

INTERNATIONAL MONETARY FUND

**Macro-Fiscal Implications of Health Care Reform in  
Advanced and Emerging Economies—Case Studies**

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## I. INTRODUCTION

1. **This supplement provides country case studies on public health care expenditures and reform experiences in eight advanced and six emerging market economies.** The case studies for the advanced economies seek to highlight specific episodes of success in containing public health spending during the past 30 years. For the emerging economies, the case studies take a broader approach and examine reform experiences and challenges during the past two decades rather than focusing exclusively on episodes of successful reform. The lessons from the case studies for other countries are integrated into the main Board paper.
2. **Section II examines the advanced economies.** In each of these episodes, the countries achieved a reduction in the ratio of public health spending to GDP that was sustained for a period of time, as well as a moderation in real spending growth rates.<sup>1</sup> The advanced countries and time periods covered are Canada (late 1970s and 1990s); Finland (1990s); Germany (2000–07); Italy (1990s); the Netherlands (early 1980s and 1990s); Sweden (1980s and early 1990s); the United Kingdom (1980s); and the United States (1990s). Each case study provides an overview of the health care system and comparative data on key health indicators and spending relative to the OECD average; a description of the reforms and an assessment of the impact of health care reforms on spending trends before, during, and after the reforms; an assessment of the durability of the reforms; and lessons.
3. **Section III examines emerging economies.** The case studies, covering Estonia, Hungary, China, Thailand, Chile, and Mexico, were selected to provide a description of the diverse challenges facing emerging economies across emerging Europe, emerging Asia, and Latin America. Health care systems and reform experiences vary substantially across emerging economies, and the case studies illuminate both successes and remaining weaknesses in these systems. Each case study provides an overview of the health care system and comparative data on key health indicators relative to the appropriate comparator group (in terms of level of GDP per capita); a description of the experience with health reforms; the remaining challenges confronting the health care system; and lessons.
4. **The appendix provides a typology of reforms adopted by advanced economies.** The description of reforms offers a source of reference for comparing the reforms in the case studies with the general range of reforms undertaken in other economies. These reforms can be grouped into three categories: (i) macro-level controls, constraining inputs, outputs, and prices; (ii) micro-level reforms, improving public management and coordination, contracting methods and efficiency; and (iii) demand-side reforms.

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<sup>1</sup> For all of the countries, the five-year moving average of public health spending to GDP declined.

## II. ADVANCED ECONOMIES

### A. Canada

#### Overview of health care system

5. The health care system in Canada (known as Medicare) is a public contract model: publicly financed with private provision. Canada has maintained a predominantly tax-financed public system since the 1960s, and gatekeeping by primary care physicians is a central element.<sup>2</sup> The health care system is decentralized to the provinces and provides universal coverage.<sup>3</sup> In 2008, total health spending to GDP was 10.4 percent, compared with the OECD advanced economies average of 9.3, while public health spending was 7.3 percent of GDP, compared with the OECD average of 6.9. Private spending (in percent of GDP) has roughly doubled since 1980 and made up 30 percent of total health expenditure in 2008.

**Table 1. Canada: Key Health Indicators<sup>1</sup>**

	1970	1980	1990	2000	2008	OECD 2008 <sup>2</sup>
GDP per capita (US\$, PPP)	4,272	11,066	19,565	28,482	39,288	35,617
Primary balance (percent of GDP)	...	1.4	3.6	10.1	4.0	1.5
General government primary expenditure (percent of GDP)	...	36.6	36.5	34.9	34.9	40.4
Total health spending (percent of GDP) <sup>3</sup>	6.9	7.0	8.9	8.8	10.4	9.3
public (percent of GDP)	4.9	5.1	6.3	6.2	7.3	6.9
private (percent of GDP)	2.1	1.7	2.3	2.6	3.1	2.5
Public health spending per capita (US\$)	190	582	1,387	1,465	3,293	2,028
Out-of-pocket spending (share of total health spending)	...	...	14.4	15.9	14.7	16.8
Formal health care coverage (share of population)	100.0	100.0	100.0	100.0	100.0	99.0
Life expectancy (years at birth)	72.9	75.3	77.6	79.0	80.7	79.9
Measles immunization (share of children 12-23 months)	...	...	85.0	96.2	92.7	89.6
Physicians (per 1,000 population)	...	...	...	...	...	3.1
Hospital beds (per 1,000 population)	...	6.8	6.0	3.8	3.5	5.6

Sources: OECD; WHO; WDI; and IMF staff estimates.

<sup>1</sup> Years as indicated or latest available.

<sup>2</sup> OECD advanced economy unweighted average.

<sup>3</sup> Health spending components may not add up to the total. Public health spending data (as a share of GDP) have been adjusted to account for structural breaks.

<sup>2</sup>Gatekeeping is a system in which a primary physician manages a patient's health care services, coordinates referrals, and helps control healthcare costs by screening out unnecessary services.

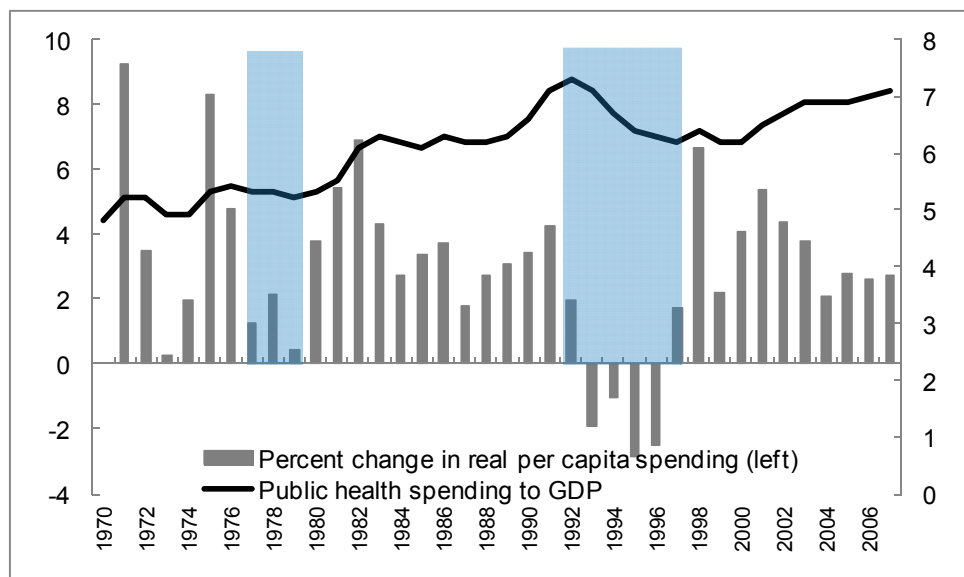
<sup>3</sup>Universal health coverage has a long history in Canada. Universal hospital coverage and universal access to essential medical services were introduced in all provinces by 1958 and 1971, respectively.

## Experience with health reforms: late 1970s and 1990s

### *Spending trends*

6. Canada experienced a significant increase in public health expenditure between 1970 and 1992, despite a brief period of stabilization in the late 1970s as recessions in the early 1980s and early 1990s led to jumps in the share of health spending to GDP. Over this period, real per capita public health care expenditure in Canada increased at an average annual rate of 3–4 percent, and spending rose to 6.9 percent of GDP from 4.8 percent in 1970. From 1992 onwards, the government exerted a strong cost-containment policy and the ratio of public health expenditure to GDP declined to 6.2 by 1999. Between 1993 and 1998, the real growth rate of per capita public health spending averaged -1.2 percent. Public health expenditure increased by 3.5 percent per year in the 2000s. Public health expenditure in Canada increased rapidly as a share of GDP during recessions and was generally followed by periods of cost containment.

**Figure 1. Canada: Public Health Spending**  
(Percent)



Sources: OECD Health Data and IMF staff estimates.

### *Cost containment reforms*

7. The most successful cost-containment reforms in Canada took place in the late 1970s and during the 1990s. Health reforms focused on the introduction of budget caps, supply constraints, and price controls. Budget caps and price controls were part of a broader fiscal

consolidation effort that took place during the mid-1990s and delivered fiscal surpluses for over a decade.

8. **Budget caps and supply constraints.** A 1977 federal-provincial fiscal program<sup>4</sup> reformed funding arrangements for health care, including hospitalization, medical care, and extended health care. Under the new system, the federal government adjusted funding to each province according to an “escalator” that took into consideration per capita growth and inflation—federal transfers were established prospectively and were no longer based on actual provincial expenditures. Initially, each province received an equal per capita transfer for health insurance. The provincial and territorial governments had flexibility to spend the transfer based on their needs and priorities.<sup>5</sup> Per capita transfers were frozen in the early 1990s, before resuming in the late 1990s, but at a rate below GDP growth.

9. In 1992, budgets for hospitals and physicians were capped in one of the most important cost-containment policies of the 1990s. Since nearly all hospitals and physicians are financed by federal funds in the Canadian health system, and implementing a budget cap was relatively simple. Canadian physicians are mostly funded by fee-for-services, reimbursed by the public system. The fee-for-service rates were also controlled by the federal government in the 1990s and were set to decline once having reached a certain level of service.<sup>6</sup> In addition, the federal government limited the enrolment in medical schools starting in 1991, effectively imposing supply constraints—albeit with a significant time lag.

10. **Price controls.** Pharmaceutical policies differ substantially among the provinces. Since 1994 reimbursement price freezes have been used in at least two provinces (Ontario and Québec). British Columbia was the first province using internal or therapeutic price referencing.<sup>7</sup>

### *Impact and durability of reforms*

11. The growth rate of health care expenditure per capita declined from 15.7 percent in 1975 to 1.2 percent in 1977. The impact of spending can also be examined by looking at

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<sup>4</sup>The legislative act that incorporates these reforms was the Established Program Financing Act (1977).

<sup>5</sup>Federal funding for provinces had two components: a tax transfer and a cash transfer. Since 1977, the cash component was derived by linking the growth rate of the transfer to the growth rate in per capita output—in effect, a budget cap. This “escalator” factor was extended to all transfers in 1982. Since then, the government has regularly adjusted the escalator to contain costs: the escalator was reduced twice, in 1986 and 1989, to increase 2 percentage points and 3 percentage points below the growth of Gross National Product, respectively.

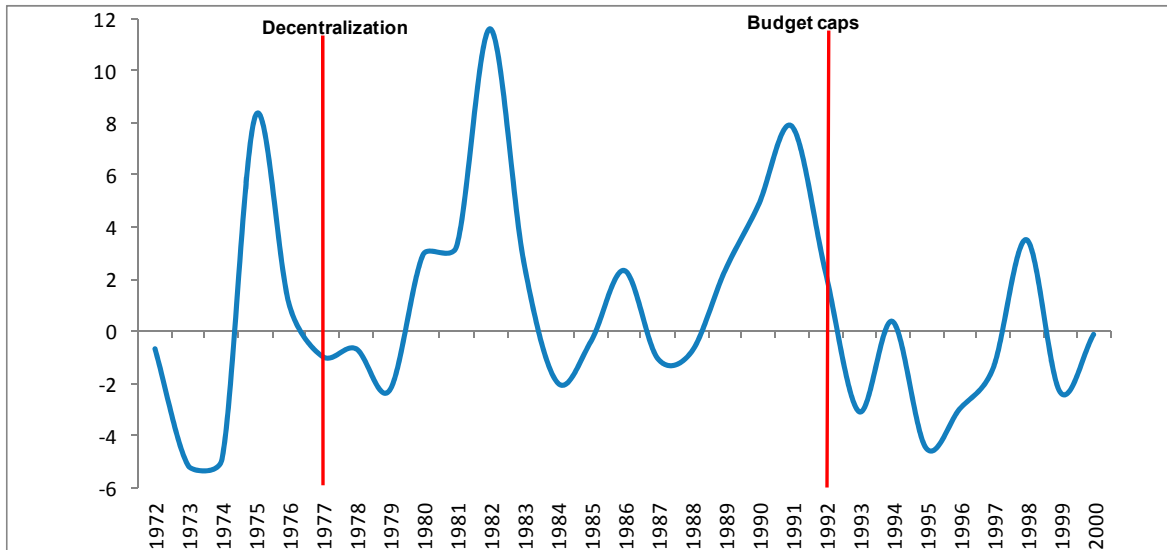
<sup>6</sup>In some Canadian provinces where individual physicians are reimbursed according to a fee-for-service schedule, once a certain billing threshold is reached, a declining fraction of the negotiated fee is reimbursed.

<sup>7</sup>Therapeutic price referencing relates the value of an innovative patented product to the price of the established treatments on the market, including off-patent products deemed therapeutically equivalent.

excess cost growth—that is, real growth of per capita public health spending minus real per capita GDP growth. The average excess cost growth in the five years following the 1977 reform was 2.9 percent compared with 0.6 percent in the five preceding years.<sup>8</sup> The cost-containment effects of federal-provincial funding arrangement of 1977 were thus short lived and excess cost growth increased after two years.

12. The cost-containment reforms in the 1990s considerably reduced public expenditure and were more durable than the 1970s reform. Per capita public spending on health stood at US\$1,299 in 1996 compared with US\$1,516 in 1991. Excess cost growth was high during the deep recession in early 1990s—although real growth in total public expenditure was relatively strong as well. However, annual excess cost growth averaged -2.3 over the rest of the 1990s following the cost-containment efforts. Public expenditure on in-patient care declined strongly, from US\$743 in 1991 to US\$563 in 1995. As a result of the budget squeeze, hospitals that reduced the number of beds were closed or merged. This led to a decline in the number of both hospitals and beds over the 1990s (Rapoport and others, 2008). Reductions in spending during the 1990s may also have resulted in increases in waiting times for treatment of breast cancer (Mayo and others, 2001).

**Figure 2. Canada: Excess Cost Growth and Key Reform Episodes**  
(Percent)



Source: OECD Health Database; and IMF staff estimates.

<sup>8</sup>Excess cost growth is defined as the difference between real public health spending growth and real GDP growth.

13. The structure of health financing has been affected by reform. The share of public spending in total health spending declined from 74 percent in 1990 to 70 percent in 2008. Nonetheless, per capita spending in Canada has been higher than the average of OECD countries through the last four decades. As an example, Australia with similar health outcomes managed to spend on average less on health care services.

### **Lessons**

14. The Canadian experience shows that budget caps and supply constraints can be successful in limiting increases in health care spending. A single-payer system can facilitate the implementation of cost-cutting reforms and help control administrative costs. While health indicators remain strong in Canada, this strength is achieved with a lower level of health sector inputs (e.g., hospital beds per thousand). For public contract systems such as Canada's, an important issue is the role of private insurance in the provision of health services. At present, this is allowed only for services not covered by the public sector (pharmaceuticals and dental services).<sup>9</sup> Expanding the role of private insurance in Canada could potentially reduce waiting lists for services, but would likely increase total health spending.

## **B. Finland**

### **Overview of health care system**

15. The health care system in Finland is based on public insurance and provision and offers universal coverage. There is a public spending target for health care, which however, is not binding. Patients have limited choice and gatekeeping is strictly applied. The system is decentralized, with municipalities responsible for health care delivery. Municipal taxes, state subsidies and user charges are the financing sources for municipal services, including health care. In 2008, total health spending to GDP was 8.4 percent, below OECD advanced economy average of 9.3 percent. Public expenditure on health services was 6.1 of GDP. The role of the private sector is small, although it has grown through the last two decades—it peaked at 29 percent of total health expenditure in 2000 and stood at 26 percent in 2008.

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<sup>9</sup>In the United Kingdom, in contrast, private insurance is allowed for a large number of services and generally used as a top up to the NHS, although many treatments are not covered or are restricted.



**Table 2. Finland: Key Health Indicators<sup>1</sup>**

	1970	1980	1990	2000	2008	OECD 2008 <sup>2</sup>
GDP per capita (US\$, PPP)	3,328	9,033	17,608	25,653	35,853	35,617
Primary balance (percent of GDP)	...	3.1	7.0	9.6	5.6	1.5
General government primary expenditure (percent of GDP)	...	39.6	42.2	40.8	40.8	40.4
Total health spending (percent of GDP) <sup>3</sup>	5.5	6.3	7.7	7.2	8.4	9.3
public (percent of GDP)	3.3	4.1	5.1	5.1	6.1	6.9
private (percent of GDP)	1.5	1.3	1.5	2.1	2.2	2.5
Public health spending per capita (US\$)	99	549	1,752	1,203	3,179	2,028
Out-of-pocket spending (share of total health spending)	23.8	18.4	15.5	22.3	19.4	16.8
Formal health care coverage (share of population)	100.0	100.0	100.0	100.0	100.0	99.0
Life expectancy (years at birth)	70.8	73.6	75.0	77.7	79.5	79.9
Measles immunization (share of children 12-23 months)	...	70.0	87.0	96.0	98.7	89.6
Physicians (per 1,000 population)	...	...	2.2	2.5	2.7	3.1
Hospital beds (per 1,000 population)	...	...	8.3	7.5	6.5	5.6

Sources: OECD, WHO, WDI, and IMF staff estimates.

<sup>1</sup> Years as indicated or latest available.

<sup>2</sup> OECD advanced economy unweighted average.

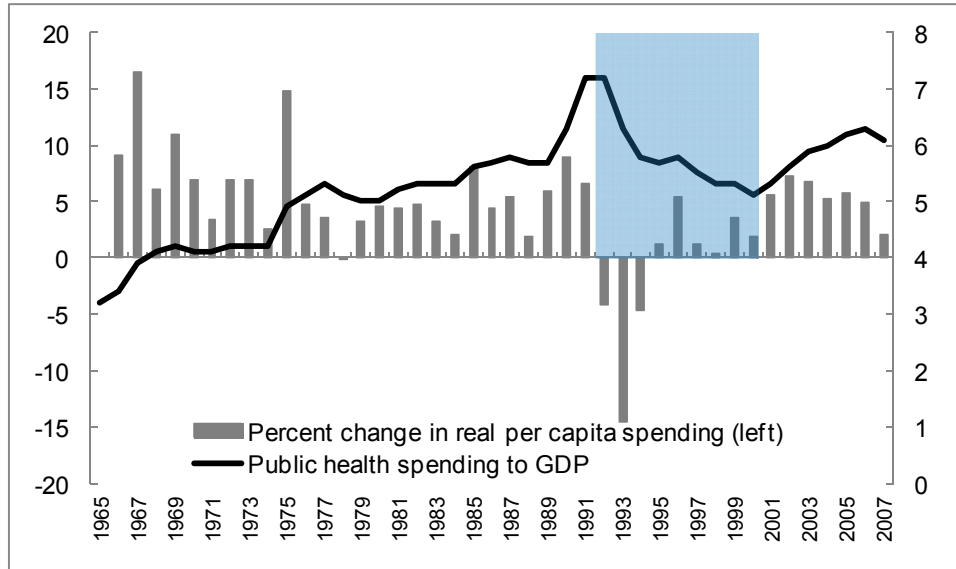
<sup>3</sup> Health spending components (as a share of GDP) may not add up to the total. Public health spending data have been adjusted to account for structural breaks.

## Experience with health reforms: 1990s

### *Spending trends*

16. From the mid-1960s through the 1980s, public health care spending in Finland grew substantially, rising from 3.2 percent of GDP in 1965 to 6.3 percent in 1990 and then surging to 7.2 percent by 1992 as Finland suffered from a deep recession. The central government fiscal balance deteriorated rapidly from the surpluses in the years before the 1991 crisis, reaching a deficit of over 10 percent of GDP by 1994. The ratio of public health expenditure to GDP dropped to 5.1 percent in 2000. However, the decline was partially offset in subsequent years as the share of public spending on health to GDP in 2008 remained roughly at the same level as in 1990. Public health spending per capita was US\$3,179 in 2008, above the OECD advanced economies average.

**Figure 3. Finland: Public Health Spending**  
(Percent)



Sources: OECD Health Data and IMF staff estimates.

### *Cost containment reforms*

17. Cost containment in Finland in the 1990s was achieved through a comprehensive set of reforms that acted at the macro- and micro-levels and included supply constraints, budget caps, price controls, and public management and coordination reforms.

18. **Public management and coordination.**<sup>10</sup> All municipal hospitals were brought under the ownership and management of 21 health care districts in order to improve coordination within districts and reduce the duplication of services. In 1991 multi-purpose hospital districts were created with each municipality required to be a member of a hospital district.

19. **Supply constraints and price controls.** The early 1990s also saw a push to reduce the number of bed in hospitals and the move from an integrated system to a public contract model. In 1997, two hospital districts moved to case-based, Diagnostic Related Group (DRG) pricing, and by 2000 most hospital districts followed suit.<sup>11</sup>

<sup>10</sup>The Hospital Act (1990); the Specialized Medical Care Act (1991).

<sup>11</sup>DRGs specify treatment protocols and medical conditions and provide an associated price schedule. DRGs can help control spending by reducing incentives for unnecessary treatments to address a given medical condition. Where reimbursement is based on DRGs, health providers are not compensated for costs of treatment that go above the price schedule associated with a given DRG.

20. **Budget caps.** Central subsidies to local governments were reduced and greater responsibility devolved to municipalities as the main purchasers of health care services. The financing of operating costs also changed and hospitals revenues became dependent on the type and number of services that municipalities purchased from them.<sup>12</sup> Under the new system, subsidies were calculated prospectively according to weighted capitation that is based on the expected population of patients. This helped address incentives for over-provision of health care services present under a system where expenditures are reimbursed, ex-post.<sup>13</sup> Local governments were given more freedom on decisions related to administration, user charges, and arrangement of services. Subsequently, the share of municipal taxes in financing increased. In addition, out-of-pocket payment increased during 1990s with the abolition of tax deduction for medical expenses and increased user charges.

21. **Pharmaceutical cost sharing.** Early policies mainly focused on increasing cost sharing. Subsequently, controlling the prices of drugs became the key issue at the end of 1990s. The fixed deductible for drugs increased three times in 1990, 1992, and 1994. In 1993 regulations were changed allowing pharmacists to substitute the prescribed drug with cheaper generic options.

### *Impact and durability of reforms*

22. Cost containment reforms had a significant impact on expenditure in 1990s and health outcomes remain strong. Per capita public spending on health stood at US\$1,203 in 2000, compared with US\$1,752 in 1990. In 2008, life expectancy in Finland stood at 79.5 years, slightly below the OECD advanced economies average of 79.9 years.

23. In-patient care—per capita expenditure on in-patient care decreased from US\$743 to US\$563 during 1991–95. However, by 2008 it rose to US\$792. As a result of supply-side reforms, hospital beds per 1,000 people decreased from 8.3 in 1,990 to 6.5 in 2008. Average excess cost growth in the five years following the state subsidy reforms of 1993 was -3.3, compared with 4.4 in the five preceding years.

24. The introduction of DRG case-based pricing in hospitals happened gradually between 1997 and 2000. The average excess cost growth for total public health expenditure during this period was -2.9, although it increased again after 2000. This may have reflected the government's attempt to eliminate waiting times by awarding earmarked funding to municipalities and hospital districts in 2001 (Hakkinen, 2005).

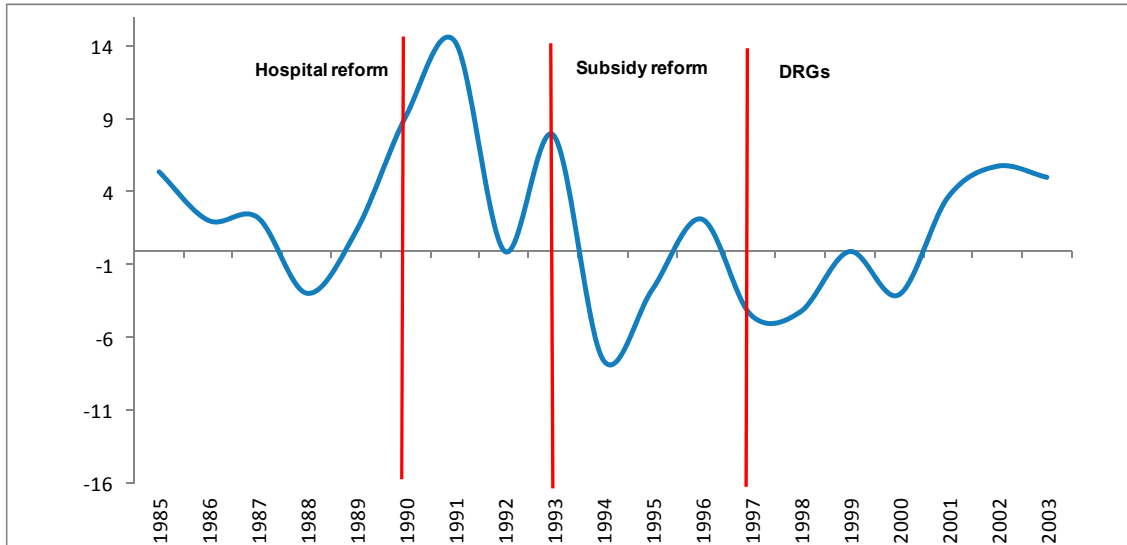
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<sup>12</sup>Before 1993 hospitals received around half of their revenues from state and the other half from municipalities.

<sup>13</sup>In the previous system, past expenditures were used as the basis for calculating subsidies.

25. Public expenditure on pharmaceuticals has grown rapidly since 1990, rising from 5.5 percent to 8.4 percent of health expenditure during 1991–95; by 2000 it increased to 10 percent. The substitution of in-patient care with pharmaceutical care may have been one of the reasons behind the increase in pharmaceutical expenditure during the 1990s.

**Figure 4. Finland: Excess Cost Growth and Key Reform Episodes**  
(Percent)



Source: OECD Health Database and IMF staff estimates.

## Lessons

26. The 1990s in Finland witnessed in the health sector a number of reforms, acting on different fronts that successfully contained spending. The reform of subsidies in 1993 was implemented during a severe crisis and under a generalized fiscal consolidation effort. The case of Finland is indicative of how costs are better controlled when growth of spending is addressed through a combination of measures acting at various levels — when macro-level reforms are supplemented with micro-level, efficiency-enhancing measures.

27. The push toward decentralized health provisions has had some unintended consequences, including inequality between regions. In 2005, the difference in expenditure levels between municipalities was €1,000 per capita (Rapoport and others, 2009). Municipalities have different coverage, and moreover, hospital districts have different waiting times; small municipalities cannot benefit from the economies of scale to provide specialized health services; and there is no nationally set guideline to determine prices for hospital services. The two-tier financing system (state subsidies and municipal financing) also encourages cost shifting from municipal to non-municipals institutions. For example,

municipalities and the state cover the drugs used in in-patient care and out-patient care, respectively. This provides incentive for hospitals to use out-patient drug therapy.

### C. Germany

#### Overview of health care system

28. Germany's health system is primarily financed by mandatory health insurance premiums and follows a public contract model. Recipients of these premiums are sickness funds that compete for patients by offering slightly different benefit packages above a set standard. Premiums are based on income up to a ceiling. Those earning above a certain level may opt out of public insurance and take up private insurance coverage. Sickness funds cannot reject applicants and about 90 percent of the German population has public insurance coverage. A "risk compensation scheme" redistributes contributions among sickness funds (from 1994). Health care is delivered through a combination of public and private providers. In 2008, public expenditure on health was 8.1 percent of GDP, compared with an OECD advanced economies average of 6.9. The role of private sector is relatively small—2.5 percent of GDP in 2008 close to the OECD advanced economies average.

**Table 3. Germany: Key Health Indicators<sup>1</sup>**

	1970	1980	1990	2000	2008	OECD 2008 <sup>2</sup>
GDP per capita (US\$, PPP)	4,462	11,477	21,286	25,945	35,436	35,617
Primary balance (percent of GDP)	1.1	-0.9	0.5	4.5	2.8	1.5
General government primary expenditure (percent of GDP)	...	45.7	41.9	44.5	40.9	40.4
Total health spending (percent of GDP) <sup>3</sup>	6.0	8.4	8.3	10.3	10.5	9.3
public (percent of GDP)	4.4	6.6	6.3	8.2	8.1	6.9
private (percent of GDP)	1.6	1.8	2.0	2.1	2.5	2.5
Public health spending per capita (US\$)	139	913	1,572	1,889	3,618	2,028
Out-of-pocket spending (share of total health spending)	13.9	10.3	11.1	11.1	13.0	16.8
Formal health care coverage (share of population)	89.2	92.3	88.8	99.8	99.9	99.0
Life expectancy (years at birth)	70.6	72.9	75.3	78.2	80.0	79.9
Measles immunization (share of children 12-23 months)	...	...	...	91.1	95.4	89.6
Physicians (per 1,000 population)	...	...	2.8	3.3	3.6	3.1
Hospital beds (per 1,000 population)	...	...	10.1	9.1	8.2	5.6

Sources: OECD, WHO, WDI, and IMF staff estimates.

<sup>1</sup> Years as indicated or latest available.

<sup>2</sup> OECD advanced economy unweighted average.

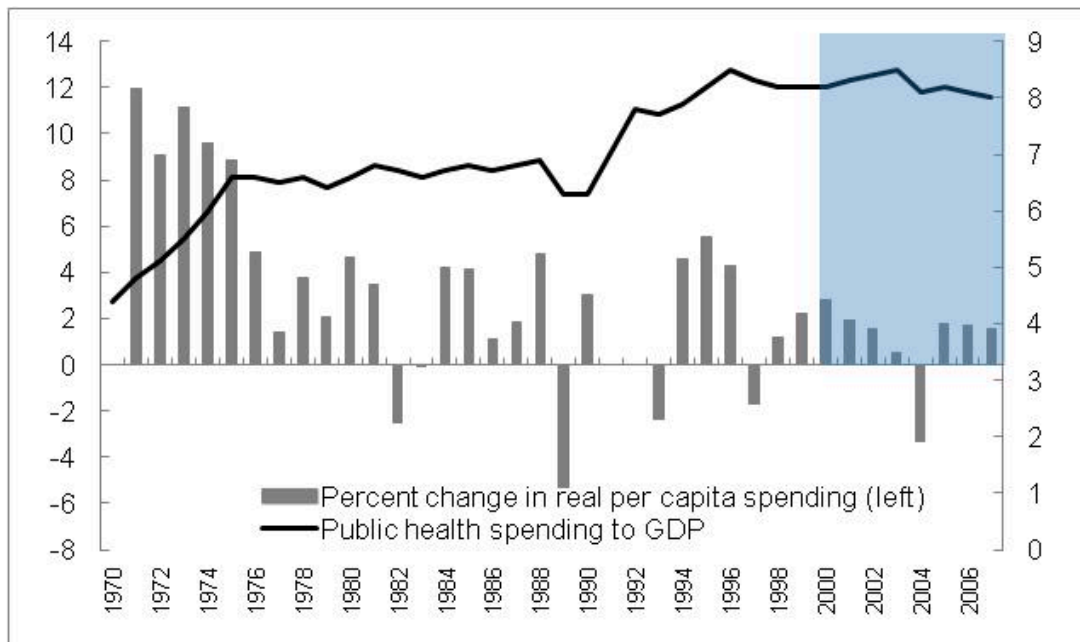
<sup>3</sup> Health spending components (as a share of GDP) may not add up to the total. Public health spending data have been adjusted to account for structural breaks. No adjustment was made for German unification.

## Experience with health reforms: 2000–07

### *Spending trends*

29. Germany has one of the highest levels of health care expenditure in the European Union. Public health spending increased from 6.3 percent of GDP in 1990 to 7.8 percent in 1992 as a result of the reunification. Between 2000 and 2007, health expenditure declined slightly by 0.2 percent of GDP to 8.0 percent—during this period the two coalition governments had a strong commitment to fiscal discipline—following an increase of about 2 percent of GDP in the 1990s. Real per capita growth was lower than in any previous decade at 1.3 percent. In line with the trend exhibited in the second half of the 1990s, growth of private spending on health was a few percentage points higher than that of public spending and below the OECD average.

**Figure 5. Germany: Public Health Spending**  
(Percent)



Sources: OECD Health Data and IMF staff estimates.

### *Cost containment reforms<sup>14</sup>*

30. During 2000–07, Germany introduced a combination of macro- and micro-level reforms affecting both the supply and demand for public health services. They included supply constraints, price controls, cost sharing, and budget caps. Micro-level reforms aimed at reforming public management and coordination, and contracting methods.

31. **Supply constraints and cost sharing.** Measures to strengthen health technology assessment were introduced in 2000, and ineffective technologies and pharmaceuticals were removed from the sickness funds benefits coverage. In 2004, many charges and restrictions were introduced for insurers and consumers, such as cutting minor benefits, increasing user charges, and shifting the mix of financing of the statutory health insurance from employers to the insured. Over-the-counter drugs were excluded from coverage and new copayments and cost-sharing were introduced, with the general exemption for the poor abolished (Worz and Busse, 2005).<sup>15</sup>

32. **Public management and coordination.** Incentives to promote voluntary gatekeeping by primary physicians were created in 2000 by allowing sickness funds to award a bonus to members accessing specialists through primary physicians. Moreover, the reform included a mandate to introduce a new payment system for hospitals based on uniform case fees.

33. **Contracting methods.** In 2002, a new regulatory framework was specified together with a schedule for the phased introduction of DRGs payments. Ambulatory and hospital budgets were frozen in 2003 except for hospitals opting for DRGs, which became the dominant payment method by 2004.

34. **Price controls and pharmaceutical measures.** In 2002, pharmacies were forced to make payments on non-reference priced drugs they prescribed to the sickness funds. In effect, this reduced the price paid for these drugs to the pharmacies. This was done to encourage greater use of less-costly drugs on the reference price list. These payments were also introduced to wholesalers and manufacturers of non-reference priced drugs. In 2003, incentives for pharmacists to choose the cheapest active substance in a class of pharmaceuticals were also introduced. Later, in 2004, wholesalers' markups were cut and the pharmacists' markup fixed. Incentives to control the volumes were introduced together with price competition (Busse and Riesberg, 2004).

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<sup>14</sup>Over 2000–07 various acts and regulations affecting health spending were passed: The 2000 Reform of Statutory Health Insurance Act; in 2001, The Diagnosis Related Groups Financing in Hospitals Act and the Pharmaceutical Budget Redemption Act; in 2002, The Case Fees Act and the Pharmaceutical Expenditure Limitation Act and the Contribution Rate Stabilization Act; and in 2004, The Health System Modernization Act.

<sup>15</sup>The Act introduced community-rated flat-rate insurance for dentures. This was followed by, the Act to Adjust the Financing of Dentures, which was introduced in July 2005. This imposed a 0.4 percent of gross income copayment for dentures (Busse and Riesberg, 2004).

35. **Budget caps.** Ambulatory care and hospital budgets were negotiated at the regional level with legally set limits throughout most of the period. Only in 2003 were budgets fixed (Busse and Riesberg, 2004). Controls on physician incomes were also imposed through the introduction of a “point” system. Physicians had been reimbursed mostly via fee-for-service since the 1960s. In 2003, a reform introduced a cap on the number of “points” for each physician practice. The number of points depends on the number of patients treated in any quarter and the conditions treated.<sup>16</sup> In effect, this limited the income of doctors and reduced incentives to increase the volume of patients with additional treatments. No minimum or fixed remuneration is guaranteed, making this system distinct from capitation.<sup>17</sup>

### *Impact and durability of reforms*

36. While real per capita spending increased in 2000–07, health care expenditure was kept constant in percent of GDP, decreasing slightly during the period of strong GDP growth. In 2000–07 excess cost growth averaged -0.3 percent.

37. At the sectoral level, the decline in spending was most pronounced in dental care (0.2 percent GDP), out-patient basic medical and diagnostic services (0.2 percent GDP) and in-patient care. Spending on therapeutic equipment was successfully controlled as well as specialized out-patient, home and day care, and ancillary services; which remained constant in percent of GDP.<sup>18</sup>

38. After dipping in 2004 when reimbursement was lowered, expenditure on pharmaceuticals resumed its growth, reaching quickly the level recorded in 2002 as a percent of GDP. It appears that the 2003 reform was effective, yet short lived. Pharmaceutical expenditures were better contained from 1993 to 2000 than in the following years until strict price and rebate measures were introduced.

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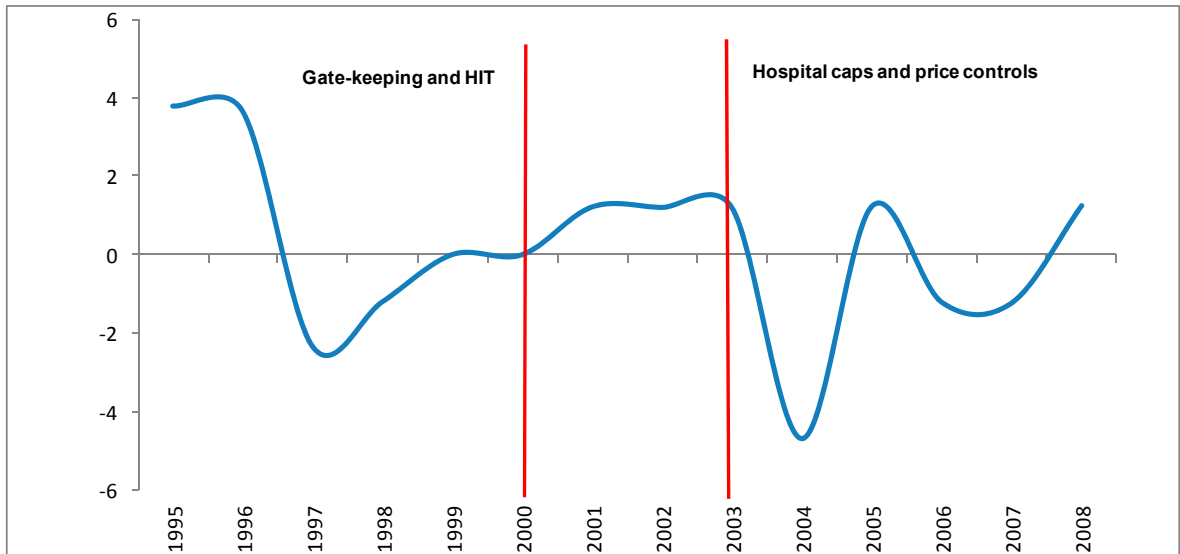
<sup>16</sup>Each service is allocated a number of points and lists certain preconditions for claiming reimbursement, such as particular indications for use or exclusions of other services during the same visit. At the end of each quarter, every office-based physician invoices the physicians’ association for the total number of service points delivered. The actual reimbursement will depend on a number of factors including the available budget allocation.

<sup>17</sup>Under a system of capitation, physicians generally are guaranteed a minimum income, even if they see a small number of patients.

<sup>18</sup>Spending on care provided by allied health professionals, medical devices, and transport/emergency services was less effectively curbed.



**Figure 6. Germany: Excess Cost Growth and Key Reform Episodes**  
(Percent)



Source: OECD Health Database and IMF staff estimates.

## Lessons

39. The experience of Germany suggests that control of prices and cost-sharing can be effective cost-containment measures only for the short run. Savings are often not durable as companies find solutions to circumvent reference pricing. Meanwhile, patient demand for more expensive drugs may be inelastic.<sup>19</sup>

40. Provider payment and contracting reforms were crucial to containing in-patient costs by limiting reimbursement through tighter budgets for hospitals and physicians (2000), and through introduction of DRGs (2002). Improved gatekeeping has also contributed to lower in-patient care expenditure, made possible by the Reform Act of 2000 that allowed contracts between the sickness funds and groups of providers; and the SHI Modernization Act that required all funds to offer integrated care with various bonus incentives for members.

<sup>19</sup>This regulation led to lower-than-calculated savings for two reasons. First, pharmaceutical companies partly introduced “dummy” drugs with high prices. In effect, this meant that drugs being heavily used were no longer expensive relative to other options (that is, the newly introduced dummy drug). The heavily used drug, therefore, would be unaffected by the reference pricing system and the requirement to use relatively inexpensive drugs. After the change in the reference pricing system in 2004, this strategy was no longer effective. Second, the regulation failed because the companies often did not comply with it (Busse and Riesberg, 2004). For an overview of pharmaceutical reforms in Germany, see Paris and Docteur (2008).

## D. Italy

### Overview of health care system

41. The National Health Care System coverage is universal, covering citizens and permanent residents. It is a public integrated model, financed through payroll and general taxation, with both private and public provision of services. Since the reforms initiated in 1992, the system has been highly decentralized, with regions and local health units bearing strong administrative and financial independence. The state sets “essential levels of care,” namely a positive list of services that must be uniformly provided by all regions.<sup>20</sup> Delivery rests with the local public enterprises (*Aziende Sanitarie Locali*—ASL), vertically integrated and funded by the region through capitated budgets. In 2008, public expenditure on health services was 7.0 percent of GDP, compared with an OECD advanced economies average of 6.9. The role of the private sector has remained broadly stable over the last decade at just over 2 percent of GDP, below the OECD average.

**Table 4. Italy: Key Health Indicators<sup>1</sup>**

	1970	1980	1990	2000	2008	OECD 2008 <sup>2</sup>
GDP per capita (US\$, PPP)	3,387	9,210	17,595	25,597	31,709	35,617
Primary balance (percent of GDP)	...	...	-1.4	5.5	2.5	1.5
General government primary expenditure (percent of GDP)	...	...	42.4	41.7	42.9	40.4
Total health spending (percent of GDP) <sup>3</sup>	...	...	7.7	8.1	9.1	9.3
public (percent of GDP)	...	...	6.1	5.8	7.0	6.9
private (percent of GDP)	...	...	1.6	2.2	2.1	2.5
Public health spending per capita (US\$)	...	...	1,222	1,122	2,737	2,028
Out-of-pocket spending (share of total health spending)	...	...	17.1	24.5	19.5	16.8
Formal health care coverage (share of population)	93.0	100.0	100.0	100.0	100.0	99.0
Life expectancy (years at birth)	72.0	74.0	77.1	79.8	81.5	79.9
Measles immunization (share of children 12-23 months)	...	...	43.0	74.1	89.5	89.6
Physicians (per 1,000 population)	...	...	...	...	...	3.1
Hospital beds (per 1,000 population)	10.6	9.6	7.2	4.7	3.8	5.6

Sources: OECD, WHO, WDI, and IMF staff estimates.

<sup>1</sup> Years as indicated or latest available.

<sup>2</sup> OECD advanced economy unweighted average.

<sup>3</sup> Health spending components (in percent of GDP) may not add up to the total. Public health spending data have been adjusted to account for structural breaks.

<sup>20</sup>In practice, essential levels of care are hard to define.

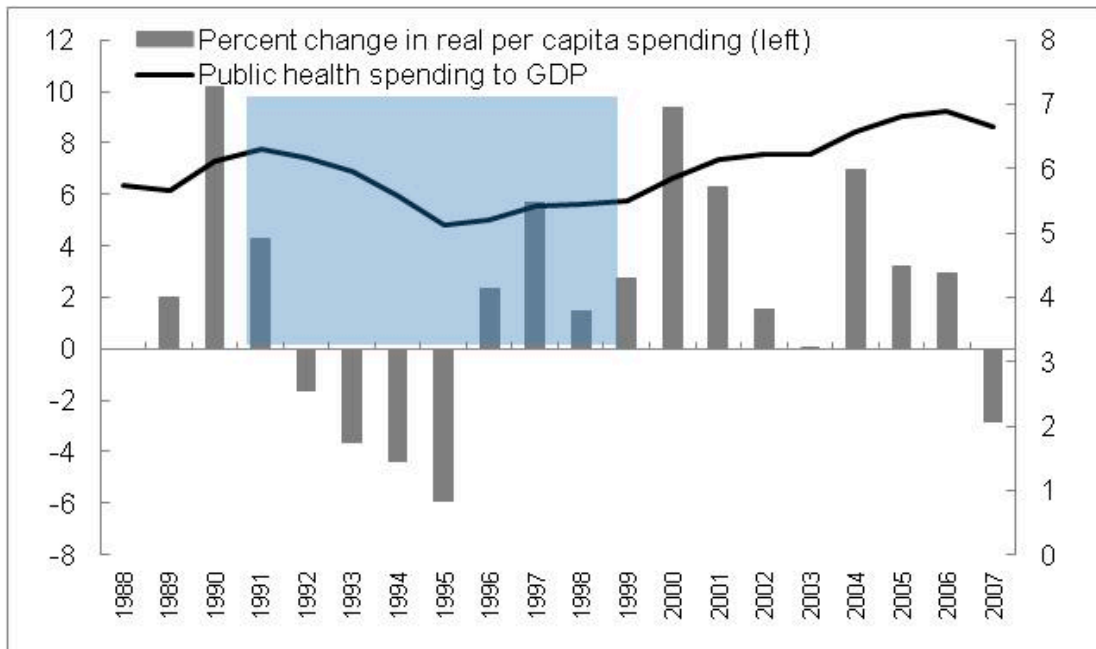
## Experience with health reforms: 1991–99

### *Spending trends*

42. The 1990s were a period of fiscal consolidation and falling inflation, after an earlier combination of loose fiscal and tight monetary policy. Between 1992 and 1995, the general government primary balance swung into a surplus exceeding 4 percent of GDP and the debt ratio recorded its first decline in many years. The consolidation involved a shift from revenue-based adjustment in the period up to 1993 to expenditure-based adjustment in 1994–95. Public spending on health declined from 6.3 percent in 1991 to 5.5 percent of GDP in 1999. Real per capita growth of public spending was negative, declining by 4.6 percent on average over 1993–95. For most of the period under consideration real growth of public spending was below the OECD average. Private spending continued to grow, albeit at a slower pace than earlier.

**Figure 7. Italy: Public Health Spending**

(Percent)



Sources: OECD Health Data and IMF staff estimates.

### *Cost containment reforms*

43. Italy's health care cost containment efforts in the 1990s focused mainly on the control of doctors' salaries and on pharmaceutical expenditure, and were part of the wider fiscal consolidation strategy.

44. **Price controls.** Italy's share of doctors to residents is among the highest in the European Union. All doctors employed by the NHS are salaried and have civil servant status. General practitioners (GPs) and pediatricians are paid on the basis of capitation. During 1991–95, control of NHS salaries was achieved in three ways: (i) renewal of national contracts was postponed several times; (ii) increases in salaries were less generous than in the past and were in line with inflation; and (iii) bonuses and compensation for overtime were cut.

45. The pharmaceutical sector was also targeted for cost control. In 1994 the positive list was re-defined and fixed charges were introduced for all prescriptions.<sup>21</sup> Moreover, a ceiling on the pharmaceutical budget for 1994 was set 2.4 percent lower than in 1993 in nominal terms. Government funding for several hundreds of active ingredients was suspended. A new system of prices was also defined that could not exceed average European prices. In 1995 a generalized price cut was mandated by the government, and a year later, a version of reference pricing was introduced. However, prices were not freed, which resulted in delisting of over 400 drugs.<sup>22</sup> Further, in 1997, pharmacists were forced to sell at discount to the NHS with margins that were smallest for the highest priced drugs (Fattore, 1999).

46. **Public management and coordination reforms.** These were implemented in 1992, granted administrative and financial independence to ASLs (and to hospitals) and reduced in number. The reform also introduced quasi-markets in which providers competed for contracts. The design was different from the one used in the United Kingdom, but it never materialized fully as the separation between purchasing and provision was left to the regions that maintained a dominant role in managing the system.

47. **Supply constraints and contracting methods.** Hospitals were not the direct target of cost containment measures in early 1990s, mainly because the pressure to contain costs at the regional level was weaker and because the introduction of mixed markets (see below) was in conflict with that. However, in 1996, a national program for bed closure was launched and DRGs were introduced in 1994 (and made operational in 1996) with the aim of introducing market competition, containing costs, and enhancing efficiency. Another cost-containment

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<sup>21</sup>A positive list is a list of drugs that are reimbursable. At times governments define negative lists which include medicine that cannot be reimbursed.

<sup>22</sup>Delisting implies that a drug will no longer be eligible for reimbursement from the public sector.

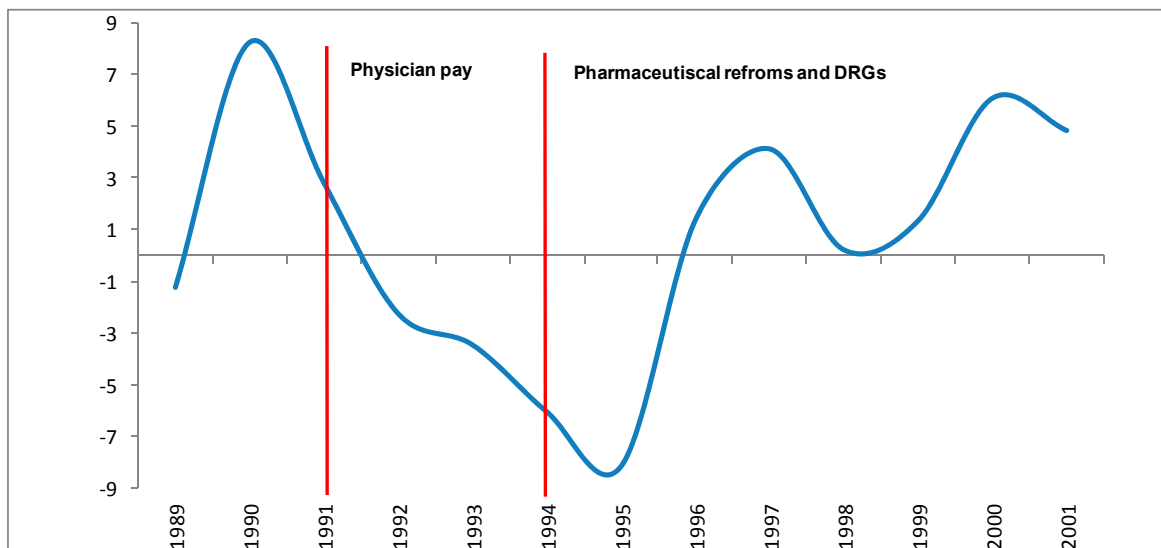
measure was to cut capital expenditure, which in 1995 equaled only 0.3 percent of current expenditure.

### *Impact and durability of reforms*

48. Italy has been very effective in cutting public expenditure on pharmaceuticals. Between 1991 and 1995, pharmaceutical expenditure declined by 35 percent in nominal terms. However, delisting has in some cases increased private spending, whose share in total spending on drugs increased from 20 percent in 1990 to over 35 percent in 1995. (Fattore, 1999).

49. Drug copayments were abolished in 2001 and restrictions on prescribing were reduced. As a result, doctors prescribed more expensive and newer drugs. Consequently, early reductions in expenditure on drugs were reversed. Subsequent measures cut prices to drug industry sales to the NHS, introduced reference prices for drugs no longer covered, reintroduced restrictions on prescribing, and imposed a ceiling on drug spending by NHS.

**Figure 8. Italy: Excess Cost Growth and Key Reform Episodes**  
(Percent)



Source: OECD Health Database and IMF staff estimates.

50. The new payment system provided incentives for the regions to cut hospital tariffs or individual DRG tariffs when expenditure exceeded a predetermined level, also discouraging the provision of certain services. Combined with that, tighter limits on the number of beds led to a decline in hospitalization rates and length of stay. The measures aimed at controlling

salaries were very effective, curbing their growth to less than 8 percent over the entire 1991–95 period. The decline in public sector spending on health over the same period was only partly compensated for by a growth of private sector spending. Total expenditure on health declined by 7.2 percent, with excess cost growth of public health spending of 3.7 percent during 1992–96.

51. However, measures aimed at containing growth of NHS salaries were durable only in part. First, the postponement of contracts only postponed expenditure; it did not cut it, since the new contracts included compensation for the period not covered by the previous contract (Fattore, 2005). Moreover, the control of the variable part of salaries may have weakened incentives and decreased health sector output, leading to a shifting of some services to the private sector.

### **Lessons**

52. The Italian experience of the 1990s demonstrates that control of prices and cost-sharing can represent very effective cost-containment measures that have an immediate effect on public health care spending. Their durability is, however, questionable. Restraint of salaries can provide incentives to reduce output and create pressures to increase salaries in the future. Increases in co-payments beyond a certain level may undermine the system's equity objectives and be subsequently reversed.

53. What appears to have been crucial to the success of Italy's cost-containment was the shared recognition that, in contrast with past experience, the central government would not bail out regional health systems burdened with large deficits. This belief was made possible by the preceding severe financial crisis and the Maastricht constraints for joining the EMU. Indeed, health spending accelerated again after it was clear that Italy would join the EMU (Bordignon and Turati, 2009).

## **E. Netherlands**

### **Overview of health care system**

54. The Dutch health care system is a public contract model with a social insurance tradition. A single compulsory insurance scheme was introduced in 2006 and changed the role of health insurers and patients. There is little reliance on regulation of prices paid by third-party payers to control public spending growth. GPs play the role of gatekeepers and their referral is required for the hospital care and specialist care. The health insurance system has three sectors: (i) compulsory social health insurance for high-risk patients (AWBZ); (ii) a sickness fund scheme (ZVW); and (iii) voluntary health insurance (VHI). AWBZ is financed with contributions linked to the level of income. The basic insurance is financed by a flat-rate premium and an employer contribution. The supervision of the system has been passed on from the government to independent bodies. In 2008, total health spending to GDP was

9.9 percent, ½ percent higher than the OECD average of 9.3 percent; while public health spending was 7.4 percent of GDP.

**Table 5. Netherlands: Key Health Indicators<sup>1</sup>**

	1970	1980	1990	2000	2008	OECD 2008 <sup>2</sup>
GDP per capita (US\$, PPP)	4,013	9,869	17,624	29,403	41,189	35,617
Primary balance (percent of GDP)	...	...	...	5.6	2.5	1.5
General government primary expenditure (percent of GDP)	...	...	...	42.2	43.0	40.4
Total health spending (percent of GDP) <sup>3</sup>	...	7.4	8.0	8.0	9.9	9.3
public (percent of GDP)	4.3	5.3	5.5	5.2	7.4	6.9
private (percent of GDP)	2.7	2.3	2.6	2.9	2.5	2.5
Public health spending per capita (US\$)	...	659	1,055	1,209	3,971	2,028
Out-of-pocket spending (share of total health spending)	...	...	...	9.0	5.7	16.8
Formal health care coverage (share of population)	69.0	68.3	61.4	97.6	98.8	99.0
Life expectancy (years at birth)	73.7	75.9	77.0	78.0	80.2	79.9
Measles immunization (share of children 12-23 months)	...	91.0	94.0	96.0	96.0	89.6
Physicians (per 1,000 population)	...	...	...	...	...	3.1
Hospital beds (per 1,000 population)	...	...	5.8	4.9	4.3	5.6

Sources: OECD, WHO, WDI, and IMF staff estimates.

<sup>1</sup> Years as indicated or latest available.

<sup>2</sup> OECD advanced economy unweighted average.

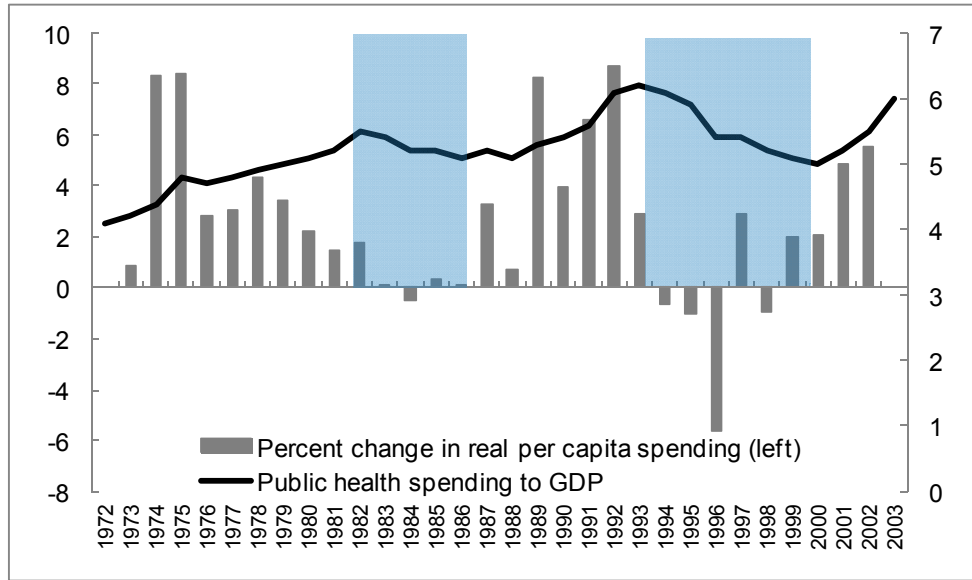
<sup>3</sup> Health spending components (in percent of GDP) may not add up to the total. Public health spending data have been adjusted to account for structural breaks.

## Experience with health reforms: early 1980s and 1990s

### *Spending trends*

55. Per capita public health expenditures increased significantly in the 1970s, growing at an average real rate of about 4 percent between 1972 and 1982, and the ratio of public health expenditure to GDP increased from 4.1 percent to 5.5. Between 1982 and 1990, public health expenditure growth declined considerably, averaging less than 2 percent. Health spending picked up again in the early 1990s, reaching 6.2 percent of GDP by 1993. There followed a period of negative average annual growth rates (1995 to 2000) and the share of public health expenditure as percent of GDP declined to 5.0 percent in 2000. By 2008 public health spending per capita was US\$3,971, compared with the OECD average of US\$2,032.

**Figure 9. Netherlands: Public Health Spending**  
(Percent)



Sources: OECD Health Data and IMF staff estimates.

### *Cost containment reforms*

56. There were three waves of cost containment reform in the Netherlands in the 1980s and 1990s, focusing first on hospitals' budgets, then managed competition, and the final wave starting in 1994 after a change in government focusing on greater use of budget caps and pharmaceutical reform.

57. **Budget caps.** The main focus of policies in the early 1980s was reigning in the in-patient sector. The change in the hospital reimbursement system started in 1983 and the government replaced the open-ended reimbursement system by a global budget system. In 1984, the government expanded the scope of budget controls to all in-patient care, moving to annual budgets calculated prospectively. In 1985, part of the budget was made variable, which was prospectively determined and depended on the agreement between hospitals and health insurers in four types of in-patient care.<sup>23</sup> Under prospective payment, payment is no longer made on the basis of a reimbursement of expenditures, but based on an assessment of what expenditures should be based on expected demand and provision of services at a reasonable cost. In 1988, the weight in the budget formula increased for hospitals that

<sup>23</sup>Number of expected in-patient days, admissions, day-treatments, and visits to the out-patient clinics per hospital per year were considered.



provided more sophisticated medical services. During the reforms beginning in 1994, there was also an expansion of global budgets. In addition, certain services were delisted from compulsory social health insurance and sickness funds (dental care, non-prescription drugs, and physiotherapy, among others).

58. **Public management and coordination.**<sup>24</sup> The original proposals to introduce managed competition in 1987 and 1989 were never fully implemented. The reform attempted to implement a single national insurance provider. The 1994 reforms for managed-competition reform reversed some of the previous elements. For instance, reform of the financing system was suggested to replace provision of basic health insurance for all citizens. The new health insurance scheme addressed this by introducing the following features: (i) a risk equalization scheme has been set up between health insurers with risk adjustments such as age, gender, labor status, and health status,<sup>25</sup> and (ii) moving from an overall budget scheme and introducing diagnosis related groups reimbursement (Schut, 1996).

59. **Pharmaceutical supply and price reforms.** In 1996, reference pricing was introduced and the government set maximum prices on two thirds of prescription drug covered by social health insurance. Moreover, between 1993 and 1998 government limited the inclusion of innovative medicines in the benefit package of social health insurance.

### *Impact and durability of reforms*

60. Budgetary control on the hospital sector in mid-1980s seemed to slow growth of public health expenditure (in-patient care has the highest share of public health expenditure). Average excess cost growth in the five years following 1983 was -1.3 percent compared with 2.5 percent in the five preceding years. Public health expenditure as a percent of GDP declined from 5.5 percent to 5.4 percent over 1982–1988. However, public health spending rose again to 6.7 percent of GDP in 1993 during the unsuccessful attempts to introduce managed-competition. This implies per capita public spending grew at an average of 5 percent a year during 1987–1993.

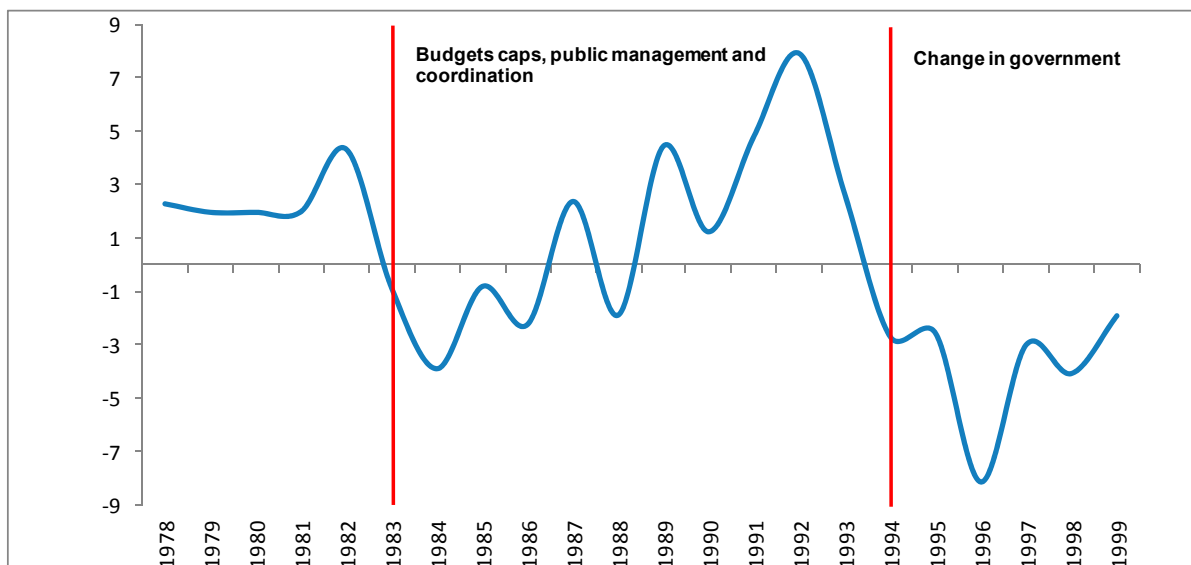
61. Public health expenditure started to decline again in early 1990s, despite increasing coverage, although the main cost-containment reform started after change in the government in 1994. The decline in expenditure may be attributed to introducing the Drug Reimbursement System in 1991, which defined limits for reimbursement of drugs by the sickness fund and by delisting of some health services (e.g., cosmetic surgery in 1991 and eye treatment in 1993).

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<sup>24</sup>Dekker Plan (1987) and Simons Plan (1989).

<sup>25</sup>Pharmaceutical cost groups and diagnostic cost groups are proxies for health status.

**Figure 10. Netherlands: Excess Cost Growth and Key Reform Episodes**  
(Percent)



Source: OECD Health Database and IMF staff estimates.

62. The mix of different cost-containment reforms introduced by the coalition government (1994) reduced the public health expenditure substantially. Average excess cost growth five years after 1994 was -3.3 compared with 4.4 percent in the preceding years. Public health expenditure as a percent of GDP declined from 6.5 percent in 1994 to 5.2 percent in 2000. Reforms in this period changed the form of financing expenditure. The role of private spending increased (i.e., share of private spending in total spending increased from 21.6 percent to 32 percent between 1993 and 2000).

### Lessons

63. The Netherlands succeeded with cost-containment despite having multiple public and private insurers. Nonetheless, the history of the managed-competition reform in the Netherlands indicates that implementing radical reform of the system is difficult and takes time.

## F. Sweden

### Overview of health care system

64. Sweden has a decentralized, public-integrated healthcare system, and delivery of health care is primarily the responsibility of the 18 country councils and two regional bodies. There is no gatekeeping. Automatic health coverage is provided to the entire population and

financed from taxes. In 2008, total health spending to GDP was 9.4 percent, in line with the OECD average for advanced economies; while public health spending was 7.7 percent of GDP, compared with 6.9 in advanced OECD countries. Private spending has increased from 0.7 to 1.7 percent of GDP in the last three decades.

**Table 6. Sweden: Key Health Indicators<sup>1</sup>**

	1970	1980	1990	2000	2008	OECD 2008 <sup>2</sup>
GDP per capita (US\$, PPP)	4,586	10,578	19,319	27,761	36,946	35,617
Primary balance (percent of GDP)	...	-1.8	8.1	7.2	4.1	1.5
General government primary expenditure (percent of GDP)	...	...	...	50.0	48.0	40.4
Total health spending (percent of GDP) <sup>3</sup>	6.8	8.9	8.2	8.2	9.4	9.3
public (percent of GDP)	5.9	8.3	7.5	7.2	7.7	6.9
private (percent of GDP)	0.9	0.7	0.8	1.2	1.7	2.5
Public health spending per capita (US\$)	257	1,310	2,116	1,936	3,994	2,028
Out-of-pocket spending (share of total health spending)	...	...	...	...	15.6	16.8
Formal health care coverage (share of population)	100.0	100.0	100.0	100.0	100.0	99.0
Life expectancy (years at birth)	74.7	75.8	77.6	79.7	81.0	79.9
Measles immunization (share of children 12-23 months)	...	...	96.0	91.0	96.0	89.6
Physicians (per 1,000 population)	1.3	2.2	2.6	3.1	3.6	3.1
Hospital beds (per 1,000 population)	...	...	...	...	...	5.6

Sources: OECD; WHO; WDI; and IMF staff estimates.

<sup>1</sup> Years as indicated or latest available.

<sup>2</sup> OECD advanced economy unweighted average.

<sup>3</sup> Health spending components (in percent of GDP) may not add up to the total. Public health spending data have been adjusted to account for structural breaks.

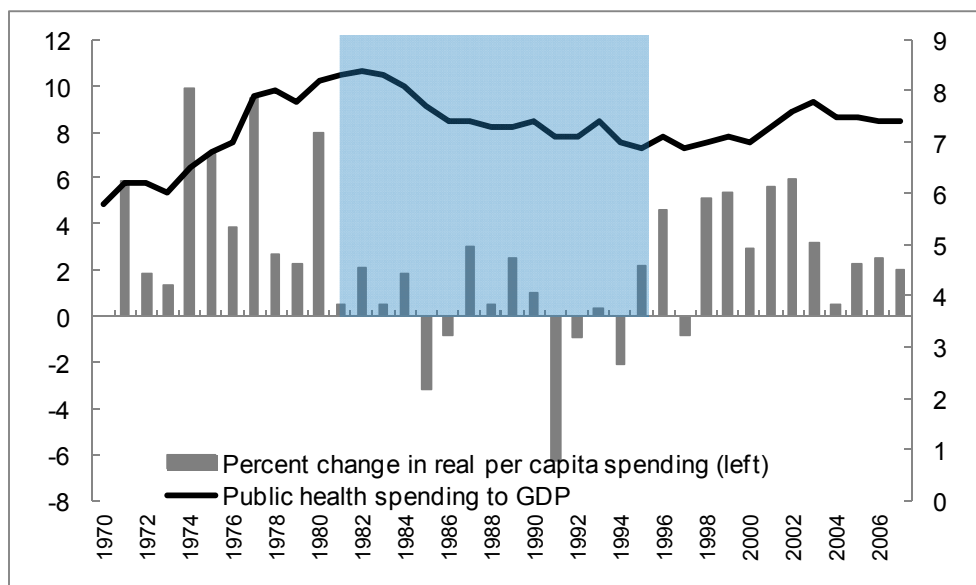
## Experience with health reforms: 1980s and early 1990s

### *Spending trends*

65. Public spending on health as a share of GDP was the highest in OECD in the 1980s and 1990s. However, since then, near zero excess cost growth has seen it fall to around seventh. In line with wider public spending, health expenditures expanded considerably in the 1960s and 1970s—growing at an average real rate of about 4.5 percent between 1970 and 1982, and increasing by over 2 percentage points of GDP. Between 1982 and 1994, expenditure growth slowed dramatically with a mildly negative average annual growth rate over this period—as a percent of GDP, public health spending declined from 8.5 percent of GDP to 7.2 percent of GDP. However, figures include two changes in definition—in 1985, care for the mentally handicapped was excluded from health and classified under education and social services and in 1992 care for the elderly was transferred to social services. Public health care spending picked up after 1995, but by 2007 was still below the levels seen in 1982.

**Figure 11. Sweden: Public Health Spending**

(Percent)



Sources: OECD Health Data and IMF staff estimates.

***Cost containment reforms***

66. The reforms of the 1980s focused on budget caps, public management and coordination (including greater decentralization), and price controls. Market mechanisms were introduced in the early 1990s.

67. **Budget caps, public management and coordination reforms, and increased involvement of local governments.**<sup>26</sup> In 1982, the power over health care activities of county councils, the second level of government, was consolidated. County councils gradually got more responsibility for planning and resource allocation and started using global budgets for recurrent and capital expenses, connected to both formal and informal rules on how to carry out activities. These reforms were introduced at different times and with different strategies across county councils.

68. In 1985, regulatory and planning capacity of county councils was further strengthened by transferring responsibility for costs of both publicly and privately owned ambulatory health care that previously lay with the Swedish Social Insurance Agency. The main purpose was to cap central government grants allocated to health sector. Before the reform, out-patient services from both public and private providers were paid for by Social Insurance

<sup>26</sup>The Health and Medical Care Act (1982), the Dagmar reform (1985), and the ÅDEL reform (1992).

Agency according to fee-for-service. After the reform, grants were disbursed to county councils based on weighted capitation—private practitioners were still paid on a fee-for-service basis, but had to negotiate with the council on volumes. In 1988, the parliament prohibited county councils and municipalities from raising income taxes starting in 1990, owing to concerns about the growth in expenditure. In 1991, decisions on copayment levels for outpatient were also devolved to county councils and these payments were increasingly used to steer patients toward primary care.

69. **Price controls.** In the late 1980s, the payment system changed; health-service providers were to be reimbursed through prospective per-case payments instead of through activity budgets. Reference prices for generic drugs were introduced in 1993. DRG pricing was also introduced in the 1990s, particularly in Stockholm County.

70. **Public management and coordination—improving incentives under decentralization.** A more market-oriented approach took over from the earlier focus on planning and cost containment, following the election of a new conservative-led government in 1992. The reform involved the transfer of responsibility for providing long-term care to the elderly and disabled from the county councils to local municipalities. The objective was to integrate activities related to the care of the elderly and the mentally handicapped with the municipal social services, thereby improving quality and efficiency. Fees were levied on municipalities if they were not ready to receive discharges from hospitals, for example, if no nursing homes were lined up.

71. **Market mechanisms.** The 1990s also saw greater use of planned markets and purchaser-provider splits—by 1994, 14 out of the then 26 councils had separate purchasing organizations, which varied in form.<sup>27</sup>

### *Impact and durability of reforms*

72. Global budgets, introduced by county councils, clearly seemed to have slowed down the rate of health expenditure expansion—average excess cost growth in the five years following the 1982 reforms was -2.4 compared with 3.5 in the five preceding years. However, the introduction of global budgeting was not sufficient with regard to efficiency and cost containment. Although the system performed well with respect to cost containment, productivity was still considered low. In the five years following the 1985 reform to the payment system, excess cost growth was negative (-0.8).

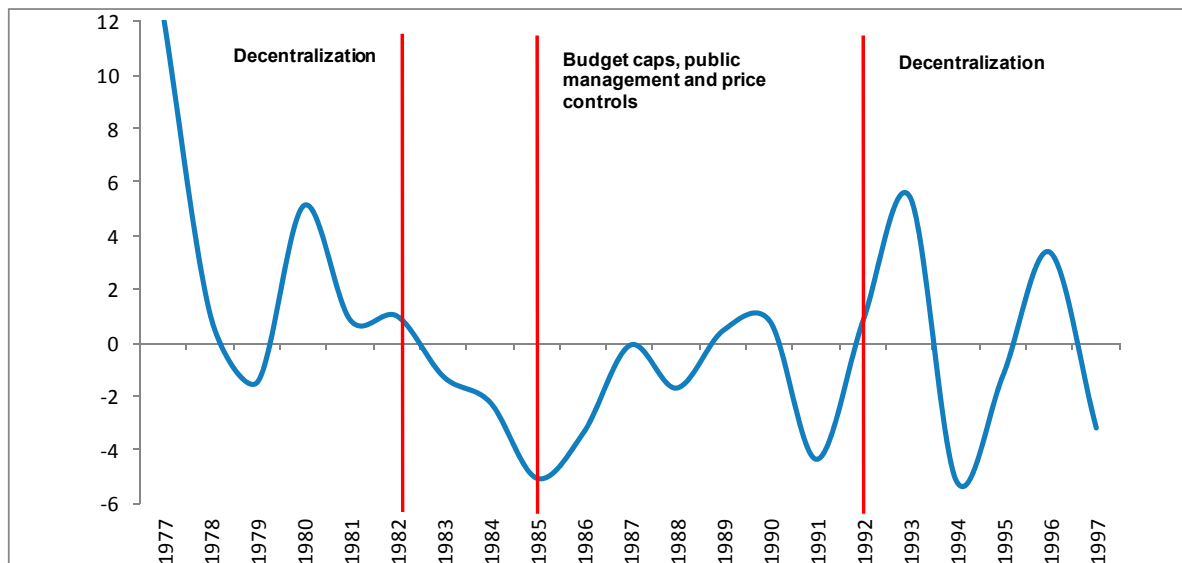
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<sup>27</sup>Purchaser-provider splits separate the role of purchasing and providing health care services within government, allowing for more active contracting for health care services by primary care providers (Italy, Sweden, and the United Kingdom).

73. The subsequent fiscal squeeze on county councils triggered by limits to taxation in 1990 led to the accumulation of debt and hospital closures. Long waiting lists arose, especially for elective care. To address this problem, in 1992, a three-month guarantee was issued for 12 selected treatments, with the patient offered treatment at a hospital in another county or at a private facility after three months. Nonetheless, long waiting lists for elective treatment continued to be a challenge for county councils and may have been one of the reasons behind the growing market for voluntary health insurance.

74. The reforms also led to changes in the level and composition of inputs. Since 1992, the number of hospital beds has decreased substantially, falling by more than 40 percent between 1993 and 2003. This reduction is partly due to a decline in the number of non-acute-care beds (e.g., for long-term patients, psychiatric patients), resulting from the 1992 reform. The number of health care staff has also decreased since the beginning of the 1990s, with the exception of physicians, nurses, and midwives. The number of staff employed in the health care sector, expressed per 1,000 people, dropped from 46.7 in 1992 to 31.9 in 2002. The main reason for this reduction in staff was the shift from hospital-based care toward primary care. Overall, health expenditure avoided the wider surge in total public expenditure in 1989–93.

**Figure 12. Sweden: Excess Cost Growth and Key Reform Episodes**  
(Percent)



Source: OECD Health Database and IMF staff estimates.

75. Other reforms were pursued throughout the 1990s, which were not focused solely on cost containment, but also on performance. While there is some evidence of increases in productivity, it is hard to attribute this entirely to these reforms, which, at least to some degree, might have made achievement of cost-containment easier.

## Lessons

76. Budget caps and public management and coordination reforms, in particular those related to strengthening accountability under decentralization, were successful in reigning in spending. However, some negative consequences on supply could not be avoided and reforms. To counter this, market mechanisms were introduced to improve efficiency.

## G. United Kingdom

### Overview of health care system

77. The United Kingdom had a public-integrated healthcare system—heavily regulated, with strict gatekeeping, little decentralization, and central government budget financing of health care provision. Hospital providers are part of the government sector. The 1990s reforms introduced elements of a public contract model. Health care is universal and free. In 2008, total health spending to GDP was 8.7 percent, compared with the OECD average of 9.3; while public health spending was 7.2 percent of GDP, compared with the OECD advanced economies average of 6.9 percent. Though small, private spending has more than doubled since 1980 as a percent of GDP.

**Table 7. United Kingdom: Key Health Indicators<sup>1</sup>**

	1970	1980	1990	2000	2008	OECD 2008 <sup>2</sup>
GDP per capita (US\$, PPP)	3,568	8,380	16,322	26,074	36,128	35,617
Primary balance (percent of GDP)	...	1.5	2.0	4.0	-2.7	1.5
General government primary expenditure (percent of GDP)	...	35.9	34.1	34.9	38.3	40.4
Total health spending (percent of GDP) <sup>3</sup>	4.5	5.6	5.9	7.0	8.7	9.3
public (percent of GDP)	3.6	4.6	4.6	5.6	7.2	6.9
private (percent of GDP)	0.6	0.6	1.0	1.5	1.5	2.5
Public health spending per capita (US\$)	86	480	875	1,403	3,171	2,028
Out-of-pocket spending (share of total health spending)	...	8.6	10.6	13.4	11.1	16.8
Formal health care coverage (share of population)	100.0	100.0	100.0	100.0	100.0	99.0
Life expectancy (years at birth)	71.9	73.2	75.7	77.9	79.7	79.9
Measles immunization (share of children 12-23 months)	...	53.0	87.0	88.0	85.9	89.6
Physicians (per 1,000 population)	0.9	1.3	1.6	2.0	2.6	3.1
Hospital beds (per 1,000 population)	...	...	...	4.1	3.4	5.6

Sources: OECD, WHO, WDI, and IMF staff estimates.

<sup>1</sup> Years as indicated or latest available.

<sup>2</sup> OECD advanced economy unweighted average.

<sup>3</sup> Health spending components (in percent of GDP) may not add up to the total. Public health spending data have been adjusted to account for structural breaks.

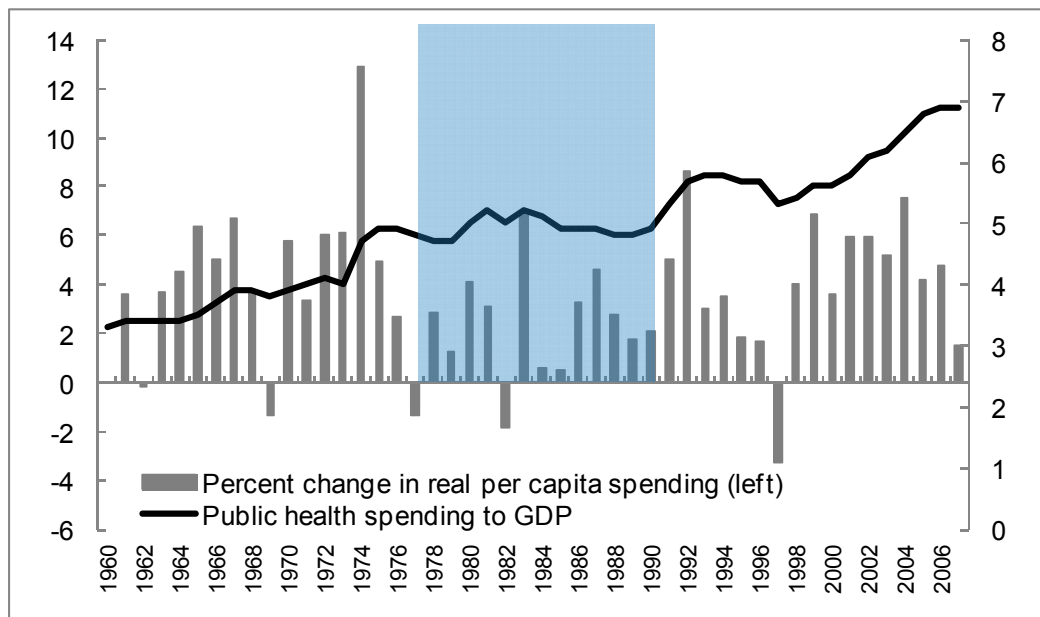
## Experience with health reforms: late 1970s and 1980s

### *Spending trends*

78. From the 1960s through the mid-1970s health care spending in the United Kingdom grew at an average real rate of 4.8 percent per year—episodes of real declines in 1962 and 1969 were quickly reversed—and health expenditure climbed as a percent of GDP from 3.3 to almost 5 percent. Expenditure rose particularly fast as a share of GDP during the recession that followed the 1973 oil shock and the 1973–74 stock market crash. The late 70s saw a short period of negative or low real growth rates and a three year period of declining expenditure as a percent of GDP as first Labor and, and then the new Conservative government, tried to rein in spending. However, the public health spending to GDP ratio rose again during the recession of the early 1980s before falling from 4.9 percent in 1981 to 4.5 percent in 1989. Real growth rates of health spending during the first two Thatcher governments averaged 2.2 percent, compared with 4.2 percent in the preceding decade that included a both a Conservative and Labor government.

**Figure 13. United Kingdom: Public Health Spending**

(Percent)



Sources: OECD Health Data and IMF staff estimates.



## Cost containment reforms

79. Budget caps were implemented in the United Kingdom in the early 1970s, while the 1980s saw a number of public management and coordination reforms implemented.

80. **Budget caps.** Following the rapid growth in public spending on health in the first half of the 1970s, the government revised the budgeting process to strengthen the control function. Cash limits were introduced on departmental budgets that were not allowed to overshoot. The National Health Service (NHS) budget was set centrally and subject to these cash limits, which were determined by weighted capitation.<sup>28</sup>

81. **Public management and coordination.** A reform aimed at containing costs and reducing bureaucracy started in 1982, with the abolishment of 90 area health authorities (a level of administration that sat between the budget-holding regional health authority and the district management teams). Subsequently, in 1983, the Griffiths Report introduced the concept of “new public management” into the NHS—essentially replacing consensus-style teams with hierarchical general management. Managers were expected to hold health service professionals accountable for levels, types, and quality of services, and also for resource use.

82. **Introduction of market mechanisms and competition.** Another series of reforms was initiated in 1989, with the objective of introducing competition, to incentivize efficiency and responsiveness. The *Working for Patients* reform proposed introducing an internal market with a split between health care purchasers and health care providers. This created two types of purchasers: the district health authorities and GP groups (fund holders). The fund-holding GP could be described as “mini-ambulatory” Health Management Organization (HMO), that is, an entity that receives a fixed, prepaid sum of money from which it must deliver or arrange for the delivery of secondary health care to a defined population group. NHS Trusts (hospitals that became semi-independent) were established on the provider-side and had to compete to get a contract from GP fund-holders and district authorities to provide services. Other reforms to restrict the supply of certain outputs emerged in 1989 to reduce costs: access to eye tests and equipment was restricted.

83. **Pharmaceutical reforms.** Since 1957, the U.K. government has regulated the profitability of pharmaceutical companies instead of product prices. The *Pharmaceutical Price Regulation Scheme* (1993–98) limited the return on capital deriving from sales to the NHS. Other efforts to control costs have included limiting the supply of pharmaceutical outputs by delisting of products from NHS coverage (1985 and 1993) and attempting to reduce over-prescription by GPs. A prescribing scheme in 1992 and 1994 tried to increase awareness of GPs by comparing actual prescription costs with the target.

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<sup>28</sup>Age structure, local inputs costs, and standardized mortality rates were originally used as weighting factors.

84. **Other reforms.** Under a new labor government, the fund-holding scheme was replaced in 1998 by Primary Care Trusts (PCTs). Most GPs work in PCTs, which are financed by weighted capitation from the Department of Health budget—pharmaceutical spending is included in the budgets. This reform maintained the earlier focus on primary care-led health services. While effectively a mechanism to both control resources and coordinate care, the political imperative of the day was to increase health expenditure and close the performance gap with OECD countries.

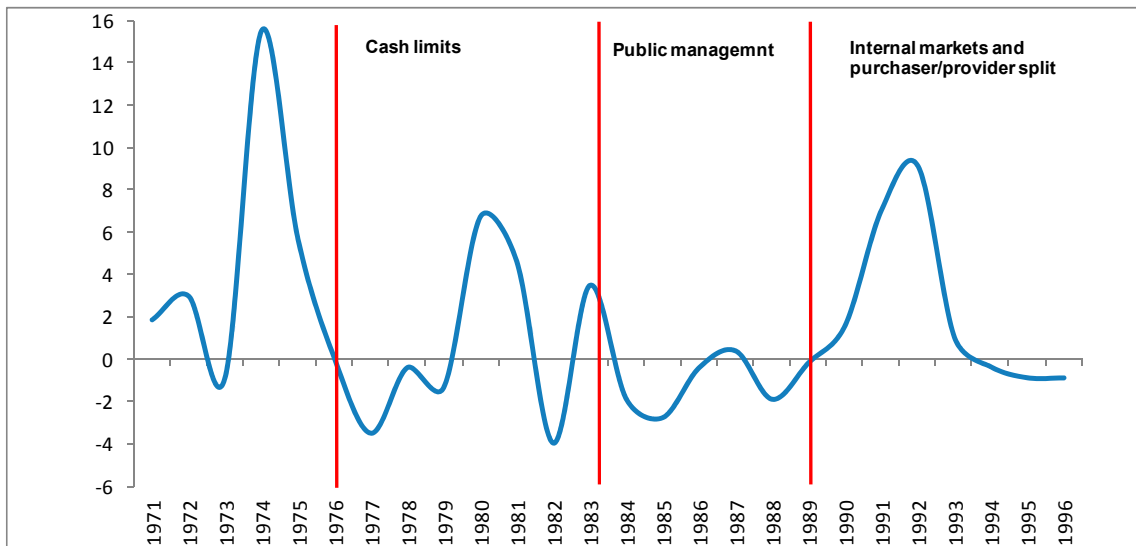
85. In the 1990s efforts focused on improving performance in the NHS. The *Health of the Nation* Green Paper set out a public health strategy based on setting quantified targets and measuring performance against these targets. The *Patient's Charter* set out for the first time patients' rights and the standards of service they could expect from the NHS, such as reduced waiting times and increased responsiveness.

### ***Impact and durability of reforms***

86. At 1.2 percent, excess cost growth in the five years following the cash limits was one-fourth the growth rate in the five preceding years. Excess cost growth in the five years after the Griffiths Reforms was -1.3 percent, compared with 1.1 in the five years before. However, the Conservative government held total public spending broadly flat in real terms over most of the 80s, so it is hard to attribute the cost containment to these specific reforms as opposed to budget limits.

87. The impact of the internal market and GP fund holding on health expenditure is hard to determine. While *Working for Patients* was published in 1989, the reforms were legislated in 1990 and implementation started the following year. By then, the government had initiated other reforms more focused on improving performance, as opposed to efficiency. Moreover, further reforms followed to develop “primary care-led” health services—the *Health Authorities Act* (1995) led to closer integration of primary and secondary care through the creation of merged district health authorities and family health service authorities and in 1996, regional health authorities were replaced by offices of the NHS Executive.

**Figure 14. United Kingdom: Excess Cost Growth and Key Reform Episodes**  
(Percent)



Source: OECD Health Database and IMF staff estimates.

## Lessons

88. The 1976 cash limits imposed on the NHS appear to have temporarily reduced the growth of health expenditure. However, limits could be renegotiated every year and expenditure began to climb again in subsequent years. The abolishment of area health authorities and introduction of new management practices seems to be associated with more success in controlling expenditure growth, even five years after initial implementation.

89. Critics of the 1989 reforms point to increased transaction costs associated with the internal market, which may not have been offset by productivity gains, the emphasis on costs over quality, and increasing inequity. Others point to evidence that fund-holding GPs have seen less growth in prescription costs than non-fund-holders. A 1996 Audit Commission report on the topic was inconclusive.

90. Long waiting times for elective inpatient care have been a feature of the NHS since its formation in 1948 and have worsened during the cost-containment period. Since 2001 there has been a considerable effort to reduce long waiting times, driven by a strictly enforced system of waiting-time targets for individual hospital trusts. (Smith and Goddard, 2009).

## H. United States

### Overview of health care system

91. The United States has a mainly private insurance and provider healthcare system. Private insurance is largely tied to employment, but individuals can purchase policies in the non-group market. There are two large public insurance programs—Medicare for the elderly and Medicaid for the poor—each one covers about 15 percent of the population. Both Medicare and Medicaid were incorporated in the Social Security Act of 1965. There is some gatekeeping through managed care. In 2008, total health spending to GDP was 16 percent, compared with the OECD average for advanced economies of 9.3; while public health spending was 7.4 percent of GDP, compared with the OECD average of 6.9. Private spending has grown rapidly in recent decades, but less than public spending.

**Table 8. United States: Key Health Indicators<sup>1</sup>**

	1970	1980	1990	2000	2008	OECD 2008 <sup>2</sup>
GDP per capita (US\$, PPP)	4,998	12,180	23,054	35,078	47,193	35,617
Primary balance (percent of GDP) <sup>3</sup>	...	...	...	...	-3.9	1.5
General government primary expenditure (percent of GDP) <sup>3</sup>	...	...	...	31.3	33.6	40.4
Total health spending (percent of GDP) <sup>4</sup>	7.1	9.0	12.2	13.4	16.0	9.3
public (percent of GDP)	2.6	3.7	4.8	5.8	7.4	6.9
private (percent of GDP)	4.5	5.3	7.4	7.6	8.5	2.5
Public health spending per capita (US\$)	129	445	1,102	2,032	3,507	2,028
Out-of-pocket spending (share of total health spending)	34.2	23.4	19.4	14.5	12.1	16.8
Formal health care coverage (share of population)	...	...	...	85.0	85.2	99.0
Life expectancy (years at birth)	70.9	73.7	75.3	76.7	77.9	79.9
Measles immunization (share of children 12-23 months)	...	...	...	90.5	92.1	89.6
Physicians (per 1,000 population)	...	...	...	2.3	2.4	3.1
Hospital beds (per 1,000 population)	7.9	6.0	4.9	3.5	3.1	5.6

Sources: OECD, WHO, WDI, and IMF staff estimates.

<sup>1</sup> Years as indicated or latest available.

<sup>2</sup> OECD advanced economy unweighted average.

<sup>3</sup> Prior to 2000 data are not available based on the GFSM2001 methodology.

<sup>4</sup> Health spending components (in percent of GDP) may not add up to the total. Public health spending data have been adjusted to account for structural breaks.

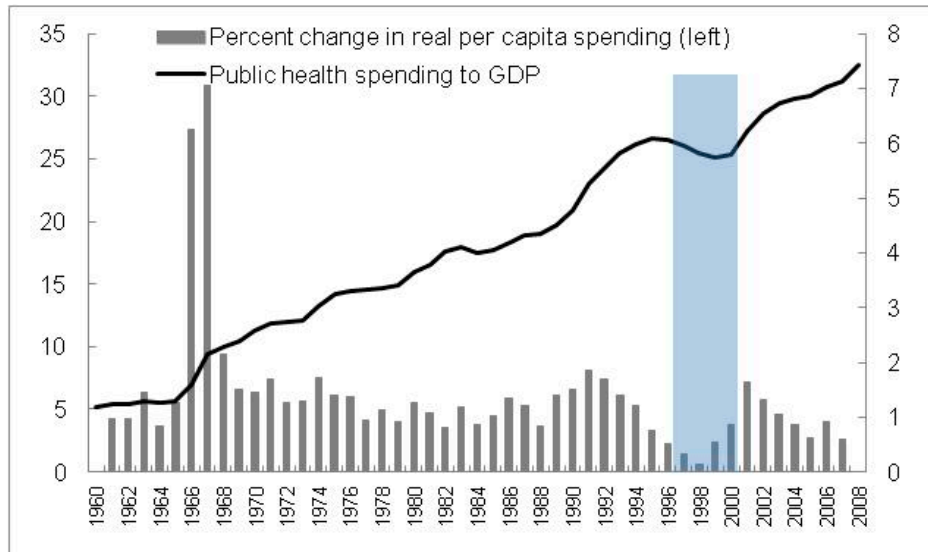
### Experience with health reforms: mid- to late 1990s

#### *Spending trends*

92. The growth in U.S. public health expenditure took off in the mid-1960s with the creation of Medicare and Medicaid. From 1970 through to 1990 public health care spending

in the United States grew at an average real rate of around 5.3 percent per year. Health expenditure climbed as a percent of GDP from 1.2 percent of GDP in 1960 to 6.1 percent in 1995. The Clinton administration focused on fiscal deficit reduction—over the 1990s the U.S. federal deficit was steadily reduced, becoming a surplus in 1997/98. Growth rates of health expenditure began to moderate in real terms in the first part of the 1990s and dipped below the rate of increase in output in the second part of the decade—by 1999 public health expenditure had dropped to 5.7 percent of GDP. However, expenditure growth resumed strongly in 2001 and public health spending to GDP rose by over 1½ percentage points by 2008.

**Figure 15. United States: Public Health Spending**  
(Percent)



Sources: OECD Health Data and IMF staff estimates.

### *Cost containment reforms*

#### 93. **Public management and coordination—including the use of managed care.**

The developments that also helped control the growth of public health care expenditure in the 1990s could be broadly identified as public management and coordination reforms. In 1992, Medicare established a new fee schedule for physicians receiving payments from Medicare in order to help control costs and provide consistency—the Resource-Based Relative Value Scale assigns procedures performed by a physician or other medical provider a relative value, which is adjusted by geographic region and multiplied by a conversion factor. The conversion factor is adjusted annually. The new fee schedule set prices based on three

separate producer factors: physician work, practice expense, and malpractice expense. It is currently used by Medicare and by nearly all Health Maintenance Organizations (HMOs).

94. The 1990s saw a rapid expansion in the managed care and away from the traditional fee-for-service reimbursement from insurance.<sup>29</sup> This was particularly true in the private sector, where employers embraced it as an opportunity to gain control over sharply increasing costs. However, the popularity of managed care in the private sector encouraged its adoption by the public sector, for example, through the expansion of Medicare managed care—enrollment in Medicare managed care increase from 1 million in 1991 to more than 6 million in 1999 (Lagoe, and others, 2005). State governments also availed themselves of managed care plans for Medicaid to constrain the growth of costs.

95. **Other reforms.** An attempt to reduce Medicare spending by reducing payments to providers such as hospitals and nurse practitioners took place in 1997–98. However, those payments were raised in subsequent legislation a year later. The Medicare+Choice program was established, which pays private health plans a monthly capitation fee based on the amount the Medicare spends per beneficiary in that area, leaving the administration of benefits and payment of providers to each health plan. This period witnessed also the introduction of the State Children’s Health Insurance Program, which was an effort to expand the coverage of uninsured children. States could obtain matching funding at a higher rate than available under Medicaid for children in poor families.

### *Impact and durability of reforms*

96. Studies have found evidence that managed care arrangements— particularly HMOs— can reduce health care costs, at least in the short term, resulting from the transfer of purchasing power toward well-informed and price-sensitive insurers and employers. Also, their presence is associated with reduced cost growth in the areas with a higher penetration of managed care plans (Docteur and Oxley, 2003). Managed care in the United States appears to have been fairly effective in reducing public sector expenditure, with excess cost growth dropping fairly steadily, by -0.7 percent, over the second half of the 1990s as use of this system was expanded.

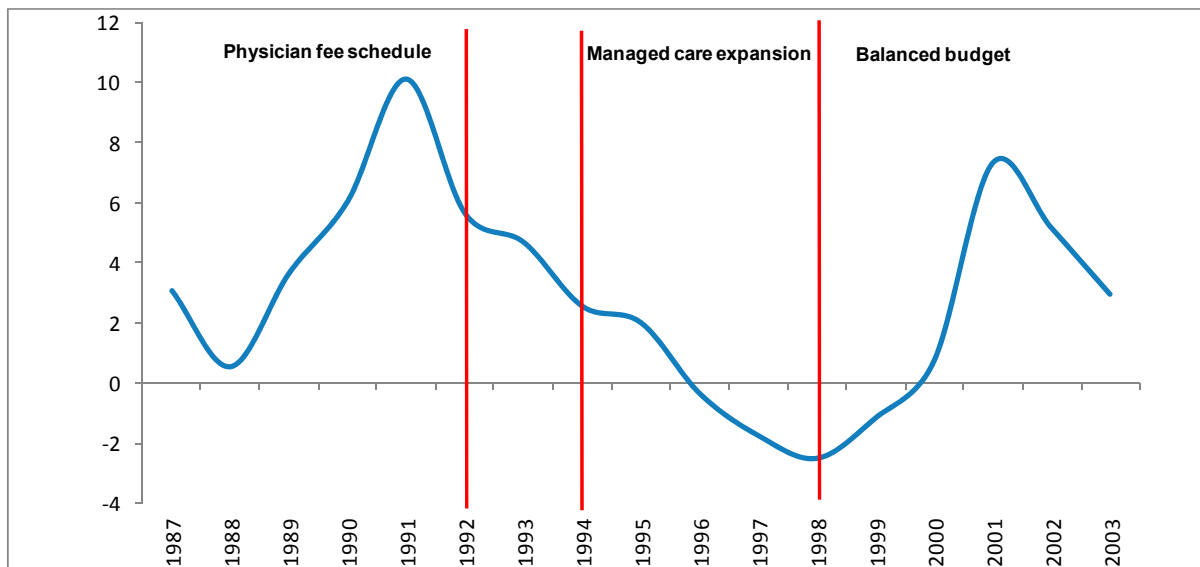
97. However, the same strategies (i.e., limits on patient choice of provider and treatment, intervention in physician practice decisions and selective contracting with alternative providers and suppliers) that helped contain costs fed discontent among both health care

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<sup>29</sup>Managed care is a general term for health plans that are proactive in seeking to affect the type or amount of care their enrollees receive. Unlike traditional insurance-based plans, they tend to have detailed contractual or employment relationships with health care providers. Cost-containment approaches used by managed care include requiring pre-authorization for services (gatekeeping), selective contracting with providers who are willing to accept the plan’s payment arrangements and utilization reviews.

providers and patients, resulting in a backlash against managed care's most restrictive characteristics. There followed a move away from such tight plan management and a rise in the concept of patients' rights—this led to Congressional debate on national legislation to establish certain patients' rights; passage of state-level patients' rights laws; and the imposition by many purchasers, including the federal government, of patient rights on the health plans with which they do business.

**Figure 16. United States: Excess Cost Growth and Key Reform Episodes**  
(Percent)



Source: OECD Health Database and IMF staff estimates.

## Lessons

98. The major slowdown in health spending in the United States in the 1990s was attributable to the widespread adoption of managed care that introduced gatekeeping and utilization reviews into the system. Negotiated prices for health services between the managed care plans and providers also contributed to lower care costs.

### III. EMERGING ECONOMIES

#### A. Estonia

##### Overview of health care system

99. The health care system in Estonia is predominately publicly funded through mandatory health insurance contributions, with a mix of public and private provision. The earmarked social payroll tax accounts for almost two-thirds of total health spending, and private spending comprises a quarter of total health spending, mostly in the form of copayments for pharmaceuticals and dental care. Most of the specialists and hospitals are public, owned by local governments. Private provision is largely restricted to primary care, ambulatory services, and pharmacies.

100. The health status of the population lags behind OECD averages. Life expectancy stood at 73.9 years in 2008, 5.6 years below the OECD average of 79.8 years. The infant mortality rate was 5.0 deaths per 1,000 live births in 2008, above the OECD average of 3.9.

101. Public health spending as a share of GDP is moderate compared with other OECD countries. In 2008, total health spending was 5.4 percent of GDP, below the OECD average of 9.2 percent. Public health expenditures as a share of GDP decreased during the 1990s (while private out-of-pocket payments as a share of total health spending nearly doubled), and has remained relatively stable since the early 2000s. However, in absolute terms, per capita public health expenditures more than doubled between 2000 and 2008, from US\$398 to US\$836.

**Table 9. Estonia: Key Indicators**

	1995	2000	2008 <sup>1</sup>	High income: nonOECD average 2008	OECD average 2008
GDP per capita (US\$, PPP)	6,318	9,876	20,640	34,549	37,899
Total health spending (percent of GDP)	6.2	5.3	5.4	5.1	9.2
public (percent of GDP)	5.6	4.1	4.1	3.4	6.8
private (percent of GDP)	0.6	1.2	1.3	2.6	2.4
Public health spending per capita (US\$)	365	398	836	1,189	2,541
Out-of-pocket spending (share of total health spending)	10.2	19.9	22.1	25.2	17.0
Formal health care coverage (share of population)	...	...	100.0	...	97.8
Life expectancy (years at birth)	67.7	70.6	73.9	75.5	79.8
Infant mortality (per 1,000 live births)	14.9	8.4	5.0	12.2	3.9
Measles immunization (share of children 12-23 months)	...	93.4	95.4	90.5	93.6
Physicians (per 1,000 population)	3.2	3.3	3.4	2.3	3.2
Hospital beds (per 1,000 population)	8.3	7.2	5.7	3.8	5.7

Sources: WDI, WHO, and OECD.

<sup>1</sup> All spending data uses 2007 for 2008.



## Experience with health reforms

102. Following the breakup of the Soviet Union, there was a strong desire to move away from the input-based system and embrace market principles, centered on meeting patient needs at an affordable cost. Since the beginning of the 1990s, the health care system underwent several major reforms:

- **Introducing a compulsory social health insurance system.** In 1992, an earmarked health insurance fund independent of the state budget was established.<sup>30</sup> The health insurance fund was financed by a 13 percent payroll tax on salaries, paid fully by employers. Initially, there were 22 non-competing, district-based funds. As a result, some of the more deprived districts had lower resources than others. In 2001, the funds were reorganized into a single independent public agency, legally obliged to balance yearly revenues and expenditures, a requirement fulfilled almost every year since its inception.
- **Primary care system reform.** The main tasks of the primary care reform included introduction of family medicine as a specialty into health care practice and changing the remuneration system of primary care doctors. The major steps of primary care reform included: creating a list system through which the population could register with a primary care doctor; introducing a partial gatekeeping system which controls most access to specialist care; introducing a mixed payment system for primary care (age-adjusted capitation, fee-for-service payments and basic allowances complemented by a quality bonus system); and granting doctors the status of independent contractors.
- **Rationalizing the size of the hospital sector.** An important milestone in hospital sector reform was the reduction in the number of acute-care hospital beds by two-thirds and the decrease in the number of acute-care hospitals in 2003.<sup>31</sup> In addition, all public hospitals had to be incorporated under private law as foundations or joint-stock companies.<sup>32</sup> As a result, all public hospitals have full managerial rights over assets and access to financial markets. DRG-based payment methods were introduced in 2004 and have been used in combination with other payment methods for hospital reimbursement.

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<sup>30</sup>The Health Insurance Act.

<sup>31</sup>Hospital Master Plan 2015.

<sup>32</sup>Health Care Services Organization Act that took effect in 2001.

- **Other public health system reforms.** The public health reforms included a number of measures, such as the creation of an institutional structure, establishment of a financial mechanism and defining the responsibilities of different shareholders.
- **Patient cost-sharing.** In 1993, the prescription pharmaceutical reimbursement system was introduced, based on some cost-sharing. Cost-sharing of dental care is substantial and about 23 percent of out-of-pocket spending goes toward these services. Flat co-payments are charged for certain types of health services such as primary care physician home visits, outpatient visits, and hospital bed-days.

### **Main challenges**

103. **Growing lack of medical professionals.** The number of doctors and nurses per 1,000 people has been declining. In 2008, the number of doctors per 1,000 people was roughly in line with the EU average, while there was a shortage of nursing personnel and an uneven distribution of specialist services across the country. EU accession in 2004 led to a temporary spike in the number of doctors and nurses migrating to neighboring EU countries. In recent years, however, migration has decreased and the main challenge is to retain qualified professionals in the health care sector.

104. **Rising health care costs.** Wide population coverage has been maintained and a comprehensive range of services are available to the population. Health spending per capita grew, in real terms, by an average of 8.8 percent per year between 2000 and 2008, which was more than double the OECD average of 4.2 percent. In addition, demographic factors, technology improvements, and the need to raise the relatively low salaries of medical professionals are likely to put upward pressure on public health spending.

105. **High life-style related risks.** The main disease burden challenges are premature mortality caused by external causes and lifestyle-related risk factors. The smoking rate remains high; HIV incidence rates are high; and alcohol consumption, at 14 liters per year per adult, is well above the OECD average of 9.3 (OECD, 2010a).

### **Lessons**

106. Careful planning is crucial for the successful transition from a tax-based health care system to a compulsory social insurance system. Health insurance reforms included a dedicated 13 percent payroll tax accompanied by carefully phased major changes in the delivery system and regulatory environment. Primary care reform included both thorough changes in the medical educational system together with changes in institutional settings and payment mechanisms. A long-term strategy with explicit objectives and direction was developed to reduce hospital capacity and improve system efficiency.

107. The development and successful implementation of a long-term strategy was the key to a successful hospital sector reform. The plan to reduce hospital beds included an assessment of future capacity and set targets on the number of hospitals and beds. In 1990, there were about 120 hospitals with 14,000 acute-care beds (Habicht and others, 2006). The number of hospitals and beds has fallen dramatically since then. As a result, inpatient care utilization has decreased while ambulatory care utilization has increased.

108. Global budgets, if well enforced, can be an effective tool in containing public health spending. The health insurance fund is the main source of health care financing and is independent of the government budget. It is legally obliged to balance yearly revenues and expenditures and has achieved this requirement almost every year since its inception. Consequently, the share of public health spending in Estonia, as a share of GDP, remains well below the OECD average, although health care spending in Estonia has been growing more rapidly between 2000 and 2008 than in most OECD countries.

109. A single health insurance fund allows for more extensive risk pooling, and can also help improve efficiency and control costs. With 22 sickness funds originally, some of the funds were small and did not provide sufficient risk pooling. A single fund, on the other hand, can facilitate redistribution of revenues between regions, have lower administrative costs, and achieve more economic use of resources. The success of Estonia in using a single insurance fund to control spending echoes the experience of advanced economies (Oxley and MacFarlan, 1995).

## **B. Hungary**

### **Overview of health care system**

110. Hungary has a compulsory social insurance system with mostly public provision. Most spending (71 percent in 2008) is financed by compulsory health insurance contributions paid by employees and employers. Municipalities are responsible for primary care, such as doctor services, family physicians services, dental care, and mother and child health nursing services. Provision of secondary care is shared among municipalities, the national government, and private providers. The national government owns hospitals that provide acute and chronic care.

111. The health status of the Hungarian population has lagged since the 1960s. Life expectancy in Hungary increased by only 1.3 years between 1960 and 1990 while life expectancy increased by 8.7 years, on average, in OECD countries (Orosz and Burns, 2000). In 2008, life expectancy in Hungary was 73.8 years, compared with the OECD average of 79.8 years; infant mortality was 5.6 per 1,000 live births, higher than the OECD average of 3.9.

112. Public health spending as a share of GDP is well below the OECD average. Public health spending as a share of GDP decreased during the 1990s (while the share of out-of-pocket payments increased), and has remained relatively stable since the early 2000s. However, in absolute terms, per capita public health spending increased rapidly, from US\$602 in 2000 to US\$980 in 2008.

**Table 10. Hungary: Key Indicators**

	1995	2000	2008 <sup>1</sup>	High income: OECD, average 2008	OECD average 2008
GDP per capita (US\$, PPP)	8,535	11,211	18,989	37,899	37,899
Total health spending (percent of GDP)	7.3	6.9	7.4	9.2	9.2
public (percent of GDP)	6.1	4.9	5.2	6.8	6.8
private (percent of GDP)	1.2	2.0	2.2	2.4	2.4
Public health spending per capita (US\$)	554	602	980	2,541	2,541
Out-of-pocket spending (share of total health spending)	16.0	26.3	24.9	17.3	17.0
Formal health care coverage (share of population)	...	100.0	...	...	97.8
Life expectancy (years at birth)	69.9	71.7	73.8	79.8	79.8
Infant mortality (per 1,000 live births)	10.7	9.2	5.6	3.9	3.9
Measles immunization (share of children 12-23 months)	99.8	99.8	99.9	93.6	93.6
Physicians (per 1,000 population)	3.0	2.7	3.1	3.2	3.2
Hospital beds (per 1,000 population)	8.8	8.1	7.0	5.7	5.7

Sources: WDI, WHO, and OECD.

<sup>1</sup> All spending data uses 2007 for 2008.

### Experience with health reform

113. Recognizing that the health care system was inefficient and ineffective and that health care costs needed to be reduced, the government has initiated a series of health care reforms since the mid-1980s, which intensified after the transition to a market economy in the 1990s.

- Compulsory social health insurance system.** The Health Insurance Fund (HIF), established under the compulsory social insurance system, collects premium contributions from formal sector workers and the self-employed. Provisions for the non-contributing groups are shared between the HIF and the government. The HIF is separated from the government budget, and although the government cannot use its surpluses for other purposes, it is obligated to cover its deficit. In addition, the HIF is only responsible for recurrent costs while fixed costs and investments are the responsibilities of the owners of health facilities (local governments and the state). The HIF has been effective in imposing discipline on aggregate health spending.

- **Primary care system.** A system of family physicians was established in the early 1990s to deliver continuous, personal, and comprehensive health care, with greater emphasis on prevention, rehabilitation, and home nursing services. Patients are required to seek referral from a GP of their choice to limit access to more expensive specialist services. The payments for GPs are based on a capitation fee and the number of patients registered.
- **Hospital system.** The hospital system was excessively costly in the pre-transition era. The overall number of hospital beds was too high, while the number of hospital beds in intensive care, chronic care, and rehabilitation was too low. Reform efforts have been made to fit the distribution of medical services to the health needs of each specific region. To provide incentives for efficiency, DRGs were introduced for inpatient care in 1993. Outpatient specialty services are paid under a fee-for-service system.
- **Patient cost-sharing.** Another area of reform focused on individual incentives, such as the introduction of copayments for pharmaceuticals and long-term chronic care. Copayments in primary and outpatient care and a hospital daily fee for inpatient care were introduced during the 2006/07 reform. Demand fell in response. However, these measures were subsequently repealed by a national referendum in 2008. The generosity of the health package has also been reduced by the exclusion of dental coverage from national health insurance, effectively increasing cost sharing.

### Main challenges

114. **Rising pressure on public health spending.** The population health status is among the worst in the EU region two decades after health care reform started. In addition, cost pressures on the health care system are likely to increase owing to demographic factors, technology improvements, and low salaries of medical professionals. The need to achieve fiscal consolidation, however, suggests financial resources for health care are limited, and improving the efficiency of spending will thus be essential for improving health outcomes.

115. **High lifestyle-related risks.** The lifestyle-related risks include high alcohol consumption, smoking, an unhealthy diet, and lack of physical activity. For example, alcohol consumption is about one third higher than the OECD average (OECD, 2010b); Hungarian men have one of the highest lung cancer mortality rates in the world; and two-thirds of men and one-half of women are overweight or obese.

116. **Imbalance of health services professionals.** While the overall health workforce/population ratio is comparable to the OECD average, the geographic and inter-specialty distribution is unbalanced and the workforce is biased towards high-skilled

specialists. Some geographic areas do not have enough doctors and nurses, and there are shortages in certain specialties such as primary care, public health, and diagnostic specialties.

117. **Inefficient use of health care resources.** The inefficiency of the health care system is reflected in the excess use of hospital based care and specialty care. Despite reforms, the rate of hospitalization has increased and the share of primary care in health care spending has decreased. High utilization of the health care system also suggests inefficiencies and the need for an appropriate regime of copayments to rationalize demand. In 2007, the number of per capita physician-patient contacts was 10.8, about 50 percent higher than the OECD average (Utca, 2009).

### **Lessons**

118. Development of a consistent long-term strategy is essential for a successful health system reform. The Hungarian health system was transformed from a centrally controlled, tax-based system to a social health insurance system and different types of reforms have been introduced since the beginning of the 1990s. Nonetheless, reforms that promote the cooperation between agencies have received less attention, and reforms have often contradicted each other.

119. Rectifying the provider payment system and getting the incentive system right are necessary to improve efficiency. The payment system does not provide sufficient incentives for GPs to treat patients within primary care because the payments for GPs are based on a capitation fee and the number of patients registered. The tendency for hospitals to treat patients on an in-patient basis reflects the higher reimbursements given for in-patient (rather than out-patient) treatment. Furthermore, health institutions have no incentive to use medical equipment in the most economic manner, since provider payments do not cover depreciation costs and the funding for capital costs are the responsibility of the governments.

120. Over-extended benefit packages are difficult to roll back. Under the communist regime, health care coverage was comprehensive and was provided for free. The benefit package has remained relatively generous. It appears increasingly difficult to roll back health care benefits as the copayment in primary and outpatient care and hospital daily fee for inpatient care have been repealed.

121. Global budgets are an effective way to reduce public health spending, but should be monitored and refined to improve overall system performance. The HIF sets sub-budgets for each type of health care services such as in-patient care, out-patient care, chronic care, and primary care. However, there was no spending cap for pharmaceuticals, which may have contributed to the growth of pharmaceutical spending. In addition, the lack of flexibility in the distribution of the health care budget across different types of health care services provides perverse incentives, since the funding proportions are based on historical spending patterns rather than medium- to long-term analysis of health care needs.

## C. China

### Overview of health care system

122. China's health insurance system is evolving toward a social health insurance system, with dominant public provision. The system consists of the basic insurance scheme for urban formal-sector workers, an urban resident scheme for the rest of the urban population, and the cooperative scheme for all rural residents. All three systems involve a mix of different financing sources, as described below. The medical assistance program provides financial assistance for the poorest and most vulnerable. Only a very small share of the population is under private coverage. Public hospitals provide most of the health care services while private hospitals and clinics play a complementary role (Huang and others, 2009).

123. The health status of the population has improved dramatically during the last 60 years. Life expectancy has more than doubled (to 74.0 years in 2008) and infant mortality has decreased to 18 deaths per 1,000 live births.

124. Prior to economic reforms in the late-1970s, China had a well-functioning health care system for its level of income. Public health and preventive care were highly developed and prioritized. The health care system dramatically improved the health of the population, as reflected by the remarkable increase in life expectancy and reduction in infant mortality.

125. In spite of rapid economic growth over the past 30 years, improvements in health care have slowed and in many respects the health of the population has deteriorated. Although China's economy grew rapidly, with real annual GDP growth averaging 10 percent since 1980, total health spending did not rise in similar fashion; in 2007, it equaled 4½ percent of GDP (with less than half public), substantially less than countries at comparable income levels.<sup>33</sup> In addition, out-of-pocket spending is also high and accounts for more than 50 percent of health care spending (OECD, 2010d).

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<sup>33</sup>Based on CEIC data, public health spending has increased by 0.8 percentage point of GDP since 2007. CEIC data are generally lower than WHO data. In 2007, CEIC estimated public health spending at 0.8 percent of GDP, while WHO data indicate spending of 1.9 percent of GDP.

**Table 11. China: Key Indicators**

	1995	2000	2008 <sup>1</sup>	Lower middle income, average 2008	OECD average 2008
GDP per capita (US\$, PPP)	1,351	2,163	5,389	5,894	37,899
Total health spending (percent of GDP)	3.5	4.6	4.3	6.0	9.2
public (percent of GDP)	1.8	1.8	1.9	3.6	6.8
private (percent of GDP)	1.7	2.8	2.4	2.4	2.4
Public health spending per capita (US\$)	46	70	104	177	2,541
Out-of-pocket spending (share of total health spending)	46.4	59.0	50.8	35.4	17.0
Formal health care coverage (share of population)	...	...	85.0	...	97.8
Life expectancy (years at birth)	70.8	71.0	74.0	65.6	79.8
Infant mortality (per 1,000 life births)	37	30	18	39.9	3.9
Measles immunization (share of children 12-23 months)	98	85	94	85.7	93.6
Physicians (per 1,000 population)	1.6	1.6	1.6	1.0	3.2
Hospital beds (per 1,000 population)	...	2.3	2.2	2.2	5.7

Sources: WDI and WHO.

<sup>1</sup> All spending data uses 2007 for 2008.

## Experience with health reform

126. **Coverage expansion.** China has taken a step-by-step approach to expand health coverage by gradually covering different segments of the population.

- At the end of 1998, basic insurance scheme for formal sector workers was introduced in urban areas to replace the labor insurance and the government insurance schemes. The basic insurance is an employment-based coverage financed operating through an employer-funded collective fund (approximately 6 percent of wages) and a beneficiary-funded personal account (about 2 percent of wages). It consists of a pooled fund for inpatient stays, and individual medical savings accounts for outpatient visits.
- Introduced in 2003, the rural residents' scheme is financed largely by government premium subsidies and enrollee contributions. The benefit package varies geographically, but a typical package includes a modest household medical savings account for outpatient expenses and a social pooling account for inpatient expenses with high deductibles. Both rates and ceilings for reimbursements have been low. However, as additional funding has gone into the program, coverage has become more generous (Wagstaff and others, 2009a).
- The medical assistance safety net program was introduced in 2003 to provide financial assistance for the poorest and most vulnerable. This program is jointly



funded by central and provincial governments. Early evidence suggests that the program is well targeted (Wagstaff and others, 2009b).

- The urban resident scheme, targeting children, the elderly, the disabled and other non-working urban residents, was introduced in 2007 and is financed largely by government premium subsidies and enrollee contributions. Enrollment is at the household level, partly to reduce administrative costs, and partly to reduce adverse selection.

127. **Payment reform.** Fee-for-service remains the most common payment method, with the government setting prices for most of the services. China attempted to address affordability and access by setting prices below cost for preventive care and basic services, and above cost for drugs and high-tech tests. This introduced incentives for providers to shift resources away from low-margin basic health services to high-margin services, and has resulted in heavy investment in high-tech equipment, a high share of spending on drugs, and the delivery of medically unnecessary care. In 2000, the government sought to reduce price distortions by increasing the prices of professional services and reducing the prices of high-tech care.<sup>34</sup> Beyond reforms to the price schedule, the government also experimented with other payment methods, including global budgets, capitation payments, and DRGs.<sup>35</sup>

## Main challenges

128. **High out-of-pocket expenditures.** Rapidly rising health care costs and limited insurance coverage has made health care increasingly unaffordable. Even if universal coverage is achieved as planned, because of the limited insurance benefits, many families may still face high out-of-pocket expenditures, and limited financial protection in case of catastrophic health care events. Addressing these shortcomings will require further government subsidies, especially for rural residents, residents of less developed regions, and low-income families.<sup>36</sup>

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<sup>34</sup>Studies suggest that this resulted in a shift from high-tech to basic professional services and a reduction in growth rates of expenditures for secondary and tertiary hospitals, but high-tech services still appears to be very profitable (Eggleston and others, 2008).

<sup>35</sup>Payment reforms have been associated with lower expenditures, compared with FFS; however, evaluation of the effects on quality of care, risk selection, and cost shifting are not yet available (Eggleston and others, 2008).

<sup>36</sup>Studies show that the NCMS and other insurance have been unable to reduce out-of-pocket spending and improve access to care and health outcomes (Lei and Lin, 2009; Wagstaff and others, 2009a).

129. **Wide inequalities.** Most of the health care resources are concentrated in urban areas and the benefits of urban insurance are much richer than those of the cooperative insurance. Government subsidies to big urban hospitals and insurance coverage for urban residents favor higher-income groups. In addition, there are wide regional disparities in public health spending across local governments at the provincial or county levels, reflecting their differing financing constraints (Wagstaff and others, 2009a).

130. **Inefficient use of resources and health care services.** Bed occupancy rates are low at 60 percent, compared with nearly 80 percent in OECD countries. Large hospitals have been expanding rapidly, while beds and healthcare personnel in small community hospitals and health centers have not been fully utilized. High-tech services and prescription drugs are overused, while preventive care and primary care services are underprovided. In addition, many preventive and primary care services are provided by large hospitals, and some patients who can be effectively treated on an outpatient basis are hospitalized. There is a need to shift from hospital-based care to primary physician services and from large hospitals to small facilities.

131. **Rapidly aging population and increasing disease burden.** The share of the population aged 60 or above is projected to reach 30 percent by 2050. In addition, the smoking rate remains high and the obesity rate has been rising rapidly. The incidence of cancer, cerebrovascular disease, and heart disease has increased, and these diseases are now the leading causes of death.

## Lessons

132. Rapid economic growth is not sufficient to ensure commensurate progress on health indicators. Health spending lagged China's spectacular growth, and flaws in the design of the health system led to slower improvements in health indicators.

133. An incremental approach can be an effective way to expand insurance coverage and access to adequate health care services. In China, this approach has initially involved limiting the health care packages to basic services and catastrophic events, and expanding coverage gradually from formal sector workers in urban areas, then to the rural population, and finally the rest of the urban population. Increasing both the depth and the breadth of health care package and ensuring universal coverage will require additional resources.

134. There is a need to re-emphasize preventive care and public health services. The importance of preventive care and public health services has been overlooked during the last few decades. Despite a large increase in public health care spending, progress in public health has slowed as most of the resources went to invasive care, high-tech tests, and expensive drugs. Public health and preventive care spending need to be expanded especially

in less developed regions and rural areas, possibly through more generous earmarked transfers for public health programs (Wagstaff and others, 2009a).

135. Improving the efficiency of the health care system will require reform of the provider payment system. Over the medium term, China's health care system will need to move toward a more efficient price schedule or payment method beyond fee-for-service. There have been many payment reform pilots at the provincial and city levels, and the payment method reforms that have been shown to be effective should be implemented at the national level.

## **D. Thailand**

### **Overview of health care system**

136. Thailand has a mixed health care system with public and private financing and provision. Since 2001, it has a tax-financed universal health care coverage policy which aims to ensure access to quality health care and a single standard benefits package for all. As a result, by 2007, 98 percent of the population was estimated to be covered by formal insurance (Wibulpolprasert and Thaiprayoon, 2008), and any uninsured citizen has the right to register and receive free care. The standard care package includes curative care, as well as health promotion and prevention.

137. There are four main insurance options in Thailand, mostly public: The Universal Coverage Scheme (UCS) (3/4 of the population); the Civil Servants Medical Benefits Scheme (CSMBS) (about 8 percent); the Social Security Scheme (SSS) (about 11 percent); and private insurance (about 2 percent). UCS and CSMBS are mainly tax-financed, whereas SSS is financed through compulsory 1.5 percent payroll contributions by employers, employees and the government each. Limited copayments apply in the case of CSMBS and SSS. Private insurance is voluntary and entirely financed through private and employer contributions.

138. Under all insurance schemes, patients can choose between public and private providers. In practice, public facilities provide most of the care under the UCS and CSMBS, whereas provision under SSS is split in about equal parts (Wibulpolprasert and Thaiprayoon, 2008). The health sector is dominated by the public sector that provides about three fourths of all hospital beds, with the private sector mainly providing high-quality care in and around Bangkok and other urban centers, including care for medical tourists. There are 4.5 hospital beds per 1,000 people in Bangkok, vis-à-vis 2.1 per 1,000 in all provinces. Similarly, the number of physicians per 1,000 people is only 0.3, but ranges between 1.2 for Bangkok and an extremely low 0.1 for the Northeastern region (Ministry of Public Health, 2009). Since the 1970s, village health volunteers have been trained to provide primary care services in rural areas and play an important role in health promotion and prevention.

139. Health indicators in Thailand are among the strongest in Southeast Asia. In 2008, life expectancy stood at 70 years and infant mortality had declined to 13 deaths per 1,000 live births, from 26 in 1995. Although there are still gaps in health outcomes between Thailand and OECD countries, Thailand performs considerably better than countries with a similar level of income. Thailand was hit hard by the HIV/AIDS epidemic, however, which continues to cause the highest disease burden overall.

140. Although overall health expenditures remain low, public health expenditures have been increasing rapidly. In 2007, total health spending equaled 3.7 percent of GDP—relatively low even in comparison with other lower-middle income countries. Almost three-fourths of total health spending was public, which amounted to 2.7 percent of GDP, an increase of 1.1 percent since 1995, while private spending almost halved as a share of GDP over the same period. The drop in private spending was driven by a significant reduction in out-of-pocket payments, which fell from 43 percent of total spending in 1995 to 19 percent in 2007.

141. The health care system has benefited from relatively stable economic growth and a sound fiscal position. Since the deep slump of the Asian crisis, Thailand's economy has performed relatively well with average annual GDP growth at 4.8 percent during 2000–08, and is projected to grow by more than 5 percent in 2010. Public finances have been relatively healthy, with modest fiscal surpluses prior to the economic crisis which created budget room for health care expansion in 2001. Public debt was around 45 percent of GDP in 2009.

**Table 12. Thailand: Key Indicators**

	1995	2000	2008 <sup>1</sup>	Lower middle income, average 2008	OECD average 2008
GDP per capita (US\$, PPP)	4,226	4,684	7,942	5,894	37,899
Total health spending (percent of GDP)	3.5	3.4	3.7	6.0	9.2
public (percent of GDP)	1.6	1.9	2.7	3.6	6.8
private (percent of GDP)	1.9	1.5	1.0	2.4	2.4
Public health spending per capita (US\$)	105	127	209	177	2,541
Out-of-pocket spending (share of total health spending)	42.6	33.8	19.2	35.4	17.0
Formal health care coverage (share of population)	45.5	71.0	97.7	...	97.8
Life expectancy (years at birth)	68.0	68.0	70.0	65.6	79.8
Infant mortality (per 1,000 live births)	26	17	13	39.9	3.9
Measles immunization (share of children 12-23 months)	80	94	98	85.7	93.6
Physicians (per 1,000 population)	...	0.3	...	1.0	3.2
Hospital beds (per 1,000 population)	...	2.2	...	2.2	5.7

Sources: WDI and WHO.

<sup>1</sup> All spending data uses 2007 for 2008.

### Experience with health reforms

142. While Thailand has undergone a series of health care reforms since the 1970s, the most significant reform was the introduction of universal coverage in 2001.

143. The main reforms from the 1970s to 1990s include the expansion of primary health care, in particular to rural areas, and the establishment of insurance schemes.

- After the end of military rule in 1973, rural health care infrastructure was aggressively expanded through district hospitals and health centers, the training of village health volunteers, and the establishment of community-financing schemes, such as village drug funds. The share of health service delivery through regional hospitals dropped from almost half in 1977 to just over a sixth in 2003 (Wibulpolprasert and Thaiprayoon, 2008).
- In 1975, the Medical Welfare Scheme (MWS) was established to provide free public health services to the poor and other selected groups; the subsidized Health Card Scheme (HCS) to cover the near-poor population on a voluntary basis was issued in 1990; and in 1992, the compulsory Social Security Scheme (SSS) started covering private-sector employees. All three schemes implemented a gatekeeper system and global budgets (MWS, HCS) or capitation payments (SSS). Public servants have been covered under the Civil Servants Medical Benefits Scheme (CSMBS) since 1963. Payments under CSMBS are fee-for-service.

144. The Universal Coverage Scheme (UCS) under the slogan “30 baht (about \$1) treats all diseases” was launched in 2001. Its main aim was to establish universal access to essential care and to reduce the risk of catastrophic illnesses and associated out-of-pocket health costs.

- After pilots in six provinces, UCS was scaled up nationwide within one year. Primary care provider units functioned as gatekeepers, and capitation rates were based on utilization and cost estimates derived from previous research. The capitation grant was set at 1,202 baht initially, and increased to 1,899 baht in 2007. Provinces receive a budget according to population and workload, and (introduced more recently) specific support to hospitals in more remote areas.
- Initially, 30 baht copayments were required and the standard care package did not include antiretroviral drugs (ARVs), renal replacement therapy, and services such as cosmetic surgery and fertility treatments. For high-cost care, a package similar to SSS was adopted, however, in order to reduce inequities in health care.
- The initial copayment of 30 baht under the UCS was abolished in 2006, and out-of-pocket charges now apply only in case of nonemergency services from nonregistered facilities. The standard care package was extended to include ARVs in 2003 and renal

replacement therapy in 2008. While capitation grants have increased rapidly since 2006, these additional benefits are managed separately. While the health package includes a wide array of services, in practice supply constraints and other cost containment incentives keep utilization low, especially utilization of high-cost services, and this is consistent with the observed low level of public spending to GDP.

### **Main challenges**

145. **Supply constraints.** The rapid scale-up of UCS and increase in demand for medical care resulted in a sharp increase in utilization rates of outpatient and inpatient care, by about 20 percent between 2002 to 2007, which put additional strain on the already relatively small number of primary health care doctors and nurses.

146. **Financing scheme.** Initial capitation grants were too low to cover the costs of many facilities, leading to severe financial stress, especially in affluent but small provinces with relatively high concentrations of health personnel. While some desirable redistribution of personnel occurred, salaries were excluded from capitation grants in 2003, and since 2005, resources are being allocated on the basis of capitation and facility workload, with additional support for hospitals in remote and hardship areas.

147. **Quality.** As a result of the financing scheme and overall supply constraint, the maintenance of quality standards within tightly set budget limits also posed a challenge (Ministry of Public Health, 2009).

148. **Rising costs.** With rising incomes, greater demand for more expensive, extended care packages, and further population aging, cost pressures are likely to increase and could require the re-introduction of copayments to supplement tax financing. In addition, subsidies could be reduced for those deciding to stay in private rooms.

### **Lessons**

149. Political consensus building is important for enacting successful health reforms. Providing universal coverage was possible in Thailand owing to an overwhelming political consensus to subsidize quality care for all through tax revenues. This consensus was created through the collaboration of policymakers and civil society, and an effective public relations campaign describing the benefits of these reforms.

150. An adequate supply of health care professionals and health infrastructure should be ensured prior to expanding coverage. The Thailand experience illustrates that rapid expansion of coverage, without expanding supply, can lead to some undesirable reductions in quality.

151. Financing models and resource transfers need to be calibrated carefully to ensure quality of care and to attract and retain health care workers in remote areas. In Thailand, the initial capitation grants were too low to cover costs and led to financial stress of many facilities.

## E. Chile

### Overview of health care system

152. Chile has a dual health care system in which citizens can choose public or private insurance coverage. Its mandatory social security system ensures that about 90 percent of the population has formal coverage. Citizens can choose between the public health insurance fund (FONASA) and private health insurance companies (ISAPREs). About 67 percent of the population is covered by FONASA, and 15 percent opts for ISAPREs.<sup>37</sup> A mandatory and universal 7 percent contribution is levied on formal sector workers' or retirees' income, up to a ceiling of 60 UF per month.<sup>38</sup> The poor and the unemployed are entitled to free coverage under FONASA which relies on contributions (about a third), and receives additional funding through budgetary subsidies (about half) and copayments. ISAPREs are financed through contributions (70 percent) and copayments (30 percent).

153. The health care delivery system consists of a mix of public and private providers. Municipal governments own primary care facilities and deliver most primary care, including free medical, dental, nursing, and midwifery services at local health centers. Public hospitals are administered and owned by regional health authorities and deliver most secondary and tertiary care for publicly insured patients. The state owns and operates about 200 hospitals with two-thirds of Chile's total inpatient capacity (Edlin, 2009). Private for-profit and not-for-profit ambulatory centers and hospitals deliver care for patients with private insurance, and physicians in private practice deliver ambulatory specialty care on a fee-for-service basis (Bastias and others, 2008). While patients are free to choose their service provider, co-payments are significantly smaller or nonexistent for publicly provided services.

154. Chile, in terms of health outcomes, is one of the world's strongest performers. The health status of the Chilean population has been improving steadily. Life expectancy had increased from 75.1 years in 1995 to 78.7 years in 2008 which was only slightly below the OECD average of 79.8 years; infant mortality had declined to 7 deaths per 1,000 live births in 2008, from 13 in 1995, but was still higher than the OECD average of 3.9. Compared with

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<sup>37</sup>The remainder (18 percent) is covered by other not-for-profit agencies or has no coverage (about 10 percent, evenly distributed across income quintiles).

<sup>38</sup>UF is an inflation-indexed unit, worth about US\$40 in August 2010.

countries with a similar level of income, health outcomes of the Chilean population are well above the average.

155. Public health spending has been growing rapidly, although not above economic growth. In 2008, total health spending in Chile remained almost constant at 6.2 percent of GDP since 1995. Per capita spending was about US\$507 a year—well below the OECD average although in line with countries with a similar level of income. Public health spending had increased from 3.3 percent of GDP in 1995 to 3.7 percent of GDP in 2008, while private spending as a share of GDP declined. In terms of composition, the share of out-of-pocket payments in total outlays decreased slightly, likely reflecting the expansion of coverage.

156. The expansion of the Chilean health care system was made possible by an extended period of economic growth. Chile's economy has performed strongly over the past decades, with GDP growth at above 5 percent annually, on average, between 1990 and 2009, and low and stable inflation. In 2008, the per capita income was US\$13,926 (PPP-adjusted) in Chile. Supported by a prudent fiscal framework, public finances have also been remarkably sound with significant fiscal surpluses, and central government gross debt stood at only 5 percent of GDP in 2009. Poverty declined from 19.9 percent in 1996 to 13.7 percent in 2006, but income inequality has remained stubbornly high, with a Gini coefficient of 0.54 in 2006 (OECD, 2010c).

**Table 13. Chile: Key Indicators**

	1995	2000	2008 <sup>1</sup>	Upper middle income, average 2008	OECD average 2008
GDP per capita (US\$, PPP)	6,828	9,018	13,926	14,150	37,899
Total health spending (percent of GDP)	6.3	6.2	6.2	6.3	9.2
public (percent of GDP)	3.3	3.0	3.7	4.0	6.8
private (percent of GDP)	3.0	3.2	2.6	2.7	2.4
Public health spending per capita (US\$)	244	280	507	518	2,541
Out-of-pocket spending (share of total health spending)	25.1	25.0	22.0	27.6	17.0
Formal health care coverage (share of population)	86.6	86.6	89.5	...	97.8
Life expectancy (years at birth)	75.1	76.9	78.7	71.8	79.8
Infant mortality (per 1,000 life births)	13.0	8.9	7.0	17.4	3.9
Measles immunization (share of children 12-23 months)	97.0	97.0	96.0	90.8	93.6
Physicians (per 1,000 population)	1.1	1.1	...	2.0	3.2
Hospital beds (per 1,000 population)	3.1	2.7	2.3	3.6	5.7

Sources: FONASA, WDI, WHO, and OECD.

<sup>1</sup> All spending data uses 2007 for 2008.



## Experience with health reforms

157. **Decentralization and private sector participation.** The three main changes introduced under the military government in the 1980s included a fundamental restructuring of the system, introduction of private sector participation, and decentralization.

- In 1979/1980, the public sector was reorganized into three distinct branches, including the Ministry of Health (regulation), Health Services (execution) and FONASA (financing); and participants were given free choice between public and private providers.
- In 1981, private health insurance companies (ISAPREs) entered the insurance market and the responsibility for the provision of primary care was transferred to municipalities.

158. **Public management and coordination.** Since the democratic transition in 1990, several reform efforts have been initiated, aimed at addressing inequities and inefficiencies, strengthening the focus on primary care, introducing more competition among ISAPREs, and improving care for the growing elderly population.

- During the 1990s, main reform steps included increased public investment in the health sector; accelerated decentralization and strengthening of subnational governments; regulation of previously unregulated ISAPREs by a Superintendent of Health; enhanced public sector efficiency, including through separation of functions and new payment mechanisms; and increased coverage for low-income groups and extended benefits (Bitran and Urcullo, 2008).
- In 2000, the Lagos administration defined new goals that ultimately translated into a legislative packages separating regulation from provision; improving private sector regulation; securing public resources for the reform; establishing universal coverage, a minimum benefits package, and a set of explicit guarantees with regard to access, quality, and financial protection.<sup>39</sup>

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<sup>39</sup>Health Authority and Management Law, the Private Health Law, Financing Government Expenditure Law, and Regime of Explicit Guarantees in Health Law (AUGE).

## Main challenges

159. **Cost containment.** Public spending on health care has increased significantly over the past 15 years, as the public sector sought to extend coverage (especially to high-risk groups) and to improve the quality of care. In addition, new technologies and medicines have increased treatment costs and higher life expectancy implies higher incidence of chronic diseases. The public sector has been forced to purchase services from the private sector in order to meet its service guarantees (Bitran and Urcullo, 2008). Public providers' costs are currently controlled by budget ceilings. The elimination of supply-side subsidies has also helped containing costs, but additional cost containment measures may still be needed.

160. **Population aging.** Cost pressures on public budgets will be exacerbated as the population ages and the public sector continues to care disproportionately for the elderly.

161. **Inequities.** Reforms were aimed at improving the health status of the poor (Tsai and Ji, 2009), but fundamental socio-economic inequities remain, with two virtually separate health care systems and continued rationing in the public sector in contrast to superior access and services in the private sector.

## Lessons

162. Universal coverage requires sufficient resource mobilization. Providing universal coverage in an upper-middle income country is costly, and public sector health spending has been growing. This could be accommodated in Chile owing to strong public finances as well as a political consensus to subsidize quality care for all through tax revenues. In addition, a high percentage of workers in the formal sector and relatively high average income enabled significant private funding support through the universal tax deduction of 7 percent.

163. The delivery of cost-effective high-quality health care depends on efficient institutions. Health care is fraught with market imperfections. Administering a system of public insurance and provision as well as effectively regulating the private sector requires credible and independent institutions. This is a particularly critical factor in providing high quality of care in a cost-effective manner.

164. Public mandatory insurance is critical to ensure near-universal coverage. In Chile, mandatory insurance ensures the inclusion of low-income and high-risk individuals, reduces adverse selection, and contains public sector costs through some degree of risk pooling. However, cream-skimming by the private sector is a concern. As the Chilean population ages and the cost of care increases with technology advancements, FONASA may remain the only affordable option for the elderly and chronically ill.

## F. Mexico

### Overview of health care system

165. Mexico has a segmented social health insurance system. It consists of insurance for private-sector, formal salaried workers, government employees, and oil company workers; and Popular Health Insurance (PHI) for the rest of the population. Each of the institutions operating in the Mexican health care system owns and runs its own facilities and employs its own staff. While the federal Ministry of Health (MoH) still finances and controls a series of third-level providers, responsibility for the delivery of most health services has been decentralized to State Health Services (SHS). The private sector is heterogeneous, in terms of both the size of care institutions and the quality of care provided, and is weakly regulated. The health status of the Mexican population has experienced dramatic improvements over the past decades, but Mexico is still behind most OECD countries. In 2008, life expectancy in Mexico was 75.1 years, below the OECD average of 79.8 years, but higher than the 71.8 years for countries with a similar income level; infant mortality per 1,000 live births was well above the OECD average of 3.9, but comparable to countries with a similar income level (OECD, 2005).

166. Public health spending in Mexico is low while out-of-pocket spending is high. Mexico spends considerably less on health than other OECD countries, but is comparable to countries with a similar income level. In 2008, public health spending was only 2.7 percent of GDP, well below the OECD average of 6.8 percent and 4.0 percent among countries with a similar income level. On the other hand, out-of-pocket spending accounted for nearly half of total health spending. Supply of inputs to the health care sector is comparably low by OECD standards, with around 2.0 doctors per 1,000 people, compared with the OECD average of 3.2.

167. Mexico has not yet achieved universal insurance coverage of basic health services. It is estimated that the various social security institutes cover about 40 percent of the population, while the PHI run by the MoH accounts for another 25 percent (Schwellnus, 2009). Part of the uninsured population has access to a program providing health care services free of charge in remote areas without access to other health care facilities. Most of the uninsured resort to state health facilities and pay out-of-pocket for services and pharmaceuticals in the private sector.

**Table 14. Mexico: Key Indicators**

	1995	2000	2008 <sup>1</sup>	Upper middle income, average 2008	OECD average 2008
GDP per capita (US\$, PPP)	7,486	10,028	14,502	14,150	37,899
Total health spending (percent of GDP)	5.6	5.6	5.9	6.3	9.2
public (percent of GDP)	2.4	2.6	2.7	4.0	6.8
private (percent of GDP)	3.2	3.0	3.2	2.7	2.4
Public health spending per capita (US\$)	166	236	372	518	2,541
Out-of-pocket spending (share of total health spending)	56.2	50.9	50.8	27.6	17.0
Formal health care coverage (share of population)	...	...	65.0	...	97.8
Life expectancy (years at birth)	72.5	73.9	75.1	71.8	79.8
Infant mortality (per 1,000 life births)	27.7	19.4	15.2	17.4	3.9
Measles immunization (share of children 12-23 months)	89.9	95.9	91.9	90.8	93.6
Physicians (per 1,000 population)	1.7	1.6	2.0	2.0	3.2
Hospital beds (per 1,000 population)	1.9	1.8	1.7	3.6	5.7

Sources: WDI, WHO, and OECD.

<sup>1</sup> All spending data uses 2007 for 2008.

### Experience with health reforms

168. Prior to 2003, the key element of the reforms was decentralization of health care services for the uninsured by transferring responsibilities to states. However, central fund allocations to the states continued to be based on historical budgets and as a result, funding disparities persisted and even increased as the wealthy states increased their own allocations.

169. The System of Social Protection in Health (SPSS) aimed to achieve universal coverage by 2011 and reduce the fragmentation of the system. The SPSS is part of the continued efforts to move away from a system of vertically integrated insurance/provider institutions toward a more universal system, by contracting SHS, the social security institutes, or private providers and encouraging competition among them. The SPSS was passed in 2003 and went into effect in 2004, and the primary objectives and measures of the reform include the following:

- Establishing a system of universal access based on social insurance. A system of family insurance, PHI or Seguro Popular, ensures that all individuals have access to affordable health insurance, particularly the poor. Family contributions to PHI are based on a sliding fee scale and are waived for families meeting the low-income criteria.
- Improving the allocation of resources by defining a package of essential services. The essential package is covered by a fund administered at the state level and includes

ambulatory care at the primary level and outpatient consultation and hospitalization for the basic specialties at the secondary level.

- Making the distribution of federal resources to the states more equitable. The federal contributions are based on a per-enrolled family fee plus a solidarity supplement for the poorer states.
- Increasing competition among service providers to raise productivity levels and improving the quality and efficiency of health sector. The health care services covered by PHI can be provided by accredited public or private clinics and hospitals.
- Protecting the funding of public health interventions. Separate fund is allocated for community health services and can only be used to finance public health programs.
- Protecting families from excessive health expenditures. The package of catastrophic interventions is financed in a fund that aggregates risk at the national level because the state risk pool may be too small to finance these interventions.

### **Main challenges**

170. **Reducing fragmentation, inequality of access, and inefficiencies.** The public sector is characterized by the presence of several public purchasers that are vertically integrated with providers and serve different parts of the population with little connection between them. In addition, there is a very large and mostly unregulated private sector. Wide inequality exists in terms of access to care, financing, and health status. A recent cross country study (Schwellnus, 2009) indicates that Mexico has one of the least efficient health care systems in the OECD.

171. **Achieving universal coverage with voluntary enrollment.** In a voluntary system, such as PHI, healthy individuals may not take up health insurance in order to avoid paying the premia. Risk selection could eventually undermine the financial sustainability of the system through a deterioration of the risk pool. Mandatory enrollment may be considered to reduce adverse selection and ensure full coverage of the population. Expanding enrollment in PHI will also depend on improvements in quality of provision and access to care in SHS facilities.

172. **Meeting the extra demand for health care services.** The increase in insurance coverage would create extra demand for health care services. Given that the number of doctors per 1,000 people in Mexico is considerably lower than the OECD average; the health care system could have difficulties in meeting the increasing demand for health care services

as a result of coverage expansion, especially in poorer states with weaker capacity and in rural areas.

173. **Increasing funding.** Additional public funding is required both to reduce out-of-pocket spending and to meet the costly demands associated with the treatment of chronic diseases that arise as countries become more developed. Although some resources could be obtained by increasing efficiency, the absolute amount and the share of GDP spent on health from public sources will have to increase for the health care system to respond effectively to the demands of the population, achieve universal coverage and expand access to new medical interventions.

174. **Integration of the insurance system.** A major step will have to be made in breaking down the institutional barriers at the provider level in order for the states to successfully set up contracts and purchasing arrangements with all types of providers. Further progress toward a system of providers serving all patients on equal terms is likely to require moving toward a unified public health insurance system. The differences in benefit packages between those under social security and those with PHI, as well as differences in the quality of providers in the two systems, may act as a barrier to the integration of the systems.

### **Lessons**

175. Fragmentation and lack of competition are major sources of inefficiency. Social security institutes, private insurers, federal and state health services each have their own vertically integrated service providers with no access to each others' services. This has resulted in a costly duplication of health administration and infrastructure, curtailment of patient choice, and lack of competition between providers.

176. Separation of financing and provision will be necessary to allow competition and foster efficiency. Insurers should be allowed to contract with any provider. This would reduce the cost of provision because the insurers can choose the providers with the lowest cost, thereby encouraging providers to become more efficient.

177. Weaknesses in the provider payment system have impeded the best use of health resources. Current methods of payment of providers provide few incentives for improvements in productivity and efficiency. Virtually all of the institutional providers are financed through capped budgets while workers are paid on a salary basis.

178. A better balance in the ratio of nurses to doctors could help reduce costs. Compared with other OECD countries, Mexico has a relatively high ratio of doctors to nurses. As nurses are generally paid less than doctors, increasing the number of nurses per doctor, and increasing their responsibilities, could lead to a more cost-effective mix of inputs.

## Appendix: Reforms in Advanced Countries—A Typology

Reforms implemented in advanced countries over the past three decades can be grouped into three categories (Oxley and MacFarlan, 1995):

### Macro-level controls

- **Budget caps:** These are the bluntest instrument for restraining resources allocated to the public health sector. They can be expressed as limits on overall healthcare spending or on sub-sectors, such as hospitals or pharmaceuticals. Examples include global budgets for hospitals or expenditure ceilings for general practitioners.
- **Supply constraints:** Here the focus is on regulating the volume of either inputs into or outputs from the health care system. Input controls include limits on admittance to physician training colleges, defining positive lists for drugs, or rationing of high-tech capital equipment. Output controls include delisting of certain treatments, such as eye tests and dental treatment.
- **Price controls:** Price controls regulate prices of inputs or outputs. They include wage controls for health care professionals, reference pricing for pharmaceuticals products, price controls on specific treatments, and set case-based payments such as capitation or diagnosis related groups (DRGs).

### Micro-level reforms

- **Public management and coordination:** These reforms seek to alter the organizational arrangements between different parts of the health care system in order to reduce costs through improved coordination, alignment of responsibility and accountability, better incentive structures, and/or reduction in overlap or redundancy. Examples of such changes include abolition of managerial levels, decentralization of health care functions, and introduction of gatekeeping arrangements (i.e., a physician who manages a patient's healthcare services, coordinates referrals to secondary and tertiary levels, and helps control healthcare costs by screening out unnecessary services).
- **Contracting:** How providers are reimbursed is one of the most important factors impacting the micro-level efficiency of health spending. There are many different ways to pay physicians, hospitals, and other providers but three of the most general methods include: (i) salaries or budgets; (ii) case-based payment like capitation or DRGs, and; (iii) fee-for-service.
- **Market mechanisms:** These reforms seek to improve micro-level efficiency and/or control costs by introducing varying degrees of market mechanisms into the health sector. These reforms operate not so much on the supply side, as on the nexus

between supply and demand. Examples include the creation of internal markets (e.g., where primary care physicians purchase services from hospitals), separating the purchase of health services from provision (thus allowing competition), and promoting patient choice (e.g., where patients can choose among primary care providers and hospitals).

### **Demand-side reforms**

These reforms include policies intended to increase the share of health care costs borne by patients, often with the objective of avoiding excessive consumption of specific health services. The two important issues on the demand side are the level of patient cost sharing (this can take form of lump-sum or percentage copayments) and the tax treatment of private health insurance.



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