shortages in the future because health professionals can migrate into other sectors or countries. Moreover, increasing co-payments can prevent unnecessary care but may also withhold people from demanding necessary care. Co-payments place a heavier financial burden on poorer parts of the society and may therefore hamper equity goals [41,42]. It is therefore critical that, potentially detrimental effects on health system goals in the long run should be fully assessed and monitored as part of any major drive towards improving cost efficiency as a short-term goal.

It is fair to say that short-term reforms are sometimes the only way to handle cuts in the budgets. In addition, looking at the politics of health care reforms good reasons exist to favour short-term over long-term reforms. Politically it is more important to have short-term success than to prepare for long-term gains. Structural reforms normally go ahead with creating winners and losers in the system, which is a risk to politicians and creates resistance towards the reform [59,60]. Hence, small cuts across many different parties might be more desirable and feasible. Nevertheless, the crisis has prompted some contributors [e.g. 2] to stress even more long-term objectives in the policy development of (hospital) reforms.

5.2. Organisational and financial requirements to modernise hospitals in the long term

To further the long-term reform agenda towards structural redesign of the health and hospital system there is a need to address both the clinical system and the financial structures. The former involves the advancement of innovative models such as integrated care (pathway) models across parts of the health system, including social care to increase coordination within the chain of providers. Shifts towards coordinated provision in non-hospital settings seem promising and increasingly probable because of technological (e.g. telemedicine, remote diagnosis) and service innovations. Moreover, pathway based care models are promising as a basis for redesigning processes, infrastructure redesign and resource realignment in hospitals. Lastly, in some countries there is room to shift

services still performed currently in hospitals towards primary care settings but availability of alternative and more suitable accommodation within the community are not yet in place.

Reforms of hospital financing systems are also critical. On the one hand, payment systems should support organisational changes such as bundled payments in the Netherlands to facilitate integrated care arrangements [43] or GP-led commissioning in the UK to stimulate service provision in community settings [44]. Early evaluations of the innovative financing models suggest that more care is allocated to the primary setting and responsiveness increases but there is no proof so far that cost savings are achieved or provision of hospital services are altered profoundly by these models [44]. However, in general well-established primary care systems are associated with better health outcomes at lower cost [63,64].

On the other hand, investment models in the hospital sector also need to change and innovate. In addition to the shortage of public money for hospital investments, private finance is getting tight. Currently, acquiring investment money for hospitals from private investors is quite difficult as the reduction in new start Public-Private Partnerships (PPP) in the UK suggests [45]. New PPP models "bundling" services with infrastructure are regarded as an opportunity to improve PPP performance and leverage reforms in the service provision towards integrated care systems [46]. The experiences so far with PPP in financing hospitals are at best mixed [45]. Lastly, the reported, short-term cuts in capital investments disregard the need for initial extra investments to restructure hospital sector. It follows that a crisis situation is something of a paradox. It creates the need and stimulus for change, but at the same time may create financial disincentives for the investment in capital resources required, as our findings tend to indicate.

5.3. What role does the European Union play in the reform of the member states' hospital systems?

The EU can have a direct impact through the conditions applying to macro fiscal support in requiring action to get public spending back under control. Global hospital budget cuts of hundreds of millions of Euros as described above is likely to cause severe distortions in the service provision as case reports from Greece or Spain indicate [47,48]. For all member states the EU exerts additional pressures for austerity in light of meeting the Maastricht criteria. In contrast, the EU can offer support and resources for hospital reforms to national decision-makers. Because they can imply a "buy in" of EU principles into domestic hospital provision, they are not neutral. [29]. Additionally, the EU has at its disposal "European solutions" to improve efficiency in the hospital sector such as cross-border care solutions in terms of sharing of infrastructure and of investment costs or steered patient mobility. The plans for European networks of reference for rare diseases would facilitate quality of care, training and research for diseases across Europe with a low prevalence for which establishing infrastructures on a national scale would be inefficient.

Albeit, member states remain largely responsible for organising their hospital system as described above; the trigger for member states to engage in short-term budget cuts and the barriers for investments following from the measures of the EU's economic governance package is more immediate compared to the various incentives set by the EU's health agenda for long-term reforms.

6. Conclusions

An agenda for a structural redesign of the hospital sector would include moving future operational and financial emphasis for patient care away from a hospital-centred health system. We conclude that, although such an agenda is desirable, it is emerging only slowly across the EU. Currently, member states are preoccupied with balancing macro financial strategy with manageable austerity in the health sector. This has driven a reliance on quick fix improvements in productivity and efficiency. It can be questioned if these provide a sufficient answer to the challenges of the current crisis. Such steps may not be sufficient to build modern, responsive and sustainable hospital and health systems. Nor may such steps address the growing demands on services resulting from an ageing population and related rise in chronic diseases. At present it stays open how structural hospital reforms will look like in practice. The current financial crisis creates a significant window of opportunity[5] for health policy reforms in general but also establishes barriers and disincentives to change of the scale required. It has been argued that structural reforms will only occur in the presence of a perception that system deficits are insurmountable and where alternative models of hospital care have gained a critical level of perceived legitimacy among key decision-makers [49]. The EU is increasingly attempting to lever both factors. Moving to a redesigned hospital sector in Europe will require embracing what for many will be new and untried models of care in an environment of financial constraints. It follows that current reform plans for hospitals need to assess and take into account changing needs for the future population they serve. Moreover, financial resources and the regulatory flexibility need to be in place to develop further and test new models of organising and financing hospital services as the current evidence remains inconclusive so far. Lastly, beyond the work on concrete tools and technological innovations in the hospital setting a broader discussion on the role and function of hospitals in future health systems has to be initiated because investments and research funding on the national and EU level follows accordingly.

Conflicts of interest

None.

[5] Policy windows according to Kingdon involve a higher probability that concrete political action is taken. But they may close without practical policies put forward [65].

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