The Drug Budget Silo Mentality in Europe: An Overview

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Introduction

This supplement engages some of the leading health economists in Europe to analyze how the policies in their respective health-care systems to control and influence pharmaceutical spending are likely to influence the overall performance of their systems, with respect to both cost control and the production of population health. Six countries were selected to provide a representative mix of public systems: France, Germany, Italy, the Netherlands, Spain, and the United Kingdom. All of their public health-care systems, whether tax- or social insurance-based, have limited resources, determined in part by their per-capita income, in part by the financing mechanism, and in part by social preferences. Each uses a unique mix of taxes, premiums, and out-of-pocket payments to fund the amount that can be spent on health care. Each is unique in how funds raised are allocated to the different types of “services”—hospitals, physicians, and drugs—used in the delivery of health care. These budgetary allocation systems can be an extremely complex mixture of mechanisms such as regional population-adjusted budgets, payments per unit of service provided, and paybacks of expenditure above preset targets. Pharmaceutical spending seems to be a highly visible target for cost controls. The act of treating pharmaceuticals as a separate expenditure category creates incentives for cost-containment measures that may reduce the overall efficiency of the health-care system. The articles in this issue aim to identify the incentive properties of budgetary control mechanisms, analyze their likely impacts, and discuss options for integrating pharmaceutical budgets into overall health-care spending budgets to enhance the efficiency with which pharmaceuticals are used to improve overall health-care system performance.

From an economic perspective, drugs, physician services, and hospital services are intermediate inputs, which together with patient’s time, are combined to produce the final output “health.” These intermediate inputs can be both complements and substitutes in this production. Treating any one of them as a single category for control runs the risk of perversely affecting production and distorting output in, perhaps, unintended ways. In particular, reducing use of one input (such as pharmaceuticals) to stay within the budget for pharmaceuticals may lead to greater expenditure on other inputs, such as hospital care, that are less efficient at improving the health of the patient, thereby reducing the overall efficiency of the health-care system. In the United States, the term “silo mentality” is often ascribed to this approach, and we adopt it here. Health systems and health providers seem to have a tendency to categorize spending by type of intermediate input, grouping expenditures into identifiable “silos” for budgetary control based on type of service input, rather than final output. These controls may mean that the most efficient mix of services to treat a disease is not used. It should be much more efficient for expenditure control to be exercised at the level of disease category or therapeutic area allowing the most efficient mix of services to be used to achieve the desired health outcome. Some of the six systems do monitor spending and performance in this manner at certain organizational levels. However, silo budget systems exist and persist in all of these countries.

This summary article provides a comparative overview of the broad, qualitative, and quantitative features of the systems in these six European countries. We then provide an overview and commentary on the six articles.

A Quantitative Comparison of the Six European Union (EU) Countries

Based on the latest figures from the Organization for Economic Cooperation and Development (OECD) [1], we set out in Figure 1 per-capita health-care spending for the six countries and in Figure 2 the percentage of gross domestic product (GDP) spent on health care. The figures show that the three countries with social insurance (France, Germany, and the Netherlands) spend more on
health care than the three tax-funded systems (Italy, Spain, and the United Kingdom). This partly reflects higher per-capita income, but as Figure 2 shows they are spending a higher share of national income also. Of course, this may in turn reflect health care being a superior good: an increasing share of income is spent on health care as income rises. We can note also that these three countries also spend more on private health care, reflecting the greater plurality of their systems.

Turning to the pharmaceutical market, we set out in Figure 3 per-capita pharmaceutical spending and in Figure 4 drug spending as a share of total health expenditure. Figure 4 shows figures for 1990 and 1999 to give an indication of change over the decade. All of these figures include over-the-counter medicines as well as prescription drugs and therefore must be interpreted with caution as evidence of relative use of prescribed drugs. We can see, however, that per-capita drug spending varies greatly and is not systematically related to levels of national income per capita or to the type of health-care system (social insurance- or tax-based).

For all countries, except Germany, the growth rate of drug spending over the past 10 years has been higher than the growth rate in total health spending, increasing the share of total pharmaceutical spend in overall health-care expenditure.

**Pharmaceutical Financing and Control Structures: A Qualitative Overview**

Given the lack of success in controlling health spending in general, and drug spending in particular, all six of the countries are more or less continuously trying to reform their control systems. Table 1 summarizes the main measures that are used to impact on drug spending and on the efficiency with which pharmaceuticals are used.

Each of these six countries had a national-level drug budget at some point over the past 10 years. The setting of a national target is a clear case of “silo budgeting”. Only the United Kingdom has abolished a national drug-spending target in favor of an integrated national budget with local allocations for spending on particular inputs such as medicines. Spain and Italy have recently devolved budgetary control to the regional level but both retain national targets.
<table>
<thead>
<tr>
<th></th>
<th>France</th>
<th>Germany</th>
<th>Italy</th>
<th>The Netherlands</th>
<th>Spain</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National drug budget or target</strong></td>
<td>Yes</td>
<td>Yes, distributed regionally to physician level</td>
<td>Yes, allocated to regions</td>
<td>Yes</td>
<td>Yes, allocated to regions</td>
<td>No, drug budgets set locally</td>
</tr>
<tr>
<td><strong>Pricing/reimbursement</strong></td>
<td>Centrally controlled/negotiated; some planned deregulation</td>
<td>Free pricing</td>
<td>Centrally controlled/negotiated</td>
<td>Centrally controlled/negotiated with regional variations</td>
<td>Yes</td>
<td>Free pricing at launch: NICE is designed to impact on sales</td>
</tr>
<tr>
<td><strong>Reference pricing—international</strong></td>
<td>Not formally</td>
<td>Planned for generics</td>
<td>Yes, off-patient products</td>
<td>Yes</td>
<td>No, but some use by regions</td>
<td>No</td>
</tr>
<tr>
<td><strong>Reference pricing—national clusters</strong></td>
<td>Not required, although companies submit to pricing body</td>
<td>May have a role in positive list being developed</td>
<td>Yes, for innovative products</td>
<td>Yes</td>
<td>Not required centrally; some regional guidelines</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Use of economic evaluation</strong></td>
<td>Yes, Conventional procedure with payback of excess revenue</td>
<td>Yes, by regions</td>
<td>Yes, by regions</td>
<td>Yes</td>
<td>General agreement on stability with payback of excess revenue</td>
<td>Yes, via NICE</td>
</tr>
<tr>
<td><strong>Copayments</strong></td>
<td>Yes, mandatory 1993–94 but not followed-up</td>
<td>No</td>
<td>Yes, developed by LHEs</td>
<td>Yes, national</td>
<td>Yes, at regional and local levels</td>
<td>Yes, via NICE</td>
</tr>
<tr>
<td><strong>Profit/revenue controls</strong></td>
<td>Yes, physician-level budgets with salary penalties for excess spending</td>
<td>Yes, developed at LHE level</td>
<td>Yes, developed at LHE level</td>
<td>Yes, salary incentives for hitting generic</td>
<td>Yes, at regional and local levels</td>
<td>Yes, set at GP</td>
</tr>
<tr>
<td><strong>Use of clinical practice guidelines</strong></td>
<td>Yes, mandatory 1993–94 but not followed-up</td>
<td>No</td>
<td>Yes, developed by LHEs</td>
<td>Yes, national</td>
<td>Yes, at regional and local levels</td>
<td>Yes, via NICE</td>
</tr>
<tr>
<td><strong>Use of drug budgets/financial incentives aimed at prescribing doctors</strong></td>
<td>Yes, physician-level budgets with salary penalties for excess spending</td>
<td>Yes, developed at LHE level</td>
<td>Yes, developed at LHE level</td>
<td>Yes, salary incentives for hitting generic</td>
<td>Yes, at regional and local levels</td>
<td>Yes, set at GP</td>
</tr>
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NICE, National Institute for Clinical Excellence.
All of the systems include patient copayments on drugs. These aim to provide an incentive to avoid overuse rather than to raise a large share of revenues. The United Kingdom and France are exceptions to this. In the United Kingdom most prescriptions are exempted from the copayment. In France, complementary insurance meets the costs of prescriptions not picked up by the main system. In Italy, national copayments were abolished in 2000 but have since been re instituted by most of the regions.

The main form of central control is price setting with some form of reference pricing being the most prevalent form. Some reference pricing systems use prices in other countries as benchmarks; others find the reference price within a grouping by therapeutic area or by molecule.

The United Kingdom and Germany do not control the pricing of new pharmaceuticals and were the first two of these six countries to introduce drug budgets for ambulatory physicians. Along with the Netherlands, they have long-standing policies to encourage the use of generic drugs. Spain, France, and Italy have acted more recently to increase the use of generics in their systems.

The use of economic evaluation is limited but increasing. Its main application in respect of pharmaceuticals in the UK, Italy, Netherlands, and France is in relation to new innovative drugs. The related use of clinical practice guidelines is increasing in importance in the UK, Italy, and the Netherlands, but an initiative in France in 1993 to 1994 to develop mandatory guidelines has fallen by the wayside. In Germany there is interest in both the potential of centralized health technology assessment (HTA) and of clinical guidelines.

In summary, there does not appear to be a uniform or dominant strategy to which these countries are converging. They do, however, sometimes experiment with similar new measures. We now discuss the country context in which these measures have been taken.

**Overview: The Six Country Papers**

**France**

Le Pen [2] discusses the French system, which is based on social insurance with an extensive benefit package, determined by the state and not the sickness funds. Since 1990, the tax-based element of financing has increased, now accounting for 40% of total funding. This has increased government control over the system. At the global system level, budgets are set by the parliament based on GDP growth, public sector deficits, and other macro criteria. However, as health-care expenditure is driven by demographic factors, technology, and expectations, there is inevitably a gap between the top-down budget and the bottom-up cost pressures.

Budgets for hospitals are set directly by the state but paid for by insurers. Diagnostic resource groups (DRGs) are measured and used in budget negotiations, but they do not determine budgets. Hospital budgets are fixed and are increasingly leading to rationing, with waiting times lengthening and new technologies not being adopted. The primary care budget is more of a target than a budget, and the government seeks to control prices (e.g., for consultations) rather than volumes of activity. The pharmaceutical budget is achieved by a complicated payback system which “taxes” companies when the growth target for aggregated pharmaceutical expenditure is exceeded. Drug prices are negotiated without reference to the budget targets, so the overall silo pharmaceutical cap produces a perverse incentive for companies to heavily promote new products in the knowledge that the budget overruns will be spread across all companies. Drug prices are also set with little use of cost-effectiveness information, although manufacturers are providing more of this information to the pricing authorities. Interest in postlaunch pharmacoepidemiologic studies is increasing. The government is also using more “programmed price cuts” for new drugs to automatically reduce future price as volume increases.

The French pharmaceutical market is a low-price and high-quantity market. There is little attempt to influence prescribing volumes or the quality of prescribing. As we noted earlier, a strategy of developing mandatory clinical practice guidelines began in 1993 to 1994 but has become obsolete. Generics are encouraged in principle but the appropriate financial incentives have not hitherto been in place.

Le Pen concludes that the budgeting system lacks incentives to use pharmaceuticals efficiently. A silo budget mentality has prevailed. The government is now seeking to set more realistic overall global budgets and for pharmaceuticals in particular. It is also encouraging generics via a reference price system, delisting from reimbursement drugs of limited therapeutic benefit, making a special budget for new drug purchase available to hospitals, and replacing price control for innovative products with a more selective process of intervention in the expectation that companies will seek to price, as now, at a European level. Although these measures will increase the efficiency of pharmaceutical expenditure, it is not apparent that they change the poor incentives
facing doctors, hospitals, and insurers to use pharmaceuticals cost-effectively to achieve the optimal gain in health care. They also will not remove silo budgeting at the national level for pharmaceuticals, which inhibits the efficient substitution of drug therapy for hospital treatment.

Germany
Schwermann et al. [3] describe a German health system that has tried numerous initiatives over the past 10 years to control spending on drugs. Health care continues to be financed in the main through social insurance. Citizens can enroll in one of some 350 sickness funds and are free to use multiple physicians (general practitioners [GPs] and specialists) who are paid on a fee-for-service basis.

In 1993, the government established a national-level drug budget and allocated it among the 23 regions. In the ensuing 10 years, a variety of mechanisms were proposed to monitor drug spending and penalize “overprescribing,” but after an initial significant impact on prescribing in 1993, these proposals either were not implemented or were found to be ineffective. Compared to the other five countries, however, Germany was the most successful at controlling drug-spending growth in the 1990s, although significant growth has occurred after 2000. More recently, it has moved to embrace physician-level drug budgets, moving away from regional drug budgets. The authors point out that these new budgets are also based on historical patterns that bear little relationship to an efficient allocation of drug and other health-care resources. They cite examples where previous attempts to control drug spending may well have increased overall spending by increasing hospital referrals.

They also discuss a number of possible reforms, some of which are in process or under consideration that could affect spending on drugs, including price competition among retail pharmacies, aut idem (generic) substitution, promoting parallel imports, proportional copayments, and mail and Internet ordering. Historically, Germany has used a negative list to exclude certain drugs from coverage, but the implementation of a positive list is scheduled for 2003. The authors see some promise in this to the extent it incorporates societal cost-effectiveness as a criterion. But there is still the need to provide physicians with incentives for optimal prescribing. They argue that centralized HTA, coupled with positive lists and a disease-management-based approach to budgeting and measuring health outcomes, offers the best way forward to improve the overall efficiency of health sector resource allocation. The authors proposed approach to disease management would use both evidence on the cost-effectiveness of interventions and financial incentives, paying disease management providers on a per-capita basis for a time period, rather than fee-for-service.

Italy
Mapelli and Lucioni [4] describe an Italian health system in which the central government regulates drug authorization, pricing, and reimbursement, but an increasingly decentralized delivery system is allowing local health authorities to experiment with different approaches. They differentiate between a “macro” and a “micro” perspective as to how government organization, regulations, and decisions affect drug spending.

The Italian National Health Service is financed almost entirely (97%) by general taxation, but at a macro level, there is a “soft” budget constraint, as deficit-financing is used if costs exceed the budget. The overall health budget is set centrally with a 3-year projection and is allocated to the 21 regions based on a complex calculation that includes a line item for drugs that is based on historical spending. But in the end, the regions are allocated a global amount and they have the flexibility to make adjustments and substitutions among line items.

The macro target for drug spending is set at 13% of the total health budget. Coupled with national-level across-the-board price cuts for drugs, this indicates a selective cost-containment, silo mentality that seems ill-suited for allocating total health resources among their best uses in terms of health outcomes. Furthermore, by using reference pricing and central price negotiation, the central government reveals a strong preference for cost minimization over obtaining value for money. We discussed the use of copayments earlier. Importantly, a significant proportion of prescription-only drugs (more than 20% by value) are, however, nonreimbursable.

Nonetheless, the decentralization of health spending control to the regions and local health enterprises (LHEs) and the accompanying experimentation and reform that is ongoing suggest somewhat greater responsiveness at a more micro level, conditional upon the efficiency of the prices determined centrally. Indeed, Mapelli and Lucioni see a gradual evolution at the micro level toward greater incentives for physicians to use drugs optimally. The regions allocate the budget for pharmaceuticals among the LHEs that deliver health services. Around one-half of the LHEs have agreements with GPs on issues such as pharmaceutical expenditure, some of which
include the use of monetary incentives, and more than 80% send their GPs reports on their drug consumption.

There is a growing interest in Italy in HTA and the related development and implementation of clinical guidelines. Although pharmacoeconomic analysis is now required for innovative drugs in pricing negotiations, most of the efforts to develop clinical guidelines have been at the LHE level. To date, national, centralized HTA has not been established. The authors conclude that interest in the efficient use of drugs is more advanced at the local level. At present, however, guidelines, moral suasion, and monitoring are the main incentives for efficiency at the micro level, and there is limited focus on health outcomes. Moreover, if the central decisions regarding the total drug budget or price cuts are not appropriate, then the ability to achieve efficiency at the micro level will be severely constrained.

The Netherlands

In their paper, Koopmanschap and Rutten [5] note that Dutch health care is funded through social insurance premiums with an annual national negotiation of a global budget linked to expected economic growth and the targeted share of health-care expenditure in national income. However, drug expenditure is only subject to a target budget, because the government has limited means to enforce it. The government uses price control in the form of reference pricing, which is linked to international prices and generic substitution by pharmacists, but there are no utilization controls or local drug budgets for prescribers. There are prescribing protocols and electronic decision support prescription systems for GPs, which appear to affect the quality of prescribing rather than the cost, but no measurement of the impact on health outcomes.

Reference pricing has led to both price cuts and price increases, as the reference price becomes the price everyone charges. Attempts to remove from reimbursement drugs that were low cost and affordable (out of pocket) to patients have in some cases led to more expensive publicly reimbursed drugs being prescribed.

Thus, the government has resorted to ad hoc (silo budget) controls such as not listing new drugs that cannot be fitted into an existing reference price cluster. There are plans to introduce cost-effectiveness studies and budget impact studies from 2005 to assess whether or not to reimburse these drugs. The government is likely to restrict the indications for which a product is reimbursed and use budget caps to enforce this. It is unclear whether the restrictions will be based on cost-effectiveness or on budget impact. The evidence on the impact of economic evaluation when used elsewhere in health policy making is mixed, as other factors enter into the reimbursement decision such as the severity of the disease (lung transplantation was reimbursed although relatively inefficient) and whether it is an individual or collective responsibility (the cost-effective treatment Viagra® was excluded from reimbursement).

The government is moving toward giving health-care insurers a more active role in relation to the purchase and use of pharmaceuticals, replacing price control with insurer negotiations and greater use of cost-effectiveness information. Whether this will be sufficient to break out of the culture of silo budgeting in relation to pharmaceuticals and establish incentives for prescribers to use pharmaceuticals in a way that is most cost-effective for the overall health-care system is not yet clear. However, Koopmanschap and Rutten are encouraged that the integration of budgets at the health insurer level will reduce the risk of perverse incentives and together with use of economic evaluation at the national level could lead to a move away from the current silo mentality.

Spain

Antoñanzas [6] begins his analysis by noting that the Spanish public health system has evolved from a social security-based system nearly 60 years ago to being now almost entirely financed by general taxation. The state owns most of the hospitals and health centers.

Another important evolution over the past 30 years has been the decentralization of power to the 17 regions, giving them funding and management control over state-owned health facilities. As of January 2000, all health spending was the responsibility of the regions within a national budget framework. The overall national health budget was established based on 1999 levels adjusted upward for income growth. Target minimum budgets for the regions have been established, with some adjustment for regional historical and demographic differences. Regional governments can budget additional funds for health above these minimums and can collect some additional taxes for this purpose. Regional primary care budgets typically include a large line item, often more than 50% for drugs. These budgets are typically set using historic
prescribing trends but giving higher spending centers lower increases to encourage them to get closer to the average. Public primary care physicians are salaried, but their salaries include some relatively small “incentive” payments related to the volume of patients covered and, in some regions, to meeting regional targets for drug spending, for example, related to generic prescribing. As part of this process, primary care centers receive detailed feedback on their prescribing expenditure. In general, it is not clear whether physicians have a net incentive to either over- or under-prescribe medicines. Doctors might over-prescribe to minimize contact time with patients (giving them a prescription to get them out of the door) or under-prescribe to avoid criticism or gain incentive payments. Antoñanzas notes, for example, the potential for more referrals to specialist care to avoid initiating expensive therapy in primary care.

The 1990s was a period of “modernization” for the Spanish health-care system. Numerous new initiatives were undertaken, ranging from more HTA to changes in hospital reimbursement and management responsibility. Information from economic evaluations became increasingly available. It is important to note that the regions have taken advantage of their autonomy to develop new policies such as encouraging generic substitution. Information systems to monitor prescribing behavior are operating in some regions and HTAs are published.

Although having considerable autonomy, the regions in Spain are still affected by central government policies to regulate access to drugs as well as their pricing and reimbursement. There is a nationally negotiated General Agreement on Stability, which seeks to limit national increases in pharmaceutical expenditure. Spain uses international reference pricing to control the prices of new drugs. There are national policies to increase generic use. Spain has the highest level of standard copayments—40% for most reimbursed drugs. However, there is tension between national and regional policies. One new development is regions negotiating lower prices than the maximum price established nationally.

Like many other countries, Spain seems to be following the path of perpetual health sector reform. Given the extent of decentralization, there is considerable scope for experimentation with reform. However, integrating budgets to achieve the most efficient mix of treatment does not appear to be part of this. As long as regional drug budgets are established on historical patterns and not linked to disease priorities with incentives to choose more efficient treatments, there will be limited potential to overcome this silo mentality to achieve optimal health outcomes for a given total health-care budget.

**United Kingdom**

McGuire [7] presents the United Kingdom as having a strong central global budget control for the tax-funded National Health Service, which has impacted at the margin primarily on the volume of services supplied. Historically a low spending country, recent increases in planned spending will take the United Kingdom closer to the average of EU countries and should increase the volume of activity. The government intends to achieve significant reductions in waiting times for treatment and better health outcomes in key disease areas such as cancer and heart disease.

Pharmaceutical expenditure is in part controlled by a profit control scheme and a negative list. Although there is a flat-rate copayment on pharmaceuticals and evidence of price elasticity, most patients are exempt and it is not used by government to control pharmaceutical use. The local purchasing bodies (primary care trusts in England) give GPs drug budgets, and GPs receive regular information on the type, cost, and volume of medicines they prescribe for their patients. However, there is no link to outcomes. Thus, while there is recognition that prescribing must increase to achieve improved outcomes in priority disease areas, there is no formal mechanism to link drug budgets to these priority areas. Primary care organizations (PCOs) in England are required to put in place prescribing incentive schemes for each GP practice which could in principle give GPs incentive to use their budgets efficiently. The proposed new contract for GPs will reward them financially for achieving certain prescribing targets in specific diseases where there is clear evidence of effectiveness.

McGuire notes that benchmarked prospective DRGs are probably the optimal type of contract for hospital services. They will help to ensure efficient production—in terms of service input selection and cost minimization—and can be linked to data on health outcomes. The United Kingdom is moving toward the adoption of a UK equivalent—health resource groups. However, there is no equivalent set of groupings to measure cost and outcome performance by disease area in primary care where most prescribing takes place.

In principle, PCOs in England can switch money between ambulatory and hospital care to make sure that disease priorities are addressed and services are
provided in the most efficient setting. However, once monies have been allocated to a budget holder, they have little interest in considering the impact of their decisions on other parts of the system or on the overall cost-effectiveness of the NHS. In particular, McGuire notes that there is a bias against adopting new treatments that have a heavy budget impact. The United Kingdom has a poor record in the rapid adoption of cost-effective new technologies, such as surgery following myocardial infarction and the use of statins for hyperlipidemia. This is part of the reason for establishing the National Institute for Clinical Excellence (NICE), which looks at the cost-effectiveness of both pharmaceutical and nonpharmaceutical treatments. The NAS is expected to follow the recommendations of NICE, and those of the National Service Frameworks (NSFs) for particular diseases. These have increased the prescribing of effective treatments. NICE is also developing clinical practice guidelines in major disease areas, which will incorporate evidence on economic efficiency as well as clinical effectiveness. However, it is not clear how these can be put into practice in the present budgetary environment and whether physicians can be induced to follow them.

Overall, McGuire concludes that the NHS suffers from an emphasis on budgetary control (and by implication silo budgeting) at the expense of incentives to promote the efficient delivery of care at local level. It remains to be seen whether the ability to move money around within the integrated budgeting system and the emphasis on quality through NSFs, NICE, and the proposed new GP contract will improve the efficiency of pharmaceutical use within the overall health-care budget.

**Concluding Observations**

The six articles have a number of common themes:

1. The six national systems of health-care financing handle drug spending in various complex ways, but there is evidence of silo budgeting of pharmaceuticals in all of them. However, it would be very difficult to quantify the impact in terms of the amounts of inefficient expenditure or of poorer health outcomes.

2. Several countries, notably Italy and Spain, have devolved national health budgets to regional and local authorities, but continue to attempt to manage and control drug spending with central level tools—for example, reference pricing, national spending targets, and positive lists. Only the Netherlands seems to be looking to use devolution (to sickness funds) to reduce the need for central pharmaceutical controls, replacing them with local incentives to improve the procurement and use of medicines.

3. Most of the countries, with the exception of France, are giving prescribing doctors more information about their expenditure on drugs, linked in several cases to drug budgets for prescribers and to incentive payments for keeping down prescribing expenditure. However, a number of countries, such as France and the Netherlands, continue to put the main emphasis on price control rather than looking at utilization and at value for money in terms of efficiency in achieving health outcomes.

4. The use of HTA to help obtain value for money is limited but seems to be increasing in most countries.

Overall, the emphasis continues to be on the cost containment of individual components of expenditure such as pharmaceuticals, rather than on getting the mix of intermediate inputs that maximizes health outcomes given overall health-care system financial constraints. Of course, these service budget systems survive for a very good reason. It is much more difficult to set up incentives and budgeting mechanisms that would achieve overall value for money. However, the authors set out ways in which progress can be made.

Budgets could be set at the disease level and linked to the health outcomes that should be achieved. Clinical protocols developed using economic evaluation can set out the most efficient way of delivering care. Activity can be benchmarked among providers to help ensure efficient use of resources including pharmaceuticals. A mechanism is still needed to decide priorities between disease areas and overall spending. The point is, however, that the focus should be on budgetary control at a relevant level of activity linked to health outcomes, leaving the budget holder free to choose the optimal mix of intermediate inputs, including use of pharmaceuticals.

Further analysis is needed of the incentives created in the experiments and reforms that are ongoing or planned in these countries, as well as an evaluation of their efficiency in terms of value for money. We look in particular to those reforms that adopt an integrative budgetary approach and focus on treating diseases and achieving health outcomes efficiently. These may provide evidence on how societies can best improve the efficiency of overall health expenditure and make the necessary trade-
offs between the conflicting demands for healthcare services and the limited finances available to provide these services.

References
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