# Explaining Health Care System Change: Problem Pressure and the Emergence of "Hybrid" Health Care Systems

Achim Schmid
Mirella Cacace
Ralf Götze
Heinz Rothgang
University of Bremen

**Abstract** In this article, we will further the explanation of the state's changing role in health care systems belonging to the Organisation for Economic Co-operation and Development (OECD). We build on our analysis of twenty-three OECD countries, which reveals broad trends regarding governments' role in financing, service provision, and regulation. In particular, we identified increasing similarities between the three system types we delineate as National Health Service (NHS), social health insurance, and private health insurance systems. We argue that the specific health care system type is an essential contributor to these changes. We highlight that health care systems tend to feature specific, type-related deficiencies, which cannot be solved by routine mechanisms. As a consequence, non-system-specific elements and innovative policies are implemented, which leads to the emergence of "hybrid" systems and indicates a trend toward convergence, or increasing similarities.

We elaborate this hypothesis in two steps. First, we describe system-specific deficits of each health care system type and provide an overview of major adaptive responses to these deficits. The adaptive responses can be considered as non-system-specific interventions that broaden the portfolio of regulatory policies. Second, we examine diagnosis-related groups (DRGs) as a common approach for financing hospitals efficiently, which are nevertheless shaped by type-specific deficiencies and reform requirements. In the United States' private insurance system, DRGs are mainly used as a means of hierarchical cost control, while their implementation in the English NHS system is to increase productivity of hospital services. In the German social health insurance system, DRGs support competition as a means to con-

We would like to thank the reviewers of the *Journal of Health Politics*, *Policy and Law*, especially Joe White, for their helpful and most valuable comments. For any errors or misinterpretations, we accept full responsibility.

Journal of Health Politics, Policy and Law, Vol. 35, No. 4, August 2010 DOI 10.1215/03616878-2010-013 © 2010 by Duke University Press

trol self-regulated providers. Thus, DRGs contribute to the hybridization of health care systems because they tend to strengthen coordination mechanisms that were less developed in the existing health care systems.

#### Introduction

The oil crisis of the 1970s is generally considered to mark the end of unbounded welfare state expansion. The development of the role of the state in health care systems belonging to the Organisation for Economic Co-operation and Development (OECD) since that incisive economic turbulence reveals broad trends in health care system financing, service provision, and regulatory structures: the public financing share tends to converge, while in service delivery privatization trends can be observed as a common pattern. Regarding regulatory structures, the three health care system types—National Health Service (NHS), social health insurance (SHI), and private health insurance (PHI), exemplified by England, Germany, and the United States, respectively—have integrated nonsystem-specific or innovative elements of regulation. Out of these developments have emerged hybrid health care systems. This hybridization can be understood as a soft form of convergence because the evolving mix of regulatory instruments entails increasing similarities across systems.

In order to explain trends of convergence, other analysts have put forward structural approaches as well as concepts of policy learning and diffusion (Bennett 1991). We argue from a structural perspective that the observed trends can be understood as specific reactions of system types<sup>2</sup> to increasing problem pressure following the end of the postwar consensus to expand the welfare state (Marmor, Freeman, and Okma 2005); as health care systems vary, so do their strengths and weaknesses and accordingly their adaptive responses to problem pressure. Health care systems tend to develop specific deficiencies that cannot be solved by routine responses. Thus, in the search for more efficient solutions, non-system-specific and/ or innovative elements are implemented, leading to the emergence of health care system types that are more hybrid and increasingly similar. While these structural forces are crucial, functional necessities alone do not cause change unless they are seen and interpreted in a certain way

<sup>1.</sup> Our sample includes all twenty-three countries (except Turkey) that joined the Organisation for Economic Co-operation and Development (OECD) before the first oil crisis in autumn 1973, namely, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

<sup>2.</sup> See Rothgang (2006) for a conceptual framework for defining health care system types.

by political actors. Therefore, we also consider cognitive approaches in reference to the fact that reforms are motivated by problem pressure perceived by the relevant actors in the health care system. Moreover, ideational factors (see Béland 2005) help to specify mechanisms of change. Cross-national policy learning and policy diffusion both help to explain the processes that lead from perceived problems to the implementation of new policies.

In the second section, we give a short account of the changing role of the state in health care systems. In order to elaborate our explanatory approach, in the third section we present a broad heuristic model of health care system change. We then describe deficiencies specific to health care systems and steps of adaptation taken according to types of health care systems, thus outlining the structural perspective of our explanation. Next we use diagnosis-related groups (DRGs) as a policy instrument, which reflects new ideas to regulate health care sectors. Numerous health care systems have adopted DRGs or similar case-mix classification systems as a way to regulate the relation of providers and financing bodies, particularly in the hospital sector. Therefore, DRGs are adjusted to the specific needs of the system in question, and they exemplify how structural approaches and cognitive concepts explain change in health care systems. While system-specific problem pressure triggered the introduction of DRGs and influenced their shape, cross-national diffusion and policy learning promoted their introduction and highlight mechanisms of transformation.

## A Short Account of the Changing Role of the State in Health Care Systems

We analyze the changing role of the state in OECD-related health care systems since the 1970s oil crisis. As mentioned in the introduction, the economic shocks of the 1970s are generally considered to mark the end of unbounded welfare state expansion, thereby challenging the role of the state. In order to give a systematic overview, we distinguish between three dimensions of the health care system: financing, service provision, and regulation (Rothgang et al. 2005).

While many researchers have examined health expenditure levels and growth trends, some have found that the state's role in financing results in the convergence of the public financing share, which subsumes tax financing and social insurance financing in total health spending. By convergence, we mean growing more similar over time, although not necessarily becoming identical. Convergence occurs as the dispersion of the public share of health care financing decreases: the coefficient of variation in our OECD sample declines from 22 percent in 1970 to 13 percent in 2006 (OECD 2009, our calculation). This is mainly because countries with a low public financing share in the beginning of the observation period tended to increase the public financing share, while countries that already displayed high values of public financing in 1970 turned to private financing (Rothgang et al. 2008: 135).

In service provision, we find that public provision has decreased in nearly all fifteen OECD countries for which appropriate data are available (Rothgang et al. 2008).<sup>3</sup> Over almost all health care systems, two major factors contribute to the common privatization trend. First, the locus of care is shifted away from the inpatient to the outpatient sector due to efficiency pressure, the requirement to provide care in the most suitable setting, and medical progress having enhanced outpatient care (Tuohy, Flood, and Stabile 2004). Since the state traditionally plays a greater role in the provision of hospital care, while private providers prevail in the outpatient sector, this means an implicit shift to private provision. Besides this implicit privatization, we also observe explicit privatization: the state as a direct service provider is on the retreat, since in the case of many health care systems the state divests its facilities. Mainly, for-profit companies buy up public hospitals in order to create a profitable market segment (Rothgang et al. 2008: 137).

Health care regulation refers to the fundamental relationships among the three main actors in health care systems: the service providers, the financing bodies, and the potential beneficiaries. For our analysis, we focus on the structural features of regulation by examining the actors and the mode of interaction describing the mechanism by which the system is coordinated (Rothgang 2006, 2009; Tuohy 1999). We refer to three specific actors relevant to the regulation of health care systems: the state, corporate actors (e.g., sickness fund or provider associations), and private market participants. We identify three basic modes of coordination among these actors: the exertion of hierarchical control; the engagement in collective bargaining processes, in which contract partners aiming at stable relations interact on equal footing; and the condition of competition, which

<sup>3.</sup> In order to measure public service provision in health care systems, we have constructed a public provision index (PPI). The PPI is constructed as a weighted mean of all sectors, that is, the inpatient, outpatient, dental, and pharmaceutical sectors. As a formula for assessing the role of the state across all sectors, we examine changes in the public-private mix within health care sectors and changes in the size of these sectors. The PPI has been constructed for fifteen OECD countries: Australia, Austria, Denmark, England, Finland, France, Germany, Iceland, Italy, Japan, the Netherlands, New Zealand, Norway, Switzerland, and the United States.

implies rivalry among individuals or groups and hence more selective and unstable relations. Linking actors with modes of coordination yields ideal regulation types: state hierarchy, collective bargaining of corporate actors, and competition among private market participants (Rothgang 2006).

In order to analyze regulation, we chose the cases of England, Germany, and the United States, as these countries most closely resembled the ideal types of a state-led NHS, a corporatist SHI, and a market-driven PHI, respectively, at the beginning of our observation period in the 1970s (Giaimo 2002; Giaimo and Manow 1999; Rothgang et al. 2005). Looking at the English NHS, we find a state-led health care system that has introduced market elements to improve efficiency. The prevalence of market mechanisms in the English system has been accompanied by stronger state involvement, indicated, for example, by the state's increasing role in the regulation of service providers (Giaimo and Manow 1999; Hacker 2004). Continued reliance on corporatist self-regulation has been attributed to the German health care system (Giaimo and Manow 1999). Yet Germany now makes room for public (state) and private (market) actors, thereby squeezing the traditional system of self-regulation in between. Thus, the introduction of competition among sickness funds in 1996 has triggered subsequent reforms that have profoundly changed the modes of regulation in the financing system (Götze, Cacace, and Rothgang 2009). Finally, for the United States' private health care system, hierarchical state regulation increased significantly as a result of the creation of the public programs Medicare and Medicaid (Marmor 2000; Oberlander 2003). Within the realm of private insurance, hierarchical state regulation remained weak, paving the way for decentralized adaptation processes or policy conversion (Hacker 2004; Stone 2000). As a consequence, the private insurance market experienced the emergence and rapid proliferation of managed care, starting in the 1980s. Managed care, although purely private by nature, has given way to a series of hierarchical governance structures, which have in some ways served as a functional equivalent to government regulation. As a consequence of the backlash against managed care, hierarchical regulation of providers and patients was partially scaled back and amended by bargaining elements. Today, as there is considerable spillover of regulatory instruments between public and private programs in the United States, these boundaries increasingly blur (Cacace 2010).

All in all, the regulatory structures have altered profoundly for these three health care systems. Our main finding is that these systems incorporate elements that are not system specific, which has led to considerable hybridization (Rothgang et al. 2008; Rothgang 2009). The convergence hypothesis in the regulation dimension therefore suggests that health care systems become more similar as they adopt instruments and structures from one another or—as we will show in the case of DRGs—as they adopt common regulatory instruments adjusted to address system-specific problems. Within this process, ideational factors loom large. First of all, ideas shape the perception of problems and suitable reform options (Béland 2005). Moreover, the cross-national diffusion of ideas about policy concepts and instruments can be considered a transformation mechanism that supports the emergence of increasing similarities across system types.

Furthermore, the case studies indicate that the three dimensions—financing, service provision, and regulation—are closely interrelated. The state's retreat from service delivery and/or health care financing is compensated by its more powerful role in regulation. Consequently, the state's retreat as a direct funding body and provider need not necessarily mean its power is weakened. Rather, these findings across dimensions of health care systems reflect a move from the positive state, characterized by direct interventions into markets through redistribution, planning, and production, to the regulatory state (Majone 1997).

# A Heuristic Model of Health Care System Change

Our main research interest here is to investigate the factors concerning the state's changing role in OECD health care systems: convergence in financing, common trends in service provision, and the regulatory hybridization of systems. Explanatory approaches to trends of convergence have often drawn on a functionalist perspective, by regarding policy change as a response to common problem pressure (Bennett 1991). As the golden age of welfare state expansion ended in the 1970s, health care systems increasingly began to experience problem pressure, which increased the need to contain health care costs and at the same time limited the amount of additional resources going into the health care system, thus causing the need to find more efficient ways to organize such systems (Hacker 2004). Against the background of a dominant neoliberal reading, the need to increase efficiency transformed into a kind of economic determinism demanding a privatization of social risks, the introduction of market competition, and the retreat of the state across OECD health care systems (Giaimo and Manow 1999; Hacker 1998; Tuohy 1999). Yet, empirical analysis reveals that common privatization trends are observed solely in service provision. Privatization trends alone, therefore, tell only part of the story. Regarding

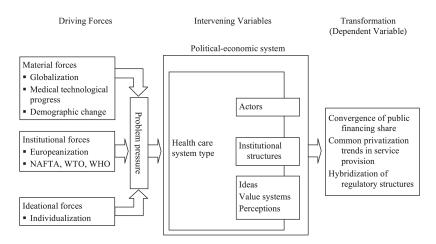


Figure 1 Heuristic Model of Health Care System Change

Source: Authors' depiction (cf. Cacace et al. 2008)

Notes: NAFTA = North American Free Trade Agreement; WTO = World Trade Organiza-

tion; WHO = World Health Organization

their financing structure, by contrast, we find that the health care systems have approached one another with respect to the role of the state. Moreover, convergence in the regulation dimension implies a blurring of systems; that is, public elements grow in the private U.S. health care system, while market competition is considerably enhanced in the state-led U.K. system and in Germany's social insurance scheme (Cacace et al. 2008). Thus, we find that the chosen trajectories vary considerably among the distinct types of health care systems. A crucial explanatory variable, therefore, is the health care system itself, its deficiencies and functional requirements as reflected in the specific system type. The direction of change is ultimately subject to the particularities of individual system types, yielding what we call a *modified problem pressure hypothesis*.

To structure our argument, we propose a general model of health care system change, which serves as a heuristic device (see fig. 1). The explanatory model addresses the interplay of specific driving forces, which cumulatively exert problem pressure on health care systems. This problem pressure becomes a system stressor that can then be seen to interact with intervening variables, which in turn structure change by pushing systems in a specific direction and by setting the pace, thus accelerating or retarding and even temporarily arresting transformation. For example, the intervening variables can be linked to institutionalist or actor-centered approaches that elucidate the potential to resist change. Furthermore,

intervening variables can be related to cognitive concepts that specify the mechanisms of change.

To start with the driving forces, we distinguish between material (e.g., globalization, medical and technological progress, demographic change), institutional (e.g., Europeanization), and ideational forces (individualization<sup>4</sup>). Without going into detail about the mechanisms of how these forces act in an isolated manner, it can be said that especially demographic change, medical progress, and individualization tend to increase demand for scarce resources, whereas globalization<sup>5</sup> and partially also Europeanization set limits on their availability. For the time being, however, we argue that their cumulative effects exert problem pressure on health care systems (Giaimo and Manow 1999; Tuohy 1999). As a consequence, efficiency has been the catchword in the 1990s political debate, requiring health care systems to implement cost-containment strategies while simultaneously achieving (or preserving) state-of-the-art treatment, responsiveness, and choice (Hacker 2004; Wilsford 1995). At the same time, institutional forces may require the harmonization of national health care policies and compliance with international law.

Regarding the intervening variables, from a structural perspective, the most crucial factors are the health care systems themselves: their functional requirements, their respective strengths and deficiencies, their value systems, the associated veto points, and organized interests, which of course are also part of the broader political-economic system. In line with the modified problem pressure hypothesis, it is both the nature and degree of problem pressure, subsequently mediated by the component factors of the health care systems themselves, that can be said to define the direction of health care system transformation observed (see fig. 1). This hypothesis suggests that in search of solutions to common problem pressure, systems develop distinct policy responses, thereby quitting traditional paths and taking up new elements that are not system specific. As system types vary, so too do their adaptive responses. By borrowing from one another, health care systems transform into more hybrid types (Rothgang et al. 2008). The modified problem pressure hypothesis takes into account that differ-

<sup>4.</sup> Individualization refers to changing life patterns that require new forms of risk protection. It also means that increasingly informed and self-conscious patients successfully demand the responsiveness of health care services.

<sup>5.</sup> Conversely, the compensation thesis (see, e.g., Swank 2002; Rieger and Leibfried 2003) assumes that globalization has an expansive effect on welfare spending. However, it can be argued that health care spending is less likely to be used to compensate the marginalized workforce (Burgoon 2001). Therefore, we assume that—concerning health care—globalization reinforces cost-containment pressure.

ent lines of adaptation emerge depending on the specific system type the observed countries resemble.

Of course, adaptive responses to system deficiencies do not develop automatically. Within a competitive environment, efficient answers to problem pressure may spread via evolution. For health care systems that hardly compete with one another in a given area, an additional mechanism for structural innovation and diffusion is needed. Adaptive responses may require decisions of policy makers and subsequent implementation through local actors. Adaptation processes may also occur in the absence of policy reforms through actors empowered under the existing regime (Hacker 2004). This includes considering the perception of problems by relevant actors and also their beliefs about strategies that may improve the efficiency of health care systems. The motivations for adaptive responses are therefore often driven by common beliefs about problem pressure and more efficient solutions rather than by validated knowledge (Oliver, Mossialos, and Maynard 2005: S4).

Decision makers, who search for more efficient solutions, may first of all resort to experience with existing national policies. Independent problem solving (Holzinger and Knill 2005) that does not take into account developments in other countries can still lead to convergence if common problems evoke similar answers or if distinct answers to problem pressure increase the similarities between systems. However, since international mutual monitoring gives the opportunity to identify a range of regulatory alternatives and to estimate reform effects before implementation, forms of transnational communication will also have to be considered. Thereby, policy makers can utilize a rich body of literature on various aspects of health care systems and reports delivered by international organizations such as the OECD, the World Health Organization, or the European Observatory. Such organizations also provide standardized data on health care systems and a platform for the discussion of approaches to respond to reform pressure. Transformation mechanisms are composed of policy learning from other countries or common, transnational development of solutions, as well as emulation or mimicking of policies of pioneer countries (Holzinger and Knill 2005; Powell and DiMaggio 1991). Apart from this cognitive set of mechanisms, further mechanisms of policy convergence have been identified (Holzinger and Knill 2005), among them imposition, international harmonization, and regulatory competition. Considering system change in the twenty-three OECD countries we studied, the imposition of change—referring to coercive policy transfer through supranational institutions or foreign countries—and competition

seem least plausible as mechanisms of change. International harmonization means that national regulations will have to comply with international or supranational law. Harmonization has some impact in the European Union (EU). Responsibility for health care belongs to EU member states, and by now there is no direct harmonization concerning the core of health systems, but spillover from regulations in other policy fields will have to be considered (Greer 2006; Leidl 2001; Rothgang and Götze 2009).

Our explanatory model addresses the cognitive mechanisms of transformation under the heading of ideas. Ideas can be understood as policy paradigms: a set of principles and causal beliefs that shapes the perception of problems and offers an acceptable set of potential solutions. Thus, ideas serve as a map and help to structure political decision making and policy learning (Béland 2005). In this sense, ideas tend to support pathdependent developments, since belief systems are rather stable, and it can be argued that health care systems are grounded in a distinct set of values and beliefs. As paradigm shifts occur, however, new ideas can induce change. Moreover, uncertainty concerning existent policy paradigms provokes comparison, evaluation, and learning (Freeman 2006). Since health care systems have experienced increasing problem pressure, there seems to be a demand for new ideas and policy change (Marmor, Freeman, and Okma 2005). Alternatively, ideas refer to the framing of problems in the process of setting political agendas. Here, ideas are used as an instrument to generate public support (Béland 2005). Moreover, policies can be seen as ideas for coping with relevant societal problems. Policy innovations in other countries and the experiences of those countries offer a supply of options and a foundation for policy learning. Knowledge about the effects of health policies as well as knowledge about health technologies spreads easily across countries and may challenge existing belief systems. Thereby, the very act of sharing common knowledge may also lead to converging belief systems. Reflections on the role of ideas highlight that reactions to problem pressure cannot be conceptualized merely as an objective need for reform. Movement toward reform is always about prob-

<sup>6.</sup> Some examples are nondiscrimination laws, which have forced private health insurance companies to offer unisex tariffs (Rothgang et al. 2007). Furthermore, the third directive of non-life insurance constrains government's influence on the design of private health insurance plans, for example, rules that implement an obligation to contract for private insurance companies. Harmonization efforts through the open method of coordination—that is, commitments of European Union (EU) members to achieve common health targets—have not been fully implemented yet. The EU also influences national health care systems via negative integration, that is, by ruling out national regulations regarded as incompatible with European law, particularly free market obligations (Mossialos and McKee 2002).

lems perceived by relevant actors and their assumptions about adequate policy responses.

We aim to elaborate on our heuristic model in two ways. The next section is devoted to describing system-specific problem pressure and adaptive responses that contribute to the hybridization of health care systems. The subsequent section uses one example of structural innovation, DRGs, to show how structural explanatory concepts may be combined with cognitive concepts to explain the spread and shape of policy instruments. DRGs are a policy instrument that addresses provider relationships as well as relationships between providers and financing institutions. The motives to implement DRGs (or related concepts) and the way they are implemented vary with the regulation of resource allocation to hospitals rooted in the type of health care system. However, policy learning and the spread of policy ideas promote the introduction of DRGs and highlight mechanisms of transformation.

## **Health Care Systems and Their Response** to System-Specific Deficiencies

We argue that the direction of change is indicated depending on the specific features and deficiencies of the type of health care system. In a somewhat stylized manner, we outline the general characteristics as well as the system-specific deficiencies by examining the system logic of state-led NHS systems, social insurance schemes, and private insurance systems, which serve as examples of most pure health care systems. We thereby draw on the general system logic, as well as on some empirical examples, which may serve as first evidence.

#### National Health Services

Health care in NHS systems is characterized by universal coverage based on citizenship. Ideally, a full range of health services is provided free at the point of delivery. Consequently, services are typically financed through taxes. Health service delivery is characterized by the dominance of public provision—that is, state-owned hospitals are the dominant providers in the inpatient sector and public employees provide most outpatient care. Moreover, relations among financing institutions, service providers, and (potential) beneficiaries/patients are mainly regulated through state hierarchy. Within our OECD sample, the Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden), Australia, Ireland, New Zealand, and the United Kingdom, as well as Italy, Spain, and Portugal can be counted as NHS systems. However, this large group of NHS countries is heterogeneous. Countries deviate from the ideal type description, for example, by relying partly on private health service provision (Rothgang et al. 2008; Freeman 2000).

NHS systems operate within a given budget, which allows for better cost containment, but that comes at the cost of other benefits, resulting in malfunctions such as long waiting lists for certain treatments, insufficient investment in health care facilities, poor responsiveness, and low productivity or low motivation of providers (e.g., Donaldson and Magnussen 1992; Keen, Light, and Mays 2001: 17; Saltman 1990; Pedersen 2005: 178). These problems are related to underfunding, which entails forms of rationing, but they have also been related more generally to the idea of state failure due to the lack of appropriate incentives for state employees. In short, the notion of state failure assumes that state-organized health care may guarantee equal access to services but fails to provide services efficiently (Scott 2001). Therefore, in NHS systems, problem pressure mainly translates into remedies to state failure. However, it has to be considered that NHS-type systems are not purely "command and control," since resource allocation requires the cooperation of the medical profession (Moran 1995). Moreover, doctors often have the right to treat patients privately. This reflects powerful provider interests but can also be interpreted as a means to enlarge overall capacities and to address low productivity of state employees. In fact, such incentive structures undermine public health services, as they create incentives for private service providers "crowding out" public providers (Pollock 2004). Nevertheless, driven by the need to produce more cost-effective and technically efficient health care services, predominantly market-based alternatives have come under consideration (Laugesen 2005). Developments in state-led systems can be crudely summarized as follows. The role of private health care financing has increased on average, and service provision has been privatized in various ways. Moreover, NHS systems have implemented market elements as modes of regulation. However, the implementation of market-oriented reforms does not necessarily mean a loss of state authority, since markets need to be regulated. Therefore, market-oriented reforms tend to go hand in hand with intensified state hierarchy (the seesaw effect) (Giaimo and Manow 1999).

The increasing salience of private financing in state-led systems may be simply a side effect of underfunding in the public system. It has to be considered, however, that this form of privatization may involve high political costs. In the United Kingdom, public financing has increased massively since 2003, after years of continuous decline of the public financing share (OECD 2009). Private financing can also reveal dissatisfaction with the public system; for example, undue waiting times or low standards of treatment provide incentives to choose private alternatives (Klein 2005; Maarse 2006). As a further option, the rise of private financing may also reflect attempts to avoid excessive demand. Cost sharing can be implemented to provide an incentive for using more primary care, such as in Italy and some Scandinavian countries (Figueras, Robinson, and Jakubowski 2002; Freeman 2000; Saltman and Figueras 1997).

As the dominant mode of regulation in NHS systems, state hierarchy has supported cost-containment policies that can easily be implemented through global budgets (Grignon 2006). Since the late 1980s, NHS systems have supplemented state hierarchy with market-style modes of regulation (Freeman 2000; Saltman and Figueras 1997). Several NHS systems such as those in England, Finland, and Italy have established a purchaserprovider split, though in some cases it is limited to certain areas, such as in Sweden and Spain (Figueras, Robinson, and Jakubowski 2002). Accordingly, hospitals have been released from command-and-control management and granted more autonomy (Busse, van der Grinten, and Svensson 2002), and providers have to compete for purchaser contracts. Similar developments took place in New Zealand in 1993, though by 2000 the new Labour government there redirected the system to local planning (Ashton 2005). In Italy, managerial behavior has generally been encouraged (Freeman 2000). Probably the most comprehensive reform steps have been taken by the English NHS through the creation of internal markets (Le Grand 1999; Oliver and Mossialos 2005).

While there is certainly variation in the timing and extent of privatization and market-style modes of regulation in NHS systems, they still share a common reform trend. Which factors contribute to these similarities? First of all, there is a common experience of problem pressure in the sense of scarcity of resources, dissatisfaction with waiting lists, and the limited responsiveness of the health care system. Rationing strategies became more precarious as increasingly informed and self-confident patients challenged doctors' decisions (Moran 1995). Moreover, as in the case of the English NHS, the government's demand to increase productivity was not supported by financial incentives. Internal markets, however, promised that money would follow the patient (Bevan and Robinson 2005: 63). Across NHS health care systems, problems were framed as inefficiencies, and, consistent with beliefs in the superiority of markets, policy response turned toward the use of competition as a coordination mechanism (Laugesen 2005: 1067; Maarse 2006: 1003). Further, economic crises have contributed to market-style reforms and brought into government political parties that adhere to liberal-conservative ideas (Moran 1998; Blomqvist 2004). Often liberal-conservative parties initiated market reforms, but these reforms were then also maintained by Social Democratic majorities. Party politics may be conceptualized as an intervening variable that helps in determining the extent to which market reforms are implemented. Thus, in New Zealand, internal markets, which had already lost public support, were abandoned by the Labour government (Laugesen 2005). In Sweden, some elements of market reform—such as the privatization of those hospitals that are pivotal for health service provision—were revoked as the Social Democrats regained power. The use of market mechanisms was left to regional authorities and remained unchallenged (Blomqvist 2004). Conversely, in Denmark, internal markets were never fully implemented due to the strong opposition of Social Democrats and unions, which, unlike the Swedish Social Democrats, maintained a negative perception of market reform (Green-Pederson 2004). In England, the Labour government sustained internal markets, and the reforms were driven by the need to regulate markets. During the implementation of the purchaser-provider split, English hospitals ran into massive problems regarding calculating costs and contract models with purchasers. The state interfered by standardizing cost calculation through patient classification systems. The implementation of health care resource groups (HRGs) was related to the need to bring provider payments in line with economic incentives and therefore to enhance competition in the English NHS (Frisina and Cacace 2009; Wiley 1992). Similarly, the implementation of national agencies to control the quality of services has contributed to the regulation of markets.

To sum up, common problem pressure and the framing of these problems as inefficiencies by relevant policy actors has triggered market reforms in many NHS-type systems. However, the implementation of market-oriented reforms has entailed further state interventions to guarantee the functioning of markets, while intervening variables such as political conflict help to explain the extent to which NHS-type systems have implemented competition as a coordination mechanism.

## Social Health Insurance Systems

SHI systems account for the second-largest group in our OECD sample, consisting of Austria, Belgium, France, Germany, Japan, Luxembourg,

the Netherlands, and since 1996 Switzerland. Coverage is usually based on employment status, which often leads to separated schemes for special occupational groups, the self-employed, or civil servants. Hence, on the financing side, wage-related contributions, which are mostly shared by employers and employees, play a dominant role. Regarding health service delivery, inpatient care mainly relies on public or private nonprofit hospitals, whereas the other health care sectors are dominated by private for-profit providers (Eeckloo, Delesie, and Vleugels 2007). Finally, SHI systems are characterized by corporatist self-regulation based on collective bargaining between sickness funds and provider associations (Rothgang et al. 2005).

The eroding financial basis of SHI schemes can be identified as a major system-specific deficiency. First and foremost, the share of wages on overall economies' income has decreased since the early 1980s, while capital gains (which are mostly not subject to contributions) have become more important in all OECD countries (IMF 2007: 168). At the same time, global competition involves increasing difficulties to raise SHI contributions as they represent a visible part of labor costs (Ferrera, Hemerijck, and Rhodes 2001). Thus, we observe attempts to broaden the financial basis of SHI systems and to limit the financial burden for employers. During the 1990s, France replaced a large part of its wage-related contribution for employees with an earmarked social security tax that includes capital gains. As a consequence, the share of employer contributions decreased steadily from nearly two-thirds to around half of the French SHI revenue (Sandier, Paris, and Polton 2004). Germany has also slightly relieved employers by introducing an additional SHI contribution borne by employees only. Furthermore, the role of general taxes and private sources such as patient co-payments increased significantly due to various German health care reforms (Rothgang et al. 2010: chapter 6). The Netherlands gradually shifted away from wage-related to flat-rate contributions, accounting since 2006 for around 45 percent of Dutch health expenditure (Greß, Manouguian, and Wasem 2007).

In service provision, we have identified common trends toward privatization (Rothgang et al. 2008). Privatization seems to be mainly driven by permanent fiscal austerity and perceived inefficiencies in the inpatient sector. In order to raise incentives for efficient behavior and to make hospitals responsible for profits and losses, the government may first formally privatize public hospitals (Busse, van der Grinten, and Svensson 2002). Moreover, the state may sell public hospitals to private enterprises that can rely on more flexible wage agreements and easy access to the capital

market. Hospital sales promise short-term revenues while simultaneously relieving state authorities from operational deficits and future investment responsibilities. We find evidence for formal and explicit privatization in Germany and Switzerland since the 1990s (Rothgang et al. 2008). Third, implicit privatization takes place as a shift from inpatient to outpatient care, which is generally advocated as an efficient method of cost contain-

ment. This substitution has been occurring in France since the 1980s.

Concerning the regulation of SHI systems, we observe a decreasing role of corporatist self-government in favor of state hierarchy and market competition. We attribute this trend first of all to poor cost containment in the aftermath of the oil crisis and since the early 1990s to a perceived lack of cost-effectiveness. These phenomena, rooted mainly in the rent-seeking behavior of corporatist actors, are commonly referred to as *institutional sclerosis*.

During the 1970s, health care costs skyrocketed in most SHI countries, exceeding the average OECD growth rate (OECD 2009). Due to assigned members, sickness funds felt little incentive to keep contribution rates low while collective bargaining forced them to be responsive to claims of well-organized provider groups. As center-Right and center-Left governments perceived this increase of labor costs as a disadvantage in global competition, we observe state-driven cost containment policies in all SHI countries since the late 1970s. The measures reduced the public benefit package and did not spare the self-regulatory core of the corporatist bargaining. Hierarchical control manifested in hospital planning, sectoral budgets, and tariff authorization (Abel-Smith and Mossialos 1994; Ess, Schneeweiss, and Szucs 2003).

Once supply control by the state had successfully slowed growth rates in the mid-1980s, equity and efficiency then became important political issues. On the one hand, coverage based on employment status caused increasing financial imbalances within and between the schemes for different social groups. On the other hand, the state's involvement in the bargaining process led to a perceived misallocation of resources. As a consequence Belgium, Germany, Switzerland, and the Netherlands enhanced the legal framework for competition between sickness funds in order to make them accountable for their expenses (Laske-Aldershof et al. 2004). As structural reforms traditionally faced strong institutional legacies in SHI countries, a large political consensus facilitated the reform process. Christian as well as Social Democrats regarded the introduction of market principles as an adequate measure to improve efficiency and demand orientation (van Essen and Pennings 2009). The positive attitude of Social

Democratic Parties toward competition and choice was supported by the fact that markets razed the inequity between different occupational groups founded in SHI systems, for example, between blue- and white-collar workers in Germany or low- and high-earning employees in the Netherlands (Companje et al. 2009).

As soon as the state abolished fund assignation, competition restrained the funds' freedom to increase contribution rates. Yet a considerable side effect of financial competition was the incentive for risk selection (Höppner et al. 2006). In all SHI systems with free choice of sickness funds, therefore, the state reacted to this adverse result of market competition with the introduction of risk-equalization schemes (van de Ven et al. 2007). As the sickness funds were forced to explore new fields for competition, the government started to cut back collective tariffs and introduced opportunities for selective contracting. Germany and the Netherlands are examples for this spillover effect of competition from insurer to provider markets (Gerlinger 2009; Götze, Cacace, and Rothgang 2009). In the inpatient sector of nearly all SHI systems, the rise of the market logic is strongly tied to the switch from budgets and per diem to case mix – based remuneration (see, for example, the section below on the spread of DRGs).

In conclusion, poor cost-containment capacities of corporatist selfregulation provoked the state to intervene hierarchically since the late 1970s in response to increasing global competition. Despite strong institutional constraints against structural reforms, a commonly perceived lack of cost-effectiveness and responsiveness facilitated the introduction of market mechanisms in the early 1990s. The implementation of marketoriented reforms led in turn to even more hierarchical re-regulation to safeguard solidarity. This seesaw effect squeezed corporatist self-regulation and is the key to understanding the blurring of SHI systems.

## Private Health Insurance Systems

PHI systems are characterized by the dominance of private actors and a mainly competition-driven approach to regulation. In our sample of twenty-three OECD countries, Switzerland (until 1996) and especially the United States before the introduction of the public programs represent a private insurance model. In private systems, the purchase of insurance is not mandatory, nor are insurers obliged to accept all applicants. Insurance companies sell a variety of contracts that are contingent on health status and also reflect consumers' willingness and ability to pay. Thus risk pooling is minimized, and the insurance function is reduced to ex post subsidization, that is, transferring burdens from the sick to the well. Service delivery is mainly performed by private providers. This also means that health care is an industry, in which private entrepreneurs respond to the high mobility of capital (Tuohy 1999; White 2007). In the outpatient sector, physicians are generally self-employed and therefore mainly for-profit providers. The free choice of providers and their remuneration according to the fee-for-service principle further characterize the PHI system.

While private health care systems in general score relatively high on responsiveness and choice, they suffer from market failure rooted in information asymmetries, which causes adverse selection and leads to overutilization of services. A common practice to decrease utilization is to increase cost sharing to make the consumer sensitive to the price, quality, and quantity of care demanded. However, as Rice (1997) points out, overutilization is a problem requiring supply-side management. In private, fee-for-service-based health care systems, however, typically no such instruments for managing provider behavior exist. Thus, while moral hazard is not a genuine PHI problem, private systems are especially affected, as they lack instruments for hierarchical control. Adverse selection is a consequence of the applicants' ability to hide their health risk. In order to avoid adverse selection, insurers spend a great deal of resources in risk rating (Keen, Light, and Mays 2001). Offering a choice of plans with different co-payment rates and deductibles is a further instrument to uncover health risk. Economic theory predicts that in this case individuals with relatively low health risk receive only partial coverage, while the sicker are fully covered at risk-adjusted rates (Rothschild and Stiglitz 1976). In reality, however, sicker and poor individuals will be unable to pay risk-rated premiums and therefore forgo insurance. Health insurance, therefore, might be unaffordable, particularly for those population groups who most urgently need it. Furthermore, taking the U.S. example, private insurers also intend to reduce uncertainty by excluding preexisting medical conditions from the benefit package or by completely denying coverage for an applicant (Glied 2001). As a consequence, PHI systems usually do not provide a comprehensive benefit package to the insured. The result is an increase in the number of uninsured and underinsured people, as experienced drastically in the U.S. health care system.

PHI systems tend to have high health care expenditures (Colombo and Tapay 2004). Much of this expenditure is wasteful, in the sense that the money spent is not employed in the production of health but rather for administrative costs or price-inflating investment strategies (White 2007; Woolhandler, Campbell, and Himmelstein 2003). In fact, the United

States and Switzerland have the most expensive health care systems in the world, consuming, respectively, more than 15 and 11.5 percent of their gross domestic product (GDP) in 2005 (OECD 2009).

As a consequence of efficiency pressure, public funding and hierarchical elements of regulation have increased in PHI systems over time. Switzerland even moved from a private to a social insurance scheme by establishing mandatory insurance for all citizens, thereby tackling the problem of noninsurance and underinsurance. State intervention enabled the system change with the introduction of the new Health Insurance Law (Krankenversicherungsgesetz) in 1996. This legislation introduced managed care to bring more hierarchy into the delivery system.

In the United States, Medicare and Medicaid were implemented in 1965 in order to provide social insurance for society's most vulnerable groups, the aged and the indigent. As in the 1996 Swiss case, this legislation emerged at a time when many elderly people had difficulty finding affordable coverage within private markets (European Observatory on Health Care Systems 2000; Marmor and McKissick 2000). Today the public programs cover a sizable part—27 percent—of the overall U.S. population. As the elderly and the indigent tend to feature above-average health risks, the state currently is responsible for almost 46 percent of health care spending (OECD 2009). In addition, an estimated \$140 billion of public money, or about 1 percent of the U.S. GDP, was spent in 2007 on tax exemptions devoted to private, employer-sponsored insurance (U.S. Office of Management and Budget 2008). This considerable increase in public funding also entailed a substantial rise in hierarchical state regulation, at least concerning public programs (Marmor 2000; Oberlander 2003). As one important example, DRGs were introduced in 1983 in the Medicare program to gain leverage over service providers (Ruggie 1992). Yet, in the realm of private insurance, government regulation remained weak, especially vis-à-vis the providers (Stone 2000).

In private insurance, as a functional equivalent to government regulation vertically integrated health maintenance organizations (HMOs) gained a foothold starting in the late 1980s. Due to their hierarchical structure, HMOs were able to impose instruments for steering the behavior of both providers and patients. Meanwhile, the situation has changed again, and "virtually" integrated networks now dominate, where provider management is based on long-term contracts (Cacace 2010).

On the service provision side, the system logic of private, market-based health care systems would lead to the expectation that most providers are private for-profit (cf. De Alessi 1989). Empirically, we find this assumption

affirmed for the outpatient sector, while in the inpatient sector the picture looks more differentiated. In the United States, public inpatient care provision has declined markedly from 30 percent of all inpatient beds in the 1970s to 20 percent today, while hospital beds in private ownership for-profit as well as nonprofit—have increased (cf. Rothgang et al. 2010: ch. 7). Between 1975 and 2006, inpatient beds in for-profit facilities almost doubled from 7 to 13.5 percent, while nonprofit providers witnessed an increase from 64 to 67 percent. As a general trend in inpatient care provision, the introduction of the DRG-based prospective payment system contributed to a continuous decline in average length of stay and also decreased the overall number of hospital beds. As a consequence, hospitals aimed at entering profitable market segments in fields where no prospective payment systems were applied, such as in psychiatric care, skilled nursing facilities, and outpatient care (Oberlander 2003: 125). Thus, throughout the 1980s, hospitals integrated forward and backward, creating large multi-institutional chains (Tuohy 1999: 135). Private facilities tended to grow relatively faster than their public counterparts, as they seemed to be more flexible in chain formation. It has also been debated whether a great deal of for-profits' competitive advantage lies in their ability to select patients with favorable risk structure. However, the growth of nonprofits is particularly remarkable and can be explained as these facilities receive tax subsidies in compensation for offering community benefits (Gray 1991). Furthermore, in the United States nonprofit institutions were exempted from most antitrust laws, thus becoming indeed the more profitable institutions (Nullmeir and Keenk 2009; Marmor et al. 1986). In Switzerland, nonprofit inpatient care is also subsidized by the state. However, this situation might change in the future as the practice in both countries is subject to debate (European Observatory on Health Care Systems 2000:68).

In addition to these trends, outsourcing activities in all public and private categories of hospitals leads to a functional privatization. This means that today hospitals commission the service industry not only with catering and laundry services but also with management functions, such as human resources management and payroll accounting. Most of these highly specialized suppliers are private for-profit businesses.

To sum up, in coping with system deficiencies, hierarchical elements have increased considerably in private health care systems, from both public and private actors. More collective financing is also observed, either through the introduction of social health insurance or by an increase in public funding. At the same time, profitization tendencies in the health service sector can clearly be discerned, but they are limited in their extent.

# System-Specific Problem Pressure and the **Spread of Diagnosis-Related Groups**

The previous sections gave a general overview on the relationship between health system change and health care system type. Here we narrow our analysis to one policy instrument—DRGs and comparable inpatient grouping systems—and its implementation across countries. DRG systems classify hospital patients according to their case mix (as measured by diagnoses and patient characteristics) and according to homogeneous treatment cost (Fischer 2001). Thus, DRGs define the hospital product and serve as a basis for hospital financing schemes, hospital management, planning, and utilization review (Rodrigues 1993). While in principle representing a more technical means of categorizing patients according to cost and illness groups, an array of applications is witnessed internationally, ranging from mere documentation to methods for effectively managing clinical care. Depending on the specific DRG application, different health care objectives may be linked to their implementation (Frisina and Cacace 2009; Leister and Stausberg 2005). By choosing DRGs, we refer to the regulatory dimension of the health care system, since DRGs contribute to the regulation of the relation between providers and financing bodies.

DRGs were developed in the late 1960s at Yale University due to the observation that the costs of comparable hospital services differed remarkably (de Pouvourville 2004). The first large-scale implementation occurred in 1983 in the U.S. Medicare program, in which DRGs were used for calculating prospective payments and were thus used as a tool to gain control over providers' fees (Ruggie 1992). Until 1983, hospitals in the United States were paid on a retrospective cost reimbursement basis, which implied negative incentives for cost containment. Annual real growth of current hospital expenditure ranged between 5.2 and 9.4 percent from 1970 to 1982 (OECD 2009; own calculation). The main motivation for the implementation of the new financing scheme in Medicare was to contain hospital expenditure by imposing an instrument for hierarchical control over providers (Coffey and Louis 2001; Frisina and Cacace 2009). Indeed, the introduction of DRGs and prospective financing schemes caused hospital reorganizations, made hospital managers more aware of economic thinking, and was a more efficient way to produce hospital services. In the following, increasing specialization, outsourcing, and reduced length of stay could be observed, while as a side effect quality control schemes were developed to impede volume increases and quality reduction (Coffey and Louis 2001). Starting in the 1990s, as DRGs proved to be an effective instrument to contain costs of inpatient stays in the Medicare program, they spread to other public and private payers in the U.S. health care system.

DRGs were implemented in France and Canada in the 1980s. In the early 1990s Belgium followed and several NHS countries, including Australia, England, Finland, Ireland, Portugal, and Sweden. By 2000, Norway and Denmark had joined the other Scandinavian countries using a commonly developed DRG system. More recently, in 2003, Germany implemented DRGs, while in the past decade Austria, Japan, and the Netherlands developed comparable systems based on disease and treatment procedures rather than diagnoses alone (cf. figure 2). Today, DRGs are implemented in most of the twenty-three countries in our OECD sample (Fischer 2007; Roger France 2003). DRGs usually affect only a portion of hospital budgets (e.g., Denmark, Portugal), a limited number of hospitals (e.g., Switzerland, Finland), or are not fully implemented in all regions (e.g., Sweden, Spain) (Lüngen and Lauterbach 2000). The nonadopters are Greece, Luxembourg, and New Zealand, which stopped the program in 2000 (Forgione et al. 2005).

A clear-cut incidence for policy diffusion is simply given by the families of DRG types implemented in health care systems. The flowchart in figure 2 illustrates the links between countries and DRG types that are chronologically ordered. The lines link systems that have been influenced by the related older system or represent further developments of DRG types within a country. Hence, the French Group Homogène des Malades is inspired by the U.S. Health Care Financing Administration (HCFA) system, which has been influential in early-adopting countries. The early French adoption of an HCFA-based system was fostered by the move of DRG advocates into the health care ministry and their contact with U.S. researchers at Yale (Rodrigues and Trombert-Paviot 2001). Connections can also be made between the German G-DRG system and the Australian system, which had served as a model for the German system (Lüngen and Lapsley 2003; Schmid and Götze 2009). Since the early 1980s, there has also been evidence for considerable transnational communication about DRGs and their use, via such means as conferences, common research groups, the cross-national development of common data sets, and so on (Rodrigues 1993).7 Furthermore, the Scandinavian NordDRGs document

<sup>7.</sup> In 1985 the Council of Europe started a research program on diagnosis-related groups (DRGs), while the World Health Organization supported the transformation of ideas through conferences on DRGs. The EU supported DRG and case mix-related research and organized

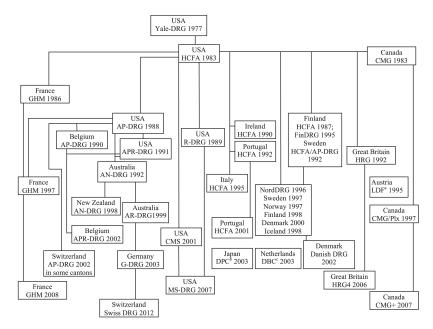


Figure 2 Diagnosis-Related Group Systems across OECD Countries

Source: Adapted from Fischer 2007, Lüngen and Lauterbach 2000, and Erlandsen 2007 Notes: AN-DRG = Australian National DRG; AP-DRG = all-patient DRG; APR-DRG = allpatient refined DRG; AR-DRG = Australian refined DRG; CMG = case-mix group; CMG+ = case-mix groups+; CMG/Plx = case-mix groups with complexity overlay and age adjustment; CMS = Centers for Medicare and Medicaid Services; DBC = Diagnose Behandelings Combinaties; DPC = diagnosis procedure combinations; G-DRG = German DRG; GHM = Group Homogène des Malades; HCFA = Health Care Financing Administration; HRG = health care resource group; HRG4 = fourth version of health care resource group; LDF = Leistungsbezogene Diagnose-Fallgruppen; MS-DRG = Medicare severity DRG; R-DRG = refined DRG

- <sup>a</sup>Based on treatment procedure
- bDiagnosis- and disease-based groups
- <sup>c</sup>Diagnosis- and treatment-based groups

a process of common problem solving, as they have been developed and implemented successively in the Nordic countries. Japan, the Netherlands, and Austria, all of which are SHI countries, have developed their own DRG systems, based on disease- and treatment-based classifications. These systems also aim to cover outpatient and inpatient services in order to maintain or foster the integration of health sectors. These countries thus address the problem of the institutional division of inpatient and outpatient services specific to SHI countries.

workshops aiming at the standardization of DRGs at the European level; however, such efforts failed due to distinct national conditions (Rodrigues 1993).

Why did DRGs diffuse? Gilardi, Flüglister, and Luyet (2009) show that the probability to implement DRG-based hospital financing increases with the ineffectiveness of the existing financing scheme and the relative success of DRG adopters in containing public health spending. This statistical relationship is interpreted as evidence for policy learning. Due to a lack of data, DRG success is crudely measured as the development of total public health care costs relative to other countries. However, it seems less plausible that policy makers use those crude indicators as a basis for their decisions, considering all the effort related to the implementation of a DRG system. To follow countries with a favorable performance of public health care spending seems to support emulation, in particular, since DRGs often serve different purposes than cost containment, such as quality control and a better allocation of funds within a given budget.

Hence, the cross-national diffusion of ideas, either as a process of learning or emulation, may serve as a mechanism for structural innovation. But why do we consider DRGs to contribute to the hybridization of health care systems? The motives for the implementation of DRGs differ according to health care system types and the related financing schemes for hospitals. In the United States, the primary motivation for DRGs and prospective financing was the desire to control costs via hierarchical regulation of providers. This aim was most prominent in a hospital financing scheme based on fee-for-service remuneration and few instruments to curb costs. NHS and SHI countries were driven by different motivations (Donaldson and Magnussen 1992). Unlike the United States, most NHS and SHI countries managed to implement fixed budgets on hospitals in order to impede excessive growth. Budgeting, however, involves no incentives for efficient service delivery and may lead to rationing and waiting lists. Here, concerns for increasing productivity were more prominent. The motivation for introducing DRGs is "to give hospitals incentives to act efficiently by encouraging them to (a) increase their activity, (b) increase their efficiency while (c) holding costs constant" (Donaldson and Magnussen 1992: 60–61). Yet so far, many NHS hospitals have been unable to calculate unit cost, a basic prerequisite for promoting competition among hospitals. Taking the English case as an example, the HRGs served to bring cost transparency to the health care system, paving the way for competition as intended by the purchaser-provider split. Consequently, some decentralized NHS systems regularly use their version of DRGs to account for cross-regional provision of care, for example, in the Scandinavian countries and Italy. Similarly, Norwegian DRGs determine regional budgets, whereas the mechanism of allocating funds to hospitals is left to the regions. Ireland and Bel-

gium aim at incentives to reduce length of stays (Lüngen and Lauterbach 2000; Rochell and Roeder 2001). With the introduction of DRGs, German policy makers expected to increase transparency, intensify competition to lead to efficient resource allocation within and between hospitals, and decrease the length of stays (Advisory Council for the Concerted Action in Health Care 2007). The introduction of DRGs must be considered as a regulatory instrument to bring competition into a system that has been dominated by the self-regulation of corporate actors (Frisina and Cacace 2009). The developments across systems may be interpreted as common efficiency pressure, which translates differently into health care systems due to their implemented hospital financing scheme and related institutional conditions to control costs and enhance productivity. At least for the countries we take as representatives for the most pure types of health care systems—the United States, Germany, and England—the introduction of DRGs supports the hybridization thesis. While the private, competitionbased U.S. health care system introduces hierarchical elements to steer provider behavior, the public NHS system uses DRGs in order to introduce transparency to facilitate more competitive behavior and increases in productivity. In Germany, representing SHI, a blend of both objectives might apply to the introduction of DRGs—that is, the implementation of competition as a mechanism in its own right and the hierarchical governance of traditionally self-regulated providers. Thus, health care systems have adopted DRGs and transformed them according to the needs of their system type.

#### Conclusion

The objective of this article is to contribute to the explanation of change in health care systems. Regarding the state's role in health care, we argue that convergence and the common trends observed in the health care systems of twenty-three OECD countries can be explained by the reaction of distinct system types to problem pressure. In our examination of the changes for NHS, SHI, and PHI, we demonstrate that the diversity of policy responses finally ends in convergence among systems.

Our underlying modified problem pressure hypothesis explains the introduction of certain health policy changes as a response to systemspecific deficits. This, however, is an incomplete explanation as long as the mechanism that transforms functional necessities into action remains unspecified. We therefore must consider the role of policy makers and their perception of functional deficits that trigger reforms. Hence, perceptions and ideas have to be accounted for. Ideas travel around the world and influence national policy makers. These ideas, however, are perceived in the context of national and system-specific experiences. Using DRGs for inpatient services as an example, we have shown how cross-national influences as well as system-specific problems contribute to the implementation of innovative policy instruments. When we examine the "pure" representatives of certain health care systems, we find that these systems employ DRGs according to their functional requirements. In line with their policy objectives, these systems utilize DRGs to introduce new modes of regulation. Yet integrating elements that are not system specific leads to the hybridization of health care systems and therefore to convergence. In this sense, we may also consider the spread of DRGs as a convergent trend, even if they seem to be a uniform instrument and also because their use and implementation differs from country to country.

### References

- Abel-Smith, B., and E. Mossialos. 1994. Cost Containment and Health Care Reform: A Study of the European Union. *Health Policy* 28:89–132.
- Advisory Council for the Concerted Action in Health Care. 2007. Cooperation and Responsibility Prerequisites for Target-Oriented Health Care. Report for 2007, abridged. www.svr-gesundheit.de/Gutachten/Gutacht07/KF2007-engl.pdf.
- Ashton, T. 2005. Recent Developments in the Funding and Organisation of the New Zealand Health System. Australia and New Zealand Health Policy, vol. 2, May 7. www.anzhealthpolicy.com/content/2/1/9.
- Béland, D. 2005. Ideas and Social Policy: An Institutional Perspective. Social Policy and Administration 39:1-18.
- Bennett, C. J. 1991. What Is Policy Convergence and What Causes It? British Journal of Political Science 21:215-233.
- Bevan, G., and R. Robinson. 2005. The Interplay between Economic and Political Logics: Path Dependency in Health Care in England. Journal of Health Politics, *Policy and Law* 30:53-78.
- Blomqvist, P. 2004. The Choice Revolution: Privatization of Swedish Welfare Services in the 1990s. Social Policy and Administration 38:139–155.
- Burgoon, B. 2001. Globalization and Welfare Compensation: Disentangling the Ties That Bind. *International Organization* 55:509–551.
- Busse, R., T. van der Grinten, and P.-G. Svensson. 2002. Regulating Entrepreneurial Behavior in Hospitals: Theory and Practice. In Regulating Entrepreneurial Behavior in European Health Care Systems, ed. R. B. Saltman, R. Busse, and E. Mossialos, 126-145. Buckingham, UK: Open University Press.
- Cacace, M. 2010. Das Gesundheitssystem der USA-Governance Strukturen

- Staatlicher und Privater Akteure (The Health Care System of the United States— Governance Structures of Public and Private Actors). Frankfurt: Campus.
- Cacace, M., R. Götze, A. Schmid, and H. Rothgang. 2008. Explaining Convergence and Common Trends in the Role of the State in OECD Healthcare Systems. Harvard Health Policy Review 9:5-16.
- Coffey, R. M., and D. Z. Louis. 2001. Fünfzehn Jahre DRG-basierte Krankenhausvergütung in den USA (Fifteen Years of DRG-Based Hospital Remuneration in the USA). In Krankenhaus-Report 2000, ed. M. Arnold, M. Litsch, and H. Schellschmidt, 33-47. Stuttgart: Schattauer.
- Colombo, F., and N. Tapay. 2004. Private Health Insurance in OECD Countries: The Benefits and Costs for Individuals and Health Systems. Paris: Organisation for Economic Co-operation and Development (OECD).
- Companje, K.-P., K. F. E. Veraghtert, R. H. M. Hendriks, and B. E. M. Widdershoven. 2009. Two Centuries of Solidarity. Amsterdam: Aksant.
- De Alessi, L. 1989. The Effect of Institutions on the Choices of Consumers and Providers of Health Care. Journal of Theoretical Politics 1:427-458.
- de Pouvourville, G. 2004. Hospital Funding and Competition. European Journal of *Health Economics* 5:3–5.
- Donaldson, C., and J. Magnussen. 1992. DRGs: The Road to Hospital Efficiency. Health Policy 21:47-64.
- Eeckloo, K., L. Delesie, and A. Vleugels. 2007. Where Is the Pilot? The Changing Shapes of Governance in the European Hospital Sector. Journal of the Royal Society for the Promotion of Health 127:78-86.
- Erlandsen, E. 2007. Improving the Efficiency of Health Care Spending: Selected Evidence on Hospital Performance. OECD Economics Department Working Paper no. 555. Paris: OECD.
- Ess, S. M., S. Schneeweiss, and T. D. Szucs. 2003. European Healthcare Policies for Controlling Drug Expenditure. *Pharmaeconomics* 21:89–103.
- European Observatory on Health Care Systems. 2000. Health Care Systems in Transition—Switzerland. Copenhagen: World Health Organization, Regional Office for Europe.
- Ferrera, M., A. Hemerijck, and M. Rhodes. 2001. The Future of the "European Social Model" in the Global Economy. Journal of Comparative Policy Analysis 3:163-190.
- Figueras, J., J. C. Robinson, and E. Jakubowski, eds. 2002. Purchasing to Improve Health Systems Performance. Maidenhead, UK: Open University Press.
- Fischer, W. 2001. Grundzüge von DRG-Systemen (Main Features of DRG Systems). In Krankenhaus-Report 2000, ed. M. Arnold, M. Litsch, and H. Schellschmidt, 13-31. Stuttgart: Schattauer.
- Fischer, W. 2007. Diagnosis Related Groups (DRGs) und verwandte Patientenklassifkationssysteme (Diagnosis Related Groups [DRGs] and Related Patient Classification Systems). Wolfertswil: Zentrum für Informatik und wirtschaftliche Medizin.
- Forgione, D. A., T. E. Vermeer, K. Surysekar, J. A. Wrieden, and Catherine Plante. 2005. DRGs, Costs, and Quality of Care: An Agency Theory Perspective. Financial Accountability and Management 21:291-308.

- Freeman, R. 2000. The Politics of Health in Europe. Manchester: Manchester University Press.
- Freeman, R. 2006. Learning in Public Policy. In The Oxford Handbook of Public Policy, ed. M. Moran, M. Rein, and R. E. Goodin, 365-386. Oxford: Oxford University Press.
- Frisina, L., and M. Cacace. 2009. DRGs and the Professional Independence of Physicians. In Handbook of Research on IT Management and Clinical Data Administration in Healthcare, ed. A. N. Dwivedi, 173-191. Hershey, PA: IGI Global.
- Gerlinger, T. 2009. Competitive Transformation and State Regulation in Health Insurance Countries: Germany, Switzerland, and the Netherlands Compared. In Governance of Welfare State Reform: A Cross National and Cross Sectional Comparison of Policy and Politics, ed. I. Dingeldey and H. Rothgang, 145-175. Cheltenham: Edward Elgar.
- Giaimo, S. 2002. Markets and Medicine. The Politics of Health Care Reform in Britain, Germany, and the United States. Ann Arbor: University of Michigan Press.
- Giaimo, S., and P. Manow. 1999. Adapting the Welfare State: The Case of Health Care Reform in Britain, Germany, and the United States. Comparative Political Studies 32:967-1000.
- Gilardi, F., K. Flüglister, and S. Luyet. 2009. Learning from Others: The Diffusion of Hospital Financing Reforms in OECD Countries. Comparative Political Studies 42:549 – 573.
- Glied, S. 2001. Health Insurance and Market Failure since Arrow. Journal of Health Politics, Policy and Law 26:957-965.
- Götze, R., M. Cacace, and H. Rothgang. 2009. Von der Risiko- zur Anbieterselektion. Eigendynamiken wettbewerblicher Reformen in Gesundheitssystemen des Sozialversicherungstyps (From Risk Selection to Selective Contracting, Market Reforms in Social Health Insurance Systems). Zeitschrift für Sozialreform 55:149–175.
- Gray, B. H. 1991. The Profit Motive and Patient Care: The Changing Accountability of Doctors and Hospitals. Cambridge, MA: Harvard University Press.
- Green-Pederson, C. 2004. The Dependent Variable Problem within the Study of Welfare State Retrenchment: Defining the Problem and Looking for Solutions. Journal of Comparative Policy Analysis 6:3-14.
- Greer, S. L. 2006. Uninvited Europeanization: Neofunctionalism and the EU in Health Policy. *Journal of European Public Policy* 13:134–152.
- Greß, S., M. Manouguian, and J. Wasem. 2007. Health Insurance Reform in the Netherlands. CESifo DICE Report 1:63–67.
- Grignon, M. 2006. The Question of Regulating Health Systems. In Reforms and Regulation of Health Care Systems in Europe, ed. F. Leclerc, 43-62. Paris: DREES.
- Hacker, J. S. 1998. The Historical Logic of National Health Insurance: Structure and Sequence in the Development of British, Canadian, and U.S. Medical Policy. Studies in American Political Development 12:57-130.
- Hacker, J. S. 2004. Dismantling the Health Care State? Political Institutions, Public Policies and the Comparative Politics of Health Care Reform. British Journal of Political Science 34:693-724.

- Holzinger, K., and C. Knill. 2005. Causes and Conditions of Cross-national Policy Convergence. *Journal of European Public Policy* 12:775–796.
- Höppner, K., S. Greß, H. Rothgang, and J. Wasem. 2006. Instrumente der Risikoselektion—Theorie und Empirie [Instruments of Risk-Selection: Theory and Practice]. In Jahrbuch Risikostrukturausgleich 2006—zehn Jahre Kassenwechsel [Yearbook Risk-Equalization Scheme 2006: One Decade of Free Choice of Sickness Funds], ed. D. Göpffarth, S. Greß, K. Jacobs, and J. Wasem, 119-144. St. Augustin, Germany: Asgard.
- International Monetary Fund (IMF). 2007. World Economic Outlook: Spillovers and Cycles in the Global Economy. Washington, D.C.: IMF.
- Keen, J., D. W. Light, and N. Mays. 2001. Public-Private Relations in Health Care. London: King's Fund.
- Klein, R. 2005. The Public-Private Mix in the UK. In The Public-Private Mix for Health, ed. A. Maynard, 43-62. Oxford: Radcliffe.
- Laske-Aldershof, T., E. Schut, K. Beck, S. Gress, A. Shmueli, and C. van de Voorde. 2004. Consumer Mobility in Social Health Insurance Markets: A Five-Country Comparison. *Applied Health Economics and Health Policy* 3:229–241.
- Laugesen, M. 2005. Why Some Market Reforms Lack Legitimacy in Health Care. Journal of Health Politics, Policy and Law 30:1065-1100.
- Le Grand, J. 1999. Competition, Cooperation, or Control? Tales from the British National Health Service. *Health Affairs* 18 (3): 27–39.
- Leidl, R. 2001. Konvergenz der Gesundheitssysteme in der Europäischen Union [Convergence of Health Care Systems in the European Union]. Gesundheitsökonomie und Qualitätsmanagement 6:44-53.
- Leister, J. E., and J. Stausberg. 2005. Comparison of Cost Accounting Methods from Different DRG Systems and Their Effect on Health Care Quality. Health Policy
- Lüngen, M., and I. Lapsley. 2003. The Reform of Hospital Financing in Germany: An International Solution? Journal of Health Organization and Management 17:360-372.
- Lüngen, M., and K. W. Lauterbach. 2000. Nutzung von Diagnosis Related Groups (DRG) im internationalen Vergleich [An International Comparison of the Utilization of Diagnosis Related Groups (DRG)]. Chirurg 71:1288–1295.
- Maarse, H. 2006. The Privatization of Health Care in Europe: An Eight-Country Analysis. *Journal of Health Politics, Policy and Law* 31:981 – 1014.
- Majone, G. 1997. From the Positive to the Regulatory State: Causes and Consequences of Changes in the Mode of Governance. Journal of Public Policy 17:139–167.
- Marmor, T. 2000. The Politics of Medicare. 2nd ed. New York: De Gruyter.
- Marmor, T., R. Freeman, and K. Okma. 2005. Comparative Perspectives and Policy Learning in the World of Health Care. Journal of Comparative Policy Analysis 7:331 – 348.
- Marmor, T., and G. J. McKissick. 2000. Medicare's Future: Fact, Fiction, and Folly. American Journal of Law and Medicine 26:225-253.
- Marmor, T., M. Schlesinger, and R. Smithey. 1986. A New Look at Nonprofits: Health Care Policy in a Competitive Age. *Yale Journal on Regulation* 3:313–349.

- Moran, M. 1995. Explaining Change in the National Health Service: Corporatism, Closure, and Democratic Capitalism. *Public Policy and Administration* 10 (2): 21–33.
- ——. 1998. Explaining the Rise of the Market in Health Care. In *Markets and Health Care: A Comparative Analysis*, ed. W. Ranade, 17–31. London: Longman.
- Mossialos, E., and M. McKee. 2002. EU Law and the Social Character of Health Care. Brussels: Peter Lang.
- Nullmeier, F., and T. Klenk. 2009. The Role of Enterprises in Welfare Provision: Enterprises as Producers of Welfare Goods. Paper presented at the seventh ESPAnet conference, September 17–19, Urbino, Italy. www.espanet-italia.net/conference 2009.
- Oberlander, J. 2003. The Political Life of Medicare. Chicago: University of Chicago Press.
- OECD. 2009. Health Data 2009. July 1. Paris: OECD.
- Oliver, A., and E. Mossialos. 2005. European Health Systems Reforms: Looking Backward to See Forward? In Legacies and Latitude in European Health Policy, ed. A. Oliver, E. Mossialos, and D. Wilsford, special issue, *Journal of Health Politics*, *Policy and Law* 30:7–28.
- Oliver, A., E. Mossialos, and A. Maynard. 2005. The Contestable Nature of Health Policy Analysis. *Health Economics* 14 (suppl. 1): S3–S6.
- Pedersen, K. M. 2005. The Public-Private Mix in Scandinavia. In *The Public-Private Mix for Health*, ed. A. Maynard, 161–190. Oxford: Radcliffe.
- Pollock, A. M. 2004. NHS plc: The Privatisation of Our Health Care. London: Verso
- Powell, W. W., and P. J. DiMaggio. 1991. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organization Fields. In *The New Institutionalism in Organizational Analysis*, ed. W. W. Powell and P. J. DiMaggio, 63–83. Chicago: University of Chicago Press.
- Rice, T. 1997. Can Markets Give Us the Health System We Want? *Journal of Health Politics, Policy and Law* 22:383–426.
- Rieger, E., and S. Leibfried. 2003. *Limits to Globalization: Welfare States and the World Economy*. Cambridge: Polity Press.
- Rochell, B., and N. Roeder. 2001. DRG-basierte Entgeltsysteme in Europa [DRG-Based Remuneration Systems in Europe]. In *Krankenhaus-Report 2000: Schwerpunkt: Vergütungsreform mit DRGs*, ed. M. Arnold, M. Litsch, and H. Schellschmidt, 49–65. Stuttgart: Schattauer.
- Rodrigues, J.-M. 1993. DRGs: Origin and Dissemination throughout Europe. In *Diagnosis Related Groups in Europe*, ed. M. Casas and M. M. Wiley, 17–29. Berlin: Springer.
- Rodrigues, J.-M., and B. Trombert-Paviot. 2001. The Case Mix in France: Is There a French Way from Problem to Paradigm in Healthcare? The DRG/PMSI SAGA. In *Case Mix: Global Views, Local Action: Evolution in Twenty Countries*, ed. F. H. Roger France, I. Mertens, M.-C. Closon, and J. Hofdijk, 57–66. Amsterdam: IOS Press
- Roger France, F. H. 2003. Case Mix Use in 25 Countries: A Migration Success but

- International Comparison Failure. International Journal of Medical Informatics 70:215-219.
- Rothgang, H. 2006. Die Regulierung von Gesundheitssystemen in vergleichender Perspektive: Auf dem Weg zur Konvergenz? [Is There Convergence in Health Care System Regulation? A Comparative Perspective]. In Soziologie der Gesundheit [The Sociology of Health], ed. C. Wendt and C. Wolf, special issue, Kölner Zeitschrift für Soziologie und Sozialpsychologie 58 (special issue 46): 298-319.
- -. 2009. Converging Governance in Healthcare Systems? In Governance of Welfare State Reform: A Cross National and Cross Sectoral Comparison of Health, Pension, Labour Market, and Educational Policies, ed. I. Dingeldey and H. Rothgang, 18-39. Cheltenham: Edward Elgar.
- Rothgang, H., M. Cacace, L. Frisina, and A. Schmid. 2008. The Changing Public-Private-Mix in OECD Health-care Systems. In Welfare State Transformations: Comparative Perspectives, ed. M. Seeleib-Kaiser, 132-146. Basingstoke: Palgrave Macmillan.
- Rothgang, H., M. Cacace, S. Grimmeisen, and C. Wendt. 2005. The Changing Role of the State in Health Care Systems. In Transformations of the State? ed. S. Leibfried and M. Zürn, 187–212. Cambridge: Cambridge University Press.
- Rothgang, H., M. Cacace, S. Grimmeisen, and C. Wendt. 2010. The State and Healthcare: Comparing OECD Countries. Basingstoke: Palgrave Macmillan.
- Rothgang, H., and R. Götze. 2009. Von negativer zu positiver Integration? Veränderungen in der europäischen Gesundheitspolitik am Beispiel der Patientenmobilität [From Negative to Positive Integration? Changes in EU Health Policy in the Field of Patient Mobility]. In Wohlfahrtsstaatlichkeit in entwickelten Demokratien. Herausforderungen, Reformen und Perspektiven [The Welfare State in Modern Democracies: Challenges, Reforms, and Outlook], ed. H. Obinger and E. Rieger, 517-544. Frankfurt: Campus.
- Rothgang, H., K. Höppner, L. Borchert, R. Becker, and G. Glaeske. 2007. Differenzierung privater Krankenversicherungstarife nach Geschlecht: Bestandaufnahme, Probleme, Optionen [Gender Mainstreaming in Private Health Insurance Tariffs: State of the Art, Problems, Options]. Baden-Baden: Nomos.
- Rothschild, M., and J. Stiglitz. 1976. Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information. Quarterly Journal of Economics 90:629-649.
- Ruggie, M. 1992. The Paradox of Liberal Intervention: Health Policy and the American Welfare State. American Journal of Sociology 97:919–944.
- Saltman, R. B. 1990. Competition and Reform in the Swedish Health System. Milbank Quarterly 68:597-618.
- Saltman, R. B., and J. Figueras. 1997. European Health Care Reform: Analysis of Current Strategies. Copenhagen: World Health Organization, Regional Office for Europe.
- Sandier, S., V. Paris, and D. Polton. 2004. Health Care Systems in Transition: France. Copenhagen: World Health Organization, Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies.
- Schmid, A., and R. Götze. 2009. Policy Learning in Health Care System Reform—

- The Case of Diagnosis Related Groups. *International Social Security Review* 62:21–40.
- Scott, C. 2001. Public and Private Roles in Health Care Systems—Reform Experience in Seven OECD Countries. Buckingham, UK: Open University Press.
- Stone, D. A. 2000. United States. *Journal of Health Politics, Policy and Law* 25:953–958.
- Swank, D. 2002. *Global Capital, Political Institutions, and Policy Change in Developed Welfare States*. Cambridge: Cambridge University Press.
- Tuohy, C. H. 1999. Accidental Logics. New York: Oxford University Press.
- Tuohy, C. H., C. M. Flood, and M. Stabile. 2004. How Does Private Finance Affect Public Health Care Systems? Marshalling the Evidence from OECD Nations. *Journal of Health Politics, Policy and Law* 29:359–396.
- U.S. Office of Management and Budget (OMB). 2008. *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2009*. Washington, DC: United States OMB.
- van de Ven, W. P. M. M., K. Beck, C. van de Voorde, J. Wasem, and I. Zmora. 2007. Risk Adjustment and Risk Selection in Europe: Six Years Later. *Health Policy* 83:162–179.
- van Essen, A. M., and P. Pennings. 2009. Balancing Competing Goals: Exploring the Political Controversy on New Hospital Payment Systems in Germany, Netherlands, and the UK. *Zeitschrift für vergleichende Politikwissenschaft* 3:59–80.
- White, J. 2007. Markets and Medical Care: The United States, 1993–2005. *Milbank Quarterly* 85:395–448.
- Wiley, M. M. 1992. Hospital Financing Reform and Case-Mix Measurement: An International Review. *Health Care Financing Review* 13 (4): 119–133.
- Wilsford, D. 1995. States Facing Interests: Struggles over Health Care Policy in Advanced, Industrial Democracies. *Journal of Health Politics, Policy and Law* 20:571–613.
- Woolhandler, S., T. Campbell, and D. U. Himmelstein. 2003. Costs of Health Care Administration in the United States and Canada. *New England Journal of Medicine* 349:768–775.