ViewPoints

Health System Sustainability Forum

Lessons learned from innovative health system interventions that are improving care delivery across Europe

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1 Leading change to make health systems sustainable

4 Reorganising care delivery in public systems to improve patient outcomes
   Specialist stroke service in London

8 Leveraging private-sector expertise to deliver integrated care in a difficult-to-treat population
   Schizophrenia care in Lower Saxony, Germany

12 Using public-private partnership to bring care to an underserved population while lowering costs
   The Alzira model in Valencia, Spain

16 Promoting public-private partnership to deliver earlier diagnosis and better treatments
   Europe's Innovative Medicines Initiative

19 Combining managed insurer competition with universal access to care
   Health insurance reform in The Netherlands

22 Transforming care through the shared goal of improving chronic disease management
   Health system reform in the Basque Country of Spain

25 Key lessons to improve health system performance and transform care delivery

29 Appendix
   Forum participants
Leading change to make health systems sustainable

Health systems are under pressure throughout Europe as the ongoing financial crisis leads to reductions in health spending and threatens the quality of care delivered to citizens. Austerity measures and fiscal constraints have reversed the trend of increasing resources devoted to healthcare. Between 2000 and 2009, Europe’s health expenditure rose steadily at an average per capita rate of 4.6% per year in real terms. This rate of increase allowed health systems to keep pace with the increasing needs of an ageing population and take up innovations in healthcare technologies. In the first years of the financial crisis, many countries protected public healthcare budgets. However, health spending per capita fell by 0.6% in real terms across the EU in 2010, with nearly all European countries reducing growth in expenditures or making outright cuts.

This contraction is unlikely to be reversed in the foreseeable future. The European Commission (EC) expects further reductions in overall government expenditure in 2013. Even by 2014, estimated GDP growth rates of 1.5% will remain well below historic averages. In response to the challenging economic climate, countries such as Ireland, Italy, Greece, Portugal, Spain and Hungary, have reduced their healthcare budgets over the last five years. The prevalence of debt-based financing of pre-crisis public expenditures makes the return of budget largesse unlikely.

Such fiscal policies place additional pressure on health systems to derive greater value for citizens from existing or diminishing resources. A number of health system leaders have commented on the impact of “downward pressure on health budgets,” citing “dropping benefits, increasing out of pocket payments and rapidly dwindling support for innovation.”

Is the European model of universal, accessible and high-quality healthcare under threat? Or does the crisis present an opportunity to implement game-changing new approaches to financing and delivering care? What is the path to improving patient outcomes and health system performance when resources are limited and patient demand is increasing? How can health system stakeholders work together to chart this course?

Tapestry Networks convened a select group of European healthcare leaders to address these questions at the Health System Sustainability Forum in Barcelona on 14–15 January 2013. The Forum sought to accelerate the transition to sustainable healthcare systems by bringing health ministers, policy-makers, budget setters, clinicians, patient advocates and senior executives from leading private sector companies together with innovators who have led specific initiatives that make this type of transition possible. Forum participants shared their
experiences with driving sustained health system transformation and agreed that future health systems must learn to do more with less in order to deliver high-quality care to patients in an era of ageing populations and fiscal austerity.

Participants acknowledged the complexity of transitioning to a sustainable future. Public- and private-sector roles will shift as care delivery is reorganised, more extensive use of information technology becomes a necessity and patient outcomes dictate how resources are distributed. One health system leader said, “Now begins the hard work.” Progress depends on the ability of key decision-makers to clearly set priorities, plan strategically and lead large-scale change efforts.

This document captures Forum participants’ collective insight about these leading edge change efforts to better understand how they can be applied more broadly for additional benefit. Taken together, these case studies illuminate parts of the transition path to the sustainable health systems of the future. The first four cases present specific health system interventions and their emerging impact, while the last two describe how two health systems created a policy environment to enable healthcare reform:

- **Reorganising care delivery in public systems to improve patient outcomes: Specialist stroke service in London.** NHS London collaborated with clinicians to improve patient outcomes and health system performance by matching the location of acute stroke care facilities to areas with highest concentration of stroke patients. Health system leaders reorganised care delivery to concentrate acute stroke care units from 34 hospital sites around London to eight hyper-acute stroke units in order to ensure all stroke patients receive specialised care and avoid misdiagnosis or inappropriate treatment. (page 4)

- **Leveraging private-sector expertise to deliver integrated care in a difficult-to-treat population: Schizophrenia care in Lower Saxony, Germany.** AOK, the largest sickness fund group in Germany, is collaborating with an independent subsidiary of Janssen-Cilag to increase the quality and efficiency of care for schizophrenia patients through an integrated and patient-centred approach to care delivery. The goal of the partnership is to improve the co-ordination of care for schizophrenic patients, increase the quality and efficiency of care and reduce unnecessary hospitalisations. (page 8)

- **Using public-private partnership to bring care to an underserved population while lowering costs: The Alzira model in Valencia, Spain.** The Alzira Model in Spain illustrates the role of a PPP in addressing the infrastructure and
care needs of an under-served population. The regional government of Valencia awarded a 15-year contract to a private consortium comprising banks, insurance and construction companies to manage the publicly controlled, and publicly funded health facility. The partnership resulted in the delivery of high-quality services at nearly 25% lower costs than other traditional publicly funded health facilities throughout Valencia. (page 12)

- **Promoting public-private partnership to deliver earlier diagnosis and better treatments: Europe’s Innovative Medicines Initiative.** The Innovative Medicines Initiative is Europe's largest public-private partnership aiming to advance the development of safe and effective medicines for European citizens. The case offers lessons on how to leverage resources dispersed across the public and private sectors to address challenges in medicine development during times of fiscal restraint and increased regulatory pressure. (page 16)

- **Combining managed insurer competition with universal access to care: Health insurance reform in The Netherlands.** In 2006, the Dutch Ministry of Health, Welfare and Sport introduced a set of insurance market reforms that required every Dutch citizen to purchase healthcare and pharmaceutical insurance at a set premium from one of several private insurers. Insurers must accept every applicant regardless of pre-existing conditions. The reforms have allowed insurers greater freedom to integrate and manage care and have produced short term benefits for patients, providers, hospitals and insurers. The objective of the policy is to incentivise insurers to demand a higher quality of care from providers on behalf of their insured populations. (page 19)

- **Transforming care through the shared goal of improving chronic disease management: Health system reform in the Basque Country of Spain.** The Basque reforms demonstrate how a compelling narrative can be used to transcend the “cost-containment” agenda and mobilise public and private healthcare leaders to transform care delivery. The government leveraged top-down agendas with bottom-up solutions to drive chronic disease management across the Basque Country. The comprehensive reforms continue to improve population health and patient experience while managing costs for the near and middle-terms. (page 22)

Together, the case studies represent a variety of approaches to health system transformation. We hope these stories offer future innovators a set of lessons learned and tools for framing, planning and implementing similar approaches while also generating value for public and private enterprise.
Reorganising care delivery in public systems to improve patient outcomes
Specialist stroke service in London

Europe has a tradition of government healthcare provision. In most countries, therefore, the starting point for health system improvement is the organisation of care across government departments to achieve higher quality and greater value at the population level. Governments are, therefore, in a position to rationalise the provision of care. The reorganisation of stroke care in London highlights both the potential benefits and challenges associated with implementing such reorganisation.

A programme driven by NHS London, the health authority for the UK’s capital region, has reorganised the network of stroke care facilities to concentrate expertise and minimise the time needed to receive treatment. The measures have saved both lives and money.

Stroke is the third most common cause of death in the United Kingdom and the most common cause of disability, with approximately 110,000 people suffering a stroke each year. One-tenth of these stroke victims live in London. The cost of stroke-related medical and social care in the United Kingdom is estimated at £4.5 billion a year – equivalent to 5% of total healthcare spending – and the cost of patients’ lost productivity represents an additional £4.5 billion. Rapid thrombolysis (the use of “clot-busting” drugs) and the employment of specialist teams can substantially reduce morbidity and mortality rates. Additionally, clinical evidence has established that patients treated in specialist acute care units enjoy improved outcomes relative to those treated in non-specialist settings.

Programme overview

In the treatment of an acute condition where time is of the essence, matching the location of patients to the hospitals best able to treat them is critical. In the case of London’s stroke service, at the inception of the programme, the location of high-performing centres failed to match the locations with the highest concentration of stroke patients. Dr Anthony Rudd, London stroke clinical director, explained the challenge that NHS London had prior to the reorganisation: “Of the 30-plus hospitals in London [with stroke treatment facilities] we had superb hospitals in central London providing care to very few people, and [inferior] hospitals in other places where most of the population lived. This was clearly an unacceptable system providing huge inequalities of care.”

The response: to concentrate acute stroke care units from 34 hospital sites around London to eight hyper-acute stroke units (HASUs). Prospective HASUs submitted proposals to expert
panels, with sites ultimately chosen based on quality, performance, multidisciplinary expertise and geographic “fit”. The goal was to ensure that all patients suffering a stroke received care in a specialist stroke unit and to minimise misdiagnosis and inappropriate treatment.

- **Stakeholders.** Patients, the National Health Service, clinicians and the newly developed HASUs.

- **Financial model.** The Strategic Health Authority for London, in conjunction with all London primary care trusts, created a joint committee to support the implementation of the London programme as well as to invest £20 million per year. Additionally, the joint committee created a financial incentive scheme to encourage efficient patient flow through the system after referral.

- **Challenges.** Many providers initially did not accept that stroke care in London was substandard. Clinicians were concerned about breaking up well-performing teams and “de-skilling” units by moving neurologists and stroke experts from their current hospitals to new jobs elsewhere. Some also worried that funds would be diverted from local hospital stroke units to support HASUs. Finally, others expressed concern that the shift in care would have a negative financial impact on those hospitals that failed to win HASU bids. Rudd highlighted the importance of proactively demonstrating benefits to potential naysayers: “Because we were able to demonstrate very quickly that there were benefits, it became a lot more difficult for people to continue to whine that they wanted to go back to where they had come from.”

- **Impact.** Following the introduction of the programme, the number of patients treated with clot busting drugs increased from 3% to 19%, while the average journey time to treatment dropped. The in-hospital mortality rate for one of the HASUs dropped to 6%, compared with a national average of 27%. The average length of stay fell from 15 days to 11.5 days, representing savings of £3.5 billion. Patients have praised the speed of diagnosis and treatment and the effectiveness of the care they received. Moreover, Rudd said, “This model has brought clinicians together. We have networks of physicians who are working together in ways they had not before.”

Notwithstanding this success, Rudd acknowledged, “We’ve lost some of the expertise we had to begin with. Some of our best facilities have stopped providing services in hyper-acute care. If I were to do it again, I would not close down high-performing hospitals because you’ll lose capacity and alienate important people in the system.”
Lessons learned and considerations for scaling up

The experience with stroke care in London has formed the basis for similar efforts in other UK geographies and other therapeutic areas. Rudd explained, “The rest of the country, like Manchester, is now looking at this model of care organisation. Outside of stroke care, we’ve implemented something similar for major trauma cases.” And in a broader context, he said, “There are lessons that can be learnt from this model that could be implemented with virtually every other disease.” For example, the model offers particular benefits in the face of rising social and healthcare costs: “Stroke is the archetypal disease where effective disease management is vital to managing resources, limiting hospital stays and preventing the need for long-term disability or end-of-life care.”

Several other regions are also piloting new organisational arrangements for disease management. One Forum participant noted, “There is interesting work around pathways from primary prevention to proactive management of pre chronic conditions.” Another added, “Many innovators are moving very strongly to manage chronic diseases, to integrate care and to bring social care into the fold with health services.”

Keys to leading the changes

Rudd described three key components that contributed to making a successful political and financial case for reorganising stroke care delivery in the face of localised pockets of opposition:

- **Bottom-up commitment coupled with top-down priority setting.** “It was the bottom-up approach – from the clinicians lobbying the Strategic Health Authority to do something about stroke – that was perhaps one of the most important things in terms of garnering investments both in time and money.”
However, top-down priority setting also played a role: “The issue should be a priority of the government. The Strategic Health Authority made the decision they were going to prioritise stroke to try and get quick wins in terms of reorganising care. They brought together all of the primary care trusts within London to produce a single joint committee that allocated resources to the project.” Rudd believes the commitment of the joint committee to finance and support the reconfiguration at the outset deterred other critics from taking issue with the model and prevented “infighting later on down the line between the winners and the losers.”

- **Convincing evidence.** “It would not have happened without good-quality evidence on which to build the model. There is very good evidence around stroke and how organisation of care impacts outcomes, the most important bit of evidence being that if you bring stroke patients into specialised units, you save lives and reduce long-term disability.”

- **Multi-stakeholder support at the outset.** “We needed the input of many to reconfigure the entire stroke pathway. A project board was formed which included commissioners, patients and voluntary groups as well as the clinicians and managers.” The perspectives of each stakeholder combined to create a more robust model that allowed for greater “buy-in” once implemented. Rudd, whose own hospital was not selected as an HASU facility because of its distance from stroke patients, touted collaboration as an essential management tool: “We dealt with the perceived ‘winners’ and ‘losers’ up front by involving as many people as possible in the design of the model.” He also encouraged collaboration between stroke units: “We got healthcare professionals [nurses as well as clinicians] from the so-called ‘loser’ hospitals to share their points of view and take part in rotations at the ‘winner’ hospitals.”

### Designing and implementing the model

Rudd outlined the process of designing and implementing the stroke model with the support of a multi-stakeholder committee and commitment from the clinical community, many of whom would be implementing the model in their local facilities. He recommended setting a vision, outlining the process and testing the approach with a multi-stakeholder committee: “The committee set standards in terms of exactly what our vision was going to be for really good quality care and what processes were needed in order to implement it.” Rudd also reminded participants that the model did not require “masses of hi-tech innovation” but rather “getting people to accept that you cannot do everything in every hospital in the best possible way and focussing our resources down.” He also urged future innovators to
develop local leadership, which he deemed a critical component of the model’s success: “In my view, the reason why services were so slow to develop over the years had largely been the failure to develop leadership within local hospitals and an obligation for continuous quality monitoring.”

Leveraging private-sector expertise to deliver integrated care in a difficult-to-treat population
Schizophrenia care in Lower Saxony, Germany

Healthcare leaders increasingly recognise the potential of integrated care pathways to deliver improved health outcomes at lower cost. Integration of care can address concerns that “healthcare is wrongly organised [because] it treats organs, not people.” A pharmaceutical industry executive and Forum participant considers this to be “an opportunity within the pharmaceutical industry to think about medicines in the context of whether they are helping to achieve the outcomes we want in the population as a whole.”

Several health systems have taken steps to collaborate with the private sector to deliver patient outcomes, not just inputs in the form of products or services. Forum participants considered a case study from Germany, where patients can engage directly with specialists without the involvement of primary care physicians. This results in a lack of care co-ordination, particularly for patients with complex conditions who are able to move from one specialist to another without a primary care clinician playing an integrating role. Partly as a result, the average German citizen consults a physician 8.2 times a year, the highest national rate in Western Europe.xv

In response to this challenge, the German government developed financial incentives to support the emergence of integrated care models. One result was the collaboration between AOK, the largest sickness fund group in Germany, and the Institut für Innovation und Integration im Gesundheitswesen GmbH (I3G), an independent subsidiary of Janssen Pharmaceuticals Germany, a Johnson & Johnson company. The collaboration seeks to increase the quality and efficiency of care for schizophrenia patients through an integrated and patient-centred approach to care delivery.

Programme overview

Germany’s fragmented care system has led to a high rate of avoidable hospital admissions for schizophrenia patients and significant health system costs. I3G is working with AOK to establish an integrated care model for schizophrenia patients in Lower Saxony with the goal of establishing a sustainable increase in the quality and efficiency of care and a reduction in unnecessary hospitalisations.
- **Stakeholders.** Psychiatric patients, AOK, I3G and a network of care managers, psychotherapists, psychiatric doctors and specialists, ambulatory care units and specialist nurses.

- **Financial model.** The collaboration took the form of a PPP. AOK sought a co-ordinating partner to establish a new structure for integrated care in schizophrenia – ideally, a partner with expertise in the field of schizophrenia that was willing to invest in a new and potentially risky model. I3G won the tender for the partnership. The partners established a virtual budget, and savings from reductions in hospitalisations were repatriated back to I3G.

- **Challenges.** Marco Mohwinckel, a partner at Janssen Healthcare Innovation EMEA, described a credibility gap as Janssen’s biggest challenge: “There is a lot of scepticism about pharmaceutical companies moving from selling products to selling outcomes and co-ordinating patient management.” He added, “In order to be seen as a trusted partner, industry has to overcome the historic negative reputation rooted in the disease-management failures of the 1990s.” To address this concern, Mohwinckel explained, “We created a separate legal structure that was managed at arm’s length. We wanted to be clear from the start that this partnership was completely distinct from our pharmaceutical product side.” Another Janssen employee added, “This is a stand-alone business focused on improving the quality of care for schizophrenia patients. The partnership is agnostic to our product, and we are really explicit about this.” Physicians were also resistant to migrating to an integrated care system. In response, I3G created a new incentive payment programme to attract physicians to its care facility.

- **Impact.** Representatives from the partnership noted they are in the midst of publishing evidence from the early stages of this collaboration; however, they discussed key metrics and milestones: “We have already recruited over 800 patients into the programme, and the quality indicators we are analysing are all pointing in the right directions. We are making a big impact on quality of life and cost by co-ordinating care delivery through this programme.” Two key success metrics include hospital admissions averted and a reduction in re-hospitalisation.
Lessons learned and considerations for scaling up

Janssen is currently designing similar integrated care approaches in a number of geographic regions: “The schizophrenia model we have in Germany may not be directly applicable elsewhere because you have to take into account local practice. However, we are doing a lot with integrated care and mental health more broadly. Everyone has the same challenge of trying to reduce costs and increase access to care, so we are looking at how to reconfigure the delivery of care in other countries.” A health system leader asked, “Why haven’t other pharmaceutical companies played an active role in moving beyond selling products to provide health system solutions?” An industry leader responded, “It is a lot more resource intensive to move from products into services and integrated solutions. It also requires different business models.”

Mohwinckel offered the group several lessons learned along the journey from “provider of products to partner in solutions,” including:

- **Focus on patient-centred care.** Mohwinckel lauded companies that place patients at the centre of care when exploring new business models: “If we do what is right for the patients, business will follow.” He observed that a shift toward patient-centred care allowed him to “think about new models in a very different way. Pharmaceutical companies have expertise, experiences and insights they can really bring to fruition in different ways.”

- **Take a long-term view.** To develop a business whose performance is based on health outcomes rather than inputs requires a fundamental shift in thinking, particularly when the return on investment will not materialise immediately. Mohwinckel said, “Change will not happen overnight. It will take several years. In this case, we have entered into a seven-year contract with the insurance company. This is the kind of time frame we are talking about to impact healthcare cost and quality of outcomes.”

- **Build an evidence base to support the case for new approaches.** Mohwinckel discussed the challenge of convincing both shareholders and government representatives that the company had not strayed from its core capability by pursuing a new business model. To address this concern, he stressed the importance of “gathering enough evidence that these new models are working and adding overall value to the system and that they can generate a return on investment.” Such evidence would allow change agents to stand up and promote new business approaches.
Leverage the company’s core competencies when partnering with governments. Several questioned the ability or interest of other pharmaceutical companies that might replicate the Janssen model. Mohwinckel noted the importance of pursuing initiatives that will allow the company to “leverage existing capabilities and competencies that we have as a result of our presence through therapeutics.” He added, “Are we credible if we decide to go into stroke if we do not have any medication or organisational knowledge in that space? Probably not.”

Develop a governance structure for the partnership that maximises each party’s independence. To avoid real and perceived conflicts of interest, companies like Janssen may set up independent companies to carry out the partnership: “We do this work at arm’s length, so one of the requirements from a governance standpoint is that you set up a company that is entirely independent and firewalled relative to your core business.” While some Forum participants agreed the Janssen model had a potential role in other health systems, others noted the constraint of building trust with potential government partners. One health system leader commented, “I think in some places, you wouldn’t have been able to carry this model out without a pre-existing relationship with the government. As an initial trust-building step, it is helpful for the private sector to identify how they can support existing administrations or payers in their own agendas.”

As an initial trust-building step, it is helpful for the private sector to identify how they can support existing administrations or payers in their own agendas.”

For the pharmaceutical industry, “It’s better to disrupt than be disrupted. That’s why we want to experiment with new ways of doing business within health systems.” This means “moving beyond pills. We have to ask ourselves: what else can we do to develop a more holistic model?” Successfully making this transition will require private-sector leaders to think more broadly about their contribution.
to improving health outcomes. A health system leader agreed: “Serving the customer’s customer and partnering to help the government deal with issues they have in their populations is a strong approach. The private sector can show up as a credible learning and execution partner if they think of the customer’s customer.”

Using public-private partnership to bring care to an underserved population while lowering costs

The Alzira model in Valencia, Spain

As state-backed health systems struggle to accommodate ageing populations, increasing demand for services and growing deficits, opportunities are emerging for others to take a more active role in the financing and delivery of care. One Forum participant explained, “The public sector often has a mandate to be an effective steward of the health system and speak for the interest of their citizens and constituents. The private sector can be a useful change agent as well and can bring technical, managerial and financial experience to the table.”

The Alzira model demonstrates the use of a public-private investment partnership (PPIP) to finance and deliver hospital and primary care services to an underserved community in Valencia, Spain. In 1991, a parliamentary commission charged with evaluating Spain’s national health system released a report criticising low efficiency and flexibility and its failure to include medical staff in hospital management; subsequent legislation created a new basis for private-sector involvement in healthcare delivery. As a result, the regional government of Valencia looked for new ways to provide healthcare for its residents, selecting the Alzira Health District for the first PPIP in Spain. The government awarded a 15-year contract to a private consortium comprising banks, insurance and construction companies to manage a publicly controlled, and publicly funded health facility.

Programme overview

Alzira lacked a hospital and faced increasing budget constraints. The Ribera Salud Temporary Union of Businesses (UTE-Ribera) won a public bid in 1997 for the construction of a hospital, Hospital de La Ribera, and provision of clinical services there.

- Stakeholders. The government of Valencia, the citizens of Alzira and UTE-Ribera are the primary stakeholders. UTE-Ribera is a private consortium comprising Adeslas (one of the largest health insurance companies in Spain), Ribera Health (a conglomeration
Financial model. The form of PPIP used in Alzira, also referred to as a management concession, focuses on the private management of a publicly controlled, publicly funded public health facility. The government of Valencia granted UTE-Ribera a 15-year (extendable to 20 years) management concession to provide a health system that was integrated with the existing national health system.

The project is funded by an annual capitation fee that the region’s 250,000 residents pay to the health system. UTE-Ribera has an incentive to provide high-quality healthcare in Alzira because it must pay 100% of local residents’ healthcare costs if they seek healthcare elsewhere. The government must pay 85% of the healthcare costs of patients from other catchment areas that visit Hospital de La Ribera. The PPIP is cost neutral for patients, for whom service continues to be free. The hospital’s profitability is limited by law to 7.5% each year.

Challenges. The partners had challenges negotiating the initial capitation fee, incentivising providers and dealing with public reactions to private-sector involvement in the project. One partner recalled, “Even though this was still a public health facility, there was resistance from citizens to anything that seemed to be privatising the system. But after a year, we surveyed patients, and it seemed that people had forgotten that the private sector was even involved. They were just happy with their care.”

Impact. The average per-capita healthcare cost incurred by the Valencia Health Ministry for Hospital de La Ribera is nearly 25% lower than the costs incurred in other districts in Valencia. Additionally, the model has allowed the government to provide a complete bundle of clinical and non-clinical services to patients at the hospital.
Lessons learned and considerations for scaling up

Based on the Alzira experience, the government of Valencia has already contracted for additional PPIPs in four other health districts. The model has also been implemented in Madrid and Portugal. Alberto de Rosa Torner, director general of the Ribera Salud Group and a partner in the Alzira project, described the characteristics of the PPIP model that contributed to the project’s success:

- **A capitation system that aligns the interests of public and private institutions and focuses on health promotion.** Ribera Salud is paid a fixed annual sum for inhabitants in the system; therefore, “[the company’s] pay is linked not to activity but to health. To optimise our benefits, we must achieve the best health conditions for the population.” Ribera Salud receives additional payments for patients who enter the system from other regions and hospitals, which allows them to “foster principles of loyalty and increase quality.” When asked how the model aligns the objectives of public and private institutions in pursuit of better health, de Rosa responded, “The two sectors reach alignment between the different goals in this capitative payment because we are rewarded on the basis of the government’s primary goal – to improve healthcare quality, accessibility and efficiency.”

- **Integration between the hospital and the primary care system.** Future innovators should think beyond “building hospitals” when they seek to improve a community’s health indicators. Primary care plays a key role in improving health outcomes within a system: “The most important thing in order to get the best health conditions is to give due attention to primary care. The hospital is only part of the process. The integration with primary care allows us to follow the patient throughout all of...
Those attempting to reform health systems should rethink the role of hospitals within the system and “envision a system of shared services, have a multi-hospital view and see how a network of primary healthcare providers can work with multiple stakeholders in order to cater to the needs of citizens in a better way.” To achieve the best health outcomes for the population, innovators will “need to shepherd a change in mind-set, a cultural change.”

- **Efficient allocation of risk at the outset.** One ideal approach behind PPIPs is that a greater share of the risk is “assigned” to the party that is best able to manage it. This will lead to productive innovations as the parties bearing the risk act on their incentives to effectively manage it: “We bring an efficient component to the system in part because we’ve assumed much of the risk and must manage care delivery appropriately.”

- **Population stratification.** Stratifying populations at the outset helped identify the citizens at greatest risk: “We needed to define which populations were at risk and what was the best place for diagnosis, for therapy and for monitoring the patient either at home, primary assistance, secondary assistance or the hospital.”

- **Better use of information technology.** Information technology enables the tracking of a patient’s movements across the entire health system: “We have developed a number of information technologies that allow us to track the citizen’s movement into the system across the primary, secondary and tertiary levels of care delivery. It is also devoted to giving information to the professional so the professional can work with all of the information available and optimise resource utilisation.”

- **Engage the clinical community.** Ribera Salud sought help from clinicians in the development of the model: “We believed clinicians needed to improve the way they worked if we were to improve patient outcomes. However, given our different competencies, we realised we needed to understand their goals and incentives and align around what is best for the patient.” Participants agreed the model would not have been successful without a strong commitment from the clinical community.
Promoting public-private partnership to deliver earlier diagnosis and better treatments
Europe’s Innovative Medicines Initiative

The Innovative Medicines Initiative (IMI) is Europe’s largest public-private partnership (PPP) aiming to advance the development of safe and effective medicines for European citizens. Launched in 2008 as a large-scale collaboration between the European Commission and the European Federation of Pharmaceutical Industries and Associations (EFPIA), the IMI pools public and private resources to speed effective new medicines to patients and support the competitiveness of Europe’s pharmaceutical industry.

Programme overview

The IMI implements a programme of precompetitive research and development projects geared towards removing bottlenecks from the development of safe and effective medicines. It also provides a vehicle for education and training projects supporting this objective. IMI projects are often initiated through the EFPIA by pharmaceutical companies and attract relevant actors in the life sciences arena, including academics, patients’ organisations, regulatory authorities and small businesses, to address these challenges with the pharmaceutical industry.

- Stakeholders. The IMI governing board comprises representatives from the European Commission and EFPIA. A scientific committee of experts in pharmaceutical and biomedical sciences serve as advisors.

- Financial model. With a total budget of €2 billion to be spent over a 10-year period, the IMI is the largest global PPP in the life sciences. Pharmaceutical companies provide in-kind contributions by offering industry know-how, access to data and infrastructure tailored to each IMI project. At times, they also provide direct monetary contributions. Industry investments are matched by EU funds, which are allocated to other stakeholder groups including academic teams, small and medium-sized enterprises (SMEs), patients’ organisations, regulatory agencies and not-for-profit institutions.
**Challenges.** Given the long time-horizons required for IMI projects to translate into improved therapeutics for patients, it is difficult to point to quick wins achieved by the programme. The allocation of intellectual property rights after the conclusion of IMI projects also has emerged as a topic of concern. In response, the IMI governing board has issued an intellectual property policy “designed to promote swift disclosure and exploitation of new knowledge by foreseeing access rights to third parties, as some third parties may be in a better position to ensure swift and appropriate dissemination and exploitation,” along with guidance to help applicants negotiate on intellectual property.

**Impact.** The first three calls for proposals resulted in 30 projects involving 25 EFPIA companies, 350 academic institutions, 55 SMEs, 11 patients’ organisations and 10 regulatory agencies. One project, the NEWMEDS consortium, has convened 13 pharmaceutical companies, seven academic teams and three SMEs to create the largest known database of schizophrenia studies. These projects are addressing a wide range of topics, including developing and validating new methods to identify potential unwanted drug effects more rapidly and accurately during the course of drug development.

The IMI also serves as an important model for precompetitive collaboration. According to Forum participant Michel Goldman, IMI’s executive director, “Public-private partnerships involving both private for-profit companies and publicly funded non-profit
Lessons learned

The IMI case demonstrated how “an idea generated in a coffee shop” by a policy-maker and an industry leader could be used to create a large-scale European PPP platform for what an industry leader coined “innovation sustainability.” Participants viewed the IMI as a neutral platform for collaboration that “takes everyone out of their silos and ensures appropriate dialogue about sensitive topics between industry, academia, patients and regulators.” One lead innovator stated, “A dialogue had to be created among the different stakeholders because they came to the table with vastly different expectations but all played a crucial part in the medicine development system.”

Several participants agreed there were useful lessons to be learned from IMI’s design and implementation, including its focus on neutrality, transparency and governance. One public-sector innovator praised the IMI for “overcoming the lack of trust and dynamic relationship between the public and private sector to create a safe place where governance and transparency help the private sector work with patient groups, civil society and government.”

Although the IMI focuses on improving the drug-development environment, some participants questioned whether the model could be applied to other topics. One European policy-maker acknowledged the need for a “second IMI with a strategic research agenda focused on public health issues.”

Forum participants foresaw the development of a new PPP platform in the near future: “We are now working on the next PPP and the Horizon 2020 framework. We hope that there will be other industries in our surroundings like imaging, e-health and so on that could benefit.” A private-sector innovator added, “Another platform for health system innovation is needed, especially when we put patients at the centre of the discussion and think about the current state of healthcare delivery.”
Combining managed insurer competition with universal access to care

Health insurance reform in The Netherlands

At the turn of the century, the Dutch healthcare system was in a state of crisis. The country had been providing universal healthcare coverage since 1942, with the government dictating hospital budgets, setting prices for all medical technologies and interventions, and making key investment decisions. Over the years, in spite of escalating costs, patients were faced with a limited choice of providers, long waiting lists and inadequate access to care. Growth in healthcare spending became a significant concern of the government, and pressure to contain costs led to increasing supply and price regulation beginning in the mid-1970s. In the late 1980s, a government-appointed committee recommended healthcare system reforms including the introduction of insurer competition.xxv

Transitioning from supply-side regulation to managed competition

Based on the committee recommendations, the government began implementing a series of market-oriented reforms, ultimately setting the stage for the 2006 Health Insurance Act, which combines universal healthcare access with competition among private insurers.xxvi

The act mandates that every Dutch citizen purchase healthcare and pharmaceutical insurance from one of several private insurers. Insurers are legally obligated to accept every applicant for a basic insurance contract at a specific premium, with no exclusions for pre-existing conditions. Consumers who are dissatisfied with their insurer can readily switch. The model was co-developed with major interest groups, including patients and the insurance companies. Hugo Hurts, director of pharmaceutical affairs and medical technology for the Ministry of Health, Welfare and Sport, described the resulting system as “an experiment in how far you can get with a system in which there is almost no direct government involvement.”xxvi

Introducing market mechanisms to drive delivery innovations

The Health Insurance Act describes the government-mandated basic benefit package in terms of functions of care rather than, as before, in terms of providers.xxvi This policy has allowed insurers greater freedom to integrate and manage care and has facilitated the entry of additional providers into the health system.
Patrick Jeurissen, manager for strategy and knowledge management within the Dutch Ministry of Health, Welfare and Sport, explained, “The entry of new providers to the market has allowed us to do things differently, such as creating independent treatment centres that were previously forbidden.” Jeurissen does not believe that these important changes were due merely to the promise of guaranteed funding. Rather, he said, “The radical shift in the system turned health system professionals’ comfort zones upside down, and this has led to increased innovation.”

By introducing market mechanisms to healthcare financing, the Dutch government created an improved environment for innovation. Jeurissen noted that although the reforms safeguard universal access, “the idea of a healthcare market fostered a growth of entrepreneurialism across the entire system and changed the mental model amongst stakeholders.”

Addressing the challenge of managing costs

The 2006 reforms resulted in a strong uptick in hospital productivity; however, overall hospital costs did not decrease. Addressing this conundrum, Jeurissen explained, “Productivity gains were not used to reduce expenses but rather to strengthen hospital solvency and, foremost, to deliver even more care.” Interestingly, the increased volume of healthcare services was primarily consumed by the patients with lower predicted costs—namely, “patients who were not severely ill.” Jeurissen believes that replacing some of the existing volume incentives with incentives for improved outcomes may eventually result in cost savings.

Additionally, in 2012, Edith Schippers, the minister of Health, Welfare and Sport, introduced a new set of market reforms directed at cost management. One measure, described by Jeurissen as “stiffer corporatist governance,” involves an agreement between the Dutch government and the entire healthcare sector that limits the annual growth of costs to 2.5%. Another measure shifts the risk of cost overruns from the government to private insurers. It abolishes the “safety nets” that obligate the government to make ex-post payments to insurers for actual expenses that exceed a certain threshold of costs per insured person per year. While the cumulative impact of these reforms remains uncertain, Dutch insurers did not raise their premiums in 2013.

Some Forum participants questioned the sustainability of the recent reforms. One private-sector participant questioned whether a situation where “insurers’ margins are 2%, any overrun is at their risk and there is no premium increase” can be “a sustainable model for your suppliers.” Another participant remarked, “I am glad I am not running an insurance company in Holland.” Jeurissen noted that
while many of the insurers have indeed merged, they are all not-for-profit companies and the market remains highly competitive. “Do I think it is sustainable? Yes, I do because we have an incentive structure that supports the changes we’ve made.”

Removing the ex-post compensation to insurers places increased importance on the accuracy of the “risk-adjusted equalisation payments” that insurers receive for high-risk people. These ex-ante payments are meant to prevent insurers from discriminating against customers more likely to require medical treatment. Without the additional safety net of ex-post compensation, insurers have more incentive to engage in risk selection of young, healthy customers. Some reports have cautioned the government to avoid undermining its risk-equalisation scheme since “the more government succeeds in improving the risk-equalisation formula, the more chronically ill people will be the preferred clients for efficient insurers, because the potential efficiency gains per person are higher for the chronically ill than for the healthy.”

Generating a higher quality of care through competition

The financing reforms in The Netherlands have produced some notable benefits, including an upward shift in life expectancy, greater consumer choice and information, and increased solvency for insurers and hospitals. Yet these reforms have not led to a substantial change in how healthcare delivery is organised. The Dutch reforms were founded on the hope that competition at the financing level ultimately will drive improvements in the delivery of care as insurers demand higher quality from providers on behalf of their insured populations. To date, competing insurers have been reluctant to say “no” to a patient or a doctor.

Jeurissen acknowledged this downstream goal and the fact that there is currently no “clear association between quality and spending intensity.” He said the Dutch government wishes to “end the veil of ignorance on quality” and is considering ways to facilitate the incorporation of precise outcomes data into future solutions. Whether private insurers can serve as good purchasers of care is something that will be watched closely.

For the time being, Jeurissen is optimistic that managed competition will continue to move things in the right direction. As for how the experience in The Netherlands could inform other health systems looking to institute reform, Jeurissen said, “The most important lesson for me is the combination of incentives: the incentives of the market and the incentives of the government pulling together to bring about change.”
Transforming care through the shared goal of improving chronic disease management

Health system reform in the Basque Country of Spain

Since the beginning of 2009, the Basque Country’s Regional Ministry of Health and Consumer Affairs has implemented a comprehensive set of health system reforms. These reforms were motivated by recognition that, within the current economic context, future improvements to health system performance were not likely to “emerge from additional income but rather from the transformation of the health service delivery model.”\textsuperscript{xxxii}

Developing a common narrative to drive health system improvement

The Ministry recognised that transformations to health service delivery required more than a shift in management approaches and government decrees on cost-containment measures. Rafael Bengoa, former health minister for the region, explained, “The main issue was not to focus on a specific outcome or the low hanging fruit of cost-containment measures. We believed that in order to drive deep reform, we needed to put a more compelling narrative on the table.”

Bengoa and colleagues developed a common narrative that was a source of inspiration to many: “We wanted a narrative that mobilised nurses and doctors, citizens and the rest. We’ve all tried to set a vision before. It really does work if the vision gives a structure to guide policy changes. Improving the care of chronic conditions was our central narrative.”

To advance the goal of this narrative the Basque government adopted an approach referred to as the Basque Chronicity Strategy, which consists of five policies:\textsuperscript{xxxiii}

\begin{itemize}
\item Focus on stratified population health combined with a predictive risk approach
\item Health promotion and the prevention of chronic illnesses
\item Greater responsibility and autonomy for patients
\item Continuous care for patients with chronic conditions
\item Efficient interventions adapted to patient needs (patient-centred care)
\end{itemize}

The Ministry of Health has focused on these policy measures to transition to a health system that offers better integrated care for patients with chronic conditions, targets interventions that maximise...
the value of services healthcare professionals provide and promotes healthy living and more efficient use of public system resources. \textsuperscript{xxxiv}

Forum participants acknowledged the power of a narrative as a tool to drive comprehensive reform. One health system innovator noted that investing in health system reform and the pursuit of improved outcomes “requires political courage because there is not a dividend to be shown in the near term.”

**Leveraging top-down and bottom-up approaches to drive innovation in health system performance**

To carry out its strategy, the Basque Health Ministry implemented several primary projects. Bengoa explained, “We decided to move forward with 14 projects at once. If you want powerful change, you need to pull many levers at once.” Half were top-down projects that were focused on topics such as population stratification and technological innovation – for example, integrated electronic health records, e-prescriptions and a multichannel contact centre for patients – and the other half were local bottom-up projects that would later be scaled to the broader health system if deemed successful. Bengoa said, “It was important for us to have the right combination of top-down and bottom-up approaches for real change to happen.”

Regarding the top-down projects, Bengoa said, “You can stratify a population in most European systems quite quickly because of the information systems we have. You can also set up tele-health, tele-medicine and electronic medical records quite quickly … The important point is the alignment of all these things in the same direction.”

In parallel, Bengoa sought the expertise of clinicians and innovators at the local level to develop and launch bottom-up pilots to address these reforms. He explained, “We did not know how to integrate care or how to connect health and social care. We did not know how to do patient empowerment or case nursing, so we asked the health professionals and local managers to identify forms of doing it. This has worked very, very well.”

Forum participants discussed an additional benefit from seeding bottom-up innovations: they offer protection from the limited time in office of elected officials and ensure that gains from effective health reforms are not lost when leaders are replaced. While top-down approaches are subject to political vulnerability after each election cycle, Bengoa said, “You cannot stop the bottom-up approaches because they are intellectualised and internalised by health professionals whose work transcends political cycles.” One health system representative commented, “Leaders should let go of the idea...”
that reforms are borne only from legislative push. It is actually important to create a bottom-up pull as a complement to any top-down effort.” He concluded that policymakers should strive to strike the right balance between these directional forces.

**Addressing the challenge of managing costs**

Bengoa acknowledged that driving reform was at times costly: “Some of these programmes have been expensive. For example, we established a call centre to help triage cases for a population of 2,200,000 that cost us €14 million.” On the other hand, he noted that several other initiatives have not required up-front investments. Additionally, the entire Basque population has been stratified according to risk, allowing for more efficient allocation of available resources and the promise of long-term savings: “Local planners now have information on who will be most costly to treat. They are now beginning to intervene based on risk before a patient requires acute care. This saves us cost down the road.”

Forum participants across all stakeholder groups agreed that proactive approaches to healthcare reform were worthwhile investments. Participants were encouraged by emerging evidence supporting the cost effectiveness of infrastructure reforms like The Basque Country’s population stratification model, which proved an important tool for advancing system sustainability.

**Creating value from private-sector integration into public-sector agendas**

The Basque Country’s reforms sparked a rich discussion amongst Forum participants about the opportunities and challenges for the private sector to add value to on-going public-sector initiatives. Some participants opined that the pharmaceutical industry had not aligned their strategic agendas with the public sector’s goals as
successfully as other industries, such as information technology. One public-sector innovator lamented the extent to which the pharmaceutical industry’s engagement with healthcare reform focused on “cost containment of the pharma budget … [Pharma should also] focus on the delivery issues because there are a lot of efficiencies to be gained there.” A pharmaceutical industry representative responded, “We are only now in a situation where the leaders of the industry understand the opportunity. We are engaged in [pilot] experiments, but we have to retool the whole industry. There is a lot of conservatism and people need to be updated.”

Several agreed the need for new forms of public-private engagement but one private sector innovator also advised the group “not to overlook the role governments must play in creating the appropriate policy environment for a sustainable and value-based healthcare system, regardless of private sector contributions to health reform.”

Key lessons to improve health system performance and transform care delivery

While the selection of case studies shared in this document is by no means an exhaustive composite of all of the health system innovation taking place in Europe, they offer future innovators a body of experience to draw on. While future reforms will need to be tailored to local conditions, the case studies taken up by the Forum highlight several cross-cutting lessons learned and tools for engendering health system transformation at scale.

Place the patient at the centre of care

The health system innovations that the Forum showcased suggest that little progress can be made without placing the patient at the centre of care. A patient-centric focus can take several different forms. One is a payment system that aligns the incentives of participants behind the objective of population health. This is the approach taken by the Alzira model, where “[the company’s] pay is linked not to [fee-for-service] activity but to the health of the population.”

Putting the patient at the centre of care also means stratifying populations to identify the citizens at greatest risk so that health system resources can be focused to deliver the highest impact. Identifying the populations at greatest risk allowed the Basque Country to optimise pathways for diagnosis and treatment along a continuum of in-home care, primary care, specialty care and hospital care.

For the private sector working with public health systems, a mindset of “serving the customer’s customer” is key both for credibility and successful execution. The Forum demonstrated an increasing
recognition among private sector leaders that, “If we do what is right for the patients, business will follow.”

Finally, better use of information technology can play a major role in placing the patient at the centre of care, enabling the tracking of a patient’s movements across the entire health system as part of a citizen-based services infrastructure.

Develop a compelling, shared common narrative for change

Forum participants agreed that getting beyond “the low hanging fruit of cost-containment” requires a compelling narrative – an overarching vision – that appeals to all relevant stakeholders and provides an explanation of what is to be done and why. Engaging directly with those who need to carry out the changes and those who will be affected by them can mean the difference between success and failure, particularly where reforms impose some near-term costs or change existing roles. For example, the London stroke example was governed by a project board that included commissioners, patients and voluntary groups as well as the clinicians and managers; in the Basque Country, the narrative focused on improving care of chronic conditions.

Leverage both top-down and bottom-up approaches

The case studies illustrate that reforms undertaken to improve health system performance have the greatest chance of succeeding when they are supported by both top-down and bottom-up approaches. Top-down approaches signal that the objective at hand is a government priority. This supports the alignment of resources behind the measure and reduces the perceived risk of trying new behaviours and forms of organisation. Bottom-up support and commitment are essential where achieving the desired objective requires expertise that resides at the local level (for example, among a group of clinicians) and where the reforms require the active participation of many health system participants to be carried out. An added benefit of driving change from the bottom up is that the resulting reforms become integrated into the healthcare system and thereby become at least partially insulated from political vulnerability with each election cycle.

Build a compelling evidence base

A compelling evidence base was essential for many of the reform efforts to overcome scepticism and resistance to change. Evidence that is relevant can include knowledge about disease processes and the impact of specific interventions; evidence and experience to show that new models are working and adding value to health systems; and a demonstration that safeguards are in place to prevent conflicts of interest or unintended consequences. More broadly, examples of
successful reform efforts can guide health system decision-making elsewhere and support the courage needed for change.

**Leverage and integrate private sector competencies to maximise the impact of public sector reforms**

Forum participants agreed that the private sector can add significant value to the sustainability of health systems, so long as it aligns its strategic agenda with the public sector’s goals. Private sector contributions include being a complementary change agent to governments as well as bringing technical, managerial and financial experience to the table. Pharmaceutical industry participants conceded that their industry had been slower to achieve this alignment than some other industries, such as information technology. As the various segments of the private sector come to understand and engage the opportunity to partner with government in delivering public services, industry participants advised their public sector counterparts not to overlook the role of governments in creating the appropriate policy environment for sustainable and value-based collaboration.

**Conclusion**

Healthcare innovators from public, private and patient organisations arrived in Barcelona with a willingness to teach and learn. Participants drew parallels among the experiences presented at the Forum and emerged with a shared commitment to accelerate the transition of health systems to long-term sustainability. A public-sector innovator concluded, “We need to take that next step and not just admire other people’s policies or the way they do things. We need to actually do something about it, share that experience and persuade others that the status quo is unacceptable when there are much better systems that have been demonstrated to work elsewhere.”

Participants ended the day’s work with an agreed vision for the future in which health systems treat healthcare as an investment, provide patient-centred integrated care and focus on delivering valuable health outcomes rather than inputs. They agreed achieving this vision would likely require health system leaders to stratify patients according to risk and deploy optimal treatment pathways; engage the private sector where it has unique competencies to support health system objectives; and focus reforms at the appropriate level of the system for greatest impact – often at a regional level.

Based on their collective insight, participants committed themselves to shaping the health technology development, healthcare policy, financing and care delivery required to support this vision across Europe. One lead innovator commented, “Like Darwin, it is not the strongest of the companies or governments that survives, nor the most
intelligent. It is the institution most adaptable to change. In the struggle for survival, the fittest win out at the expense of their rivals because they succeed in adapting themselves best to their environment.” Now is the time for health systems to adapt and transform in order to meet the needs of their citizens in a resource-constrained future.

About Tapestry

Tapestry’s mission is to advance society’s ability to govern and lead across the borders of sector, geography and constituency. We form working partnerships that include the public and private sector as well as civil society. The participants in these networks are leaders from key stakeholders who realise the status quo is neither desirable nor sustainable. Tapestry Networks is built on the premise that relatively small groups of well-positioned leaders, seeking a goal that transcends their own parochial interests and which benefits everyone, can make progress towards that goal through the collaborative network-based approaches that Tapestry designs and leads.

Tapestry has used this network approach to address critical and complex challenges in healthcare, corporate governance and financial services – areas where private and public interests clearly meet. Over 200 non-executive directors from over 50 of the Fortune Global 100 companies participate in our corporate governance networks. Non-executive directors, CEOs and top management from over 35 of the largest financial institutions participate in our financial services work. In healthcare, we have a track record of moving from diverse and divergent perspectives amongst senior decision makers across EU Member States to shared strategies, specific recommendations and real-world pilots. In all our work, we bring our close connection to the market forces through work done with senior executives across all sectors, our credibility as a trusted neutral agent for change and our deep experience of working effectively across public-private sectors to catalyse progress.

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Appendix: Forum participants

- Nicola Bedlington, Executive Director, European Patients’ Forum
- Rafael Bengoa, Former Minister of Health & Consumer Affairs, Basque Government and Head, Department of Health Policy & Management, Deusto Business School
- Richard Bergström, Director General, European Federation of Pharmaceutical Industries & Associations (EFPIA)
- Alasdair Breckenridge, Former Chairman, Medicines & Healthcare Products Regulatory Agency (MHRA)
- David Byrne, Former EU Commissioner, Directorate-General for Health & Consumers (DG SANCO)
- Ron Cooper, President – Europe, Bristol-Myers Squibb
- John Crawford, Healthcare Industry Leader – Europe, IBM Healthcare & Life Sciences
- Alberto de Rosa Torner, Director General, Ribera Salud Group
- Ruxandra Draghia-Akli, Director of the Health Directorate, DG Research, European Commission
- Nick Fahy, Former Head of the Health Information Unit, EU Commission, DG SANCO
- Ed Godber, Senior Vice President, Head of Access to Medicines, GlaxoSmithKline
- Michel Goldman, Executive Director, Innovative Medicines Initiative (IMI)
- Jane Griffiths, Company Group Chairman, Janssen – Europe, Middle East & Africa (EMEA)
- Jean-Luc Harousseau, President, Haute Autorité de Santé (HAS)
- Andrew Jack, Pharmaceuticals Correspondent, Financial Times
- Patrick Jeurissen, Co-ordinator of Strategy & Knowledge Management Group, Ministry of Health, Welfare & Sport
- Sneh Khemka, Director of Healthcare Development, Bupa Group
- Finn Borlum Kristensen, Chairman of the Executive Committee, Director of Secretariat, EUnetHTA
- Marco Mohwinckel, Partner, Janssen Healthcare Innovation – EMEA
- Josep A Pujante, Director of International Relations & Co-operation, Ministry of Health, Government of Catalonia
- Anthony Rudd, London Stroke Clinical Director
- Boi Ruiz, Minister of Health, Government of Catalonia
- Ulf Säther, Vice President, Global Marketing & Sales Organisation (GMSO), AstraZeneca PLC
- Paolo Siviero, Head of Economic Strategy & Pharmaceutical Policy, Italian Medicines Agency (AIFA)
Endnotes


ii  Ibid.


iv  Ibid.


vi  This document reflects the use of a modified version of the Chatham House Rule, whereby names of members and their affiliations are a matter of public record, but comments made during conversations with members are not attributed to individuals or organisations. Quotes in italics are drawn directly from comments made by members and guests participating in discussions before and during the meeting.


ix  Porter, Mountford and Ramdas, Reconfiguring Stroke Care in North Central London, page 2.

x  Department of Health, National Stroke Strategy, page 32.

xi  Porter, Mountford and Ramdas, Reconfiguring Stroke Care in North Central London, pp 4–5.


xiii  Ibid.

xiv  Ibid.


xvi  James Barlow, Jens Roehrich and Steve Wright, “Europe Sees Mixed Results from PPPs,” Health Affairs 32, no. 2 (2013).

xvii  PPPs position a private entity, or consortium of private partners, in a long-term relationship with a government to co-finance, design, build, and operate healthcare facilities, and to deliver both clinical and non-clinical services at those facilities over time. PPPs guarantee government ownership of assets throughout the life of the partnership and aim to be cost neutral to patients.


xxii  Ibid.

xxiii  Ibid.


xxvi  Ibid.

xxvii  Van de Ven and Schut, “Universal Mandatory Health Insurance in The Netherlands.”

xxviii  Ibid.

xxix  Ibid.


xxxiv  Ibid., page 30.

xxxv  Ibid.

xxxvi  For the purposes of this document, region refers to a catchment area that provides healthcare services to populations of 1 to 10 million.