

Chapter 4

Population-based health care provider payments

This chapter discusses population-based payment to pay groups of health providers – referred to as Accountable Care Organisations (ACOs) in the United States and elsewhere. ACOs are financially accountable for the provision of all or the vast majority of health care services to a defined population. They are permitted to keep part of the savings they generate provided they meet specific quality criteria.

A number of initiatives have been carried out in recent years. The assessment reveals positive outcomes in a number of cases. Care strategies depend on the provider composition and the characteristics of the population they are financially accountable for. The ability to generate savings depends on the extent provider groups are able to identify and effectively manage high-cost and at-risk patients. However, caution must be exercised in generalising preliminary results because of the large differences in the technical design of ACOs as they operate in different environments.

4.1. Overview

Payments that cover all – or the vast majority of – health care services for a defined group of the population takes the concept of bundled payment a step further. Unlike the innovations described in Chapter 3, population-based payments are not limited to specific care episodes or chronic conditions. This *population-wide approach* is rooted in the conviction that bundled payments for *selected* chronic conditions may not sufficiently address care issues around multi-morbid patients, and in particular the elderly. Population-based payments are made to groups of health providers such as independent primary care physicians, specialists, practice networks, hospitals or nursing homes as well as management companies, which might be partially owned by health providers. The main motivation behind this form of payment is the apparent failure of traditional payment systems to overcome fragmentation of care. Siloed payments tied to care delivery by separate providers are seen as detrimental to effective integration of care. Population-based payments aim to enable care integration by readjusting the principal objectives of paying for health care: instead of paying *providers*, money follows the *patients* across providers; and instead of paying for treatment of episodes of one *disease*, a more holistic view of the *well-being* of the population is taken.

The innovative aspect of population-based bundled payment generally lies in the prospect for providers to share some of the savings that they are able to generate for the payers in case they can reduce treatment costs while meeting pre-defined quality requirements. In practical terms, this means that population-based payments define a prospective budget for a population and providers are financially rewarded if they can keep total costs below the benchmark value. The financial arrangements can also foresee that provider groups bear the risk of financial losses when total costs exceed this value. In most cases however, the actual payment for individual services continues to be done via traditional payment mechanisms such as FFS, but the benchmark budgets act as an incentive to keep costs down.

In a number of countries, capitation payments are no new phenomenon: managed care initiatives have been tried before to shift financial risk onto providers. In the United States, in the 1980s and 1990s these set out capitated contracts to a network of providers to manage a defined population. In the United Kingdom, in the 1990s, GP fundholding contracts which included specific hospital care; drugs; staffing in the practice; and community services had similar characteristics. Although managed care contracts in the United States have helped to bring costs down in the early stages this was soon followed by the “managed care backlash”. Providers were unhappy with the lower prices they initially agreed on with Managed Care Organisations and were able to negotiate more favourable terms as provider markets consolidated (Frakt and Mayes, 2012). Patients complained about required pre-authorisation and other restrictions that many of their Managed Care plans entailed which in some cases led to denial of care (Frakt and Mayes, 2012; Barnes et al., 2014). A major difference between capitation under Managed Care contracts and the new population-based payments is that the former did not bear any incentive to improve or just ensure a minimum level of health care quality. The innovative developments presented in this chapter frequently include provisions to make sure that quality targets are met. Thus, they initiate a shift away from exclusively paying for *volume* to reward *quality improvements* and *efficiency gains*.

These payment reforms can be considered as one pillar towards a more effective integration of care activities. The implementation of population-based payments, the definition of the population, the services provided by the groups of health providers and their strategy to reduce costs while improving quality differs between health systems and needs to be analysed within the country context. This chapter first presents a number of examples of recently-implemented population-based payment schemes. Then, it compares their impact on quality and costs, as well as the conditions for their implementation, before analysing some important technical aspects in more detail. Finally, some key challenges associated with these innovations are discussed.

4.2. Population-based payment innovations are currently implemented in a variety of countries

Population-based payment is closely related to the emergence of so-called Accountable Care Organisations (ACO) in the United States and elsewhere. ACOs are groups of health care providers that are collectively accountable for the organisation of health care and its quality and also take the financial responsibility of care provision. In some countries, population-based payment contracts can also be signed with non-health care providers such as management companies and other private contractors. ACOs *do not* act as health insurers – the ACOs themselves do not sell any health plans to the population. They rather contract health insurers (or other payers) and guarantee the provision of health care for their insured population for a predefined budget. ACOs are responsible for the delivery of all – or the vast majority of – health care services for a defined group of the population. The largest experiments currently happen in the United States where around 400 ACOs are contracted by Medicare. Another 200 ACOs have negotiated population-based payment contracts with private insurers. In total, ACOs in the United States provide care for about 20 million patients (Shortell et al., 2014a). Smaller initiatives exist in Germany, for example in a rural area in South-Western Germany with a physician-led ACO and in the Spanish region of Valencia where a private contractor is accountable for primary and secondary care in several health areas.¹ In Hungary, a population-based payment model existed between 1998 and 2008 but its implementation was deprioritised and the model finally discontinued in the wake of discussions around the privatisation of parts of the SHI system (Gaál et al., 2011). Similar concepts are currently piloted or discussed in a number of additional countries including Singapore, New Zealand, the Netherlands and Portugal.

Strong political commitment for Medicare ACOs in the United States

In the United States, Accountable Care Organisations (ACO) are part of broader reforms of the Affordable Care Act (ACA) of 2010. One aim of this reform is to change payment under Medicare to move away from a strict FFS scheme paying health providers for increasing activity towards a payment system rewarding quality and efficiency. There is strong political commitment to tie at least 30% of Medicare payment to quality or value through alternative payment models by 2016 and 50% by 2018 (Burwell, 2015). One of the alternative payment models are population-based payments to ACOs. The ACA mandated CMS to contract ACOs for the care of a defined population of Medicare patients.

Medicare ACOs require a minimum population of 5 000 patients. Providers forming an ACO typically include primary care providers and hospitals but can also extend to specialists, long-term care facilities, and home care. ACOs must commit to

participate in the Medicare programme for at least three years, develop a formal structure that allows the organisation to receive and distribute payments for shared savings, include a sufficient number of primary care providers, establish a leadership and management structure that includes clinical and administrative systems, define processes that promote evidence-based medicine and patient engagement, report on quality, cost measures and care co-ordination mechanisms and demonstrate that the ACO is patient-centered (Shortell et al., 2014a).

First implemented in 2012, three types of Medicare ACO programmes are currently operating (CMS, 2015a):

- Medicare Shared Savings Programme (MSSP) ACO,
- Advanced Payment ACO, and
- Pioneer ACO.

The programmes designed by CMS differ in the extent to which savings are shared between ACOs and Medicare and the financial risk assumed by the ACOs. For all models, savings can only be earned when quality targets are met. The largest programme is the Medicare Shared Savings Programme where the vast majority of ACOs have shared-savings-only contracts. In the Advance Payment initiative, Medicare makes upfront payment to rural ACOs with less access to capital. The upfront payments are consolidated with later savings. The Pioneer ACO model is the most integrated and demanding one. CMS only contracted organisations to this arrangement which had previously proven to be able to effectively manage health care across providers. In the first two years of contract, Pioneer ACOs share gains and losses with Medicare but with a higher level of reward and risk than ACOs under the MSSP. In the third year, Pioneer ACOs that have realised savings in the previous two years can move towards a prospective monthly capitation payment. Thus, they assume a higher financial risk but have bigger flexibility in spending. The Pioneer ACOs are also encouraged to start negotiating value-based models of health care delivery with other payers outside Medicare, such as Medicaid and private insurers.

The alternative quality contract for the private sector in Massachusetts

The Commercial Health Insurer Blue Cross Blue Shields in Massachusetts (BCBSMA) proposed a change in payment for groups of providers as part of their Alternative Quality Contract (AQC) from 2009 onwards. BCBSMA has roughly 2.8 million policy holders. Groups of providers eligible to sign the AQC must include primary physicians and they must collectively care for at least 5 000 people enrolled in BCBSMA Health Maintenance Organisation (HMO) and Point-of-Service (POS) plans. In 2009, eight provider groups signed the AQC with BCBSMA. The eight provider groups encompassed around one fourth of all primary care physicians in the BCBSH HMO and POS network and one third of all patients in these networks. The AQC contract length was five years (Chernew et al., 2011).

The AQC foresaw a virtual global budget with shared savings and losses for the provider groups. In 2009 and 2010 the AQC also included additional payments for quality improvements. As of 2011, AQC made shared savings dependent on quality performance.

Total virtual budgets and annual increases are negotiated between BCBSMA and provider groups individually, taking past spending for patients as a starting point. The budget is risk-adjusted annually to take account of changes in patient’s health status. The virtual budgets cover all health care services – with the exception of mental health and substance abuse treatment – delivered to patients, irrespective whether the services were provided by a member of the provider group or not. Provider groups are required to have re-insurance for exceptional expensive patients. The actual services throughout the year are billed on a FFS basis but are reconciled at the end of the year with the virtual budget. From 2011 on, increases of the virtual budget were linked to a regional spending benchmark.

Establishment of a private ACO in Northern California to compete for patients

In Northern California the commercial insurer Blue Shields of California, the independent practice association Hill Physicians and the hospital system Dignity Health collaborated in an ACO to compete for clients with the integrated care system Kaiser Permanente. In 2010, the three parties concluded an ACO contract for 41 000 insurees belonging to the California Public Employees’ Retirement System (CalPERS) in Sacramento. The four main goals of the ACO were to:

- Keep CalPERS as a client for Blue Shields (and hence for the providers) by guaranteeing zero cost and premium growth in the first year;
- Attract new public agencies to contract with CalPERS (and hence with the ACO);
- Maintain or improve quality of care; and
- Create a sustainable business model for extension to other regions.

The partners agreed on a number of strategies and initiatives to keep costs down and improve quality such as better exchanges of patient medical information, coordinated clinical processes and comprehensive home-based medical care for high-risk patients and the elderly.

Blue Shields and providers agreed on a virtual global budget with upside and downside risk-sharing savings and losses. Seven cost categories were defined, and costs per month per member were stipulated and, for each cost category, the risk for over – and under-spending were allocated between the parties (Markovic 2012).

After a predominantly successful implementation of the ACO model in Sacramento generating significant savings and some quality improvements, each of the parties concluded additional ACO contracts either with the same or other partners in other regions. The IPA Hill Physicians, for example, is currently engaged in four commercial ACO contracts covering 72 000 out of their 300 000 patients (The Commonwealth Fund, 2014).

Physician-led joint venture in South-Western Germany contracted by two health insurance funds

In 2006, two statutory health insurance funds – AOK Baden-Württemberg and LKK Baden-Württemberg – contracted a private joint venture “Gesundes Kinzigtal GmbH” (GK) to run a population-based integrated care model with a virtual budget and one-sided risk sharing in a rural area in South-Western Germany (Milstein and Blankart, 2016).

A network of doctors owns two-thirds of GK and a health management company (Optimedis AG) owns the remaining part. In 2012, GK had contracts with 86 providers including: GPs, outpatient specialist, hospitals nursing homes, physiotherapists, pharmacies (Hildebrandt et al., 2012). Providers contracted by GK are paid by health insurers in the traditional way (e.g. FFS) while there are separate payments from GK for services outside the benefit package (e.g. maintaining and update electronic health record) and to set up an IT infrastructure. Those doctors that are co-owners of GK (via their share in the doctor's network) participate additionally in any financial success of GK. These additional payments amount to 10-15% of provider income (Llano, 2013). Duration of the contract is ten years.

Currently, about one third of 31 000 eligible patients participate voluntarily in this model. They can end their participation on a quarterly basis. There are only very small financial incentives for participants such as vouchers for gyms or co-payment reductions, but enrollees benefit from tailored prevention and sports programmes (Milstein and Blankart, 2016).

A virtual budget is based on the existing risk-adjusted capitation amount the two health insurers receive from the Central Health Fund as part of the risk-structure compensation scheme. Potential savings are calculated as the difference between the virtual budget and the actual cost of the whole population insured with the two health insurers in the region. The virtual budget refers to the entire insured population and not only the participating patients to prevent any kind of risk selection by GK. Earned savings for GK are not related to explicit quality targets but as the model is based on voluntary participation of patients, the provision of low quality health care can indirectly affect the potential to earn savings if patients decided to end their participation in the model.

After showing some success in reducing spending growth and improving quality the model is now being replicated in other parts of the country. A critical mass of patients appears to be crucial to effectively manage care in a region but given the nearly 118 statutory health insurers in Germany, such a concentration is rare and seems to be essential for the success of the model in the German context.

A public-private partnership as a starting point for accountable care in Spain

Legal changes allowed for the establishments of public private partnerships (PPP) in the health sector in the late 1990s in Spain. The first PPP was implemented in the region of Valencia. There, the regional Health Ministry established a PPP for ten years with a private contractor (Ribera Salud Group) which required the contractor to construct a hospital and manage hospital care in one health area in Valencia (Alzira) covering 245 000 patients that are automatically enrolled. In return, the contractor received annually adjusted capitation payments. The contract was changed in 2003 to cover primary and secondary care services and its duration extended to 15 years. Health care is organised around one hospital, two outpatient clinics and 30 health centres (Acerete et al., 2011).

Under the current contract, the annual capitation payment is adjusted in line with the regional health budget. The contract stipulates that possible profits of the private contractor are to be shared between contractor and local government; contractors can keep profits up to 7.5% of turnover but must return any additional profit in excess of it. The fixed capitation payment also covers investment costs for medical and non-medical equipment which is under the responsibility of the contractor. However, after

expiration of the contract, the equipment becomes property of the regional administration. People in the health area are automatically assigned to the contractor without enrollment, but if they choose health care outside the health catchment area then Ribera Salud has to assume 100% of the costs incurred. To assure high-quality treatment, health providers of Ribera Salud have to meet a series of targets covering a wide range of quality and safety objectives including process indicators, clinical outcomes and patient experience.

The model has meanwhile spread to other health areas of Valencia. In 2011, around 20% of the population of Valencia was covered under similar contracts (NHS European Office, 2011).

Moving towards population-based payments in additional countries

Similar population-based care integration models are currently implemented or piloted in a number of other countries.

In ***Singapore***, several programmes were launched in recent years especially targeted at the elderly and frail population (McClellan et al., 2014). The Singapore Programme for Integrated Care for the Elderly (SPICE) is a community-based initiative using local care centres and home care to enable elderly patients to be cared for in the community rather than in hospitals. The Holistic Care for Medically Advanced Patients (HOME) targets palliative care for patients with end-stage heart, lung, liver and renal failure. These care models are partially funded by capitated monthly payments to health providers enabling them to pool these funds. Aged Care Transition teams facilitate the patient's transition to the optimal care setting facilitating the delivery of co-ordinated care after hospital discharge. First evaluations of outcomes are positive. The SPICE programme has reduced the number of emergency department visits by 50% and the HOME programme has helped increase the number of patients who choose palliative care in their homes instead of hospitals after struggling with fatal diseases. Aged Care Transition teams have prevented 17 000 hospital days per year, saving USD 11 million annually (McClellan et al., 2014).

In ***New Zealand***, 20 county district health boards are responsible for financing and provision of health and disability services for the population within their district. One of these district boards is Counties Manukau Health (CMH) near the city of Auckland caring for more than 500 000 people (Alderwick et al., 2015). With funding allocated by the government, CMH has to purchase most primary care services and provide hospital-based and specialist services. Primary care is predominantly provided by Primary Health Organisations (PHO); they are networks of self-employed GPs, nurses and other health professionals. PHOs receive an adjusted capitation payment from the district health boards for every enrolled patient. CMH has alliance agreements with the five PHO partners operating in its district stipulating shared system-wide responsibility and integration across community and hospital care providers. Since 2013, the district alliance agreement between CMH and the five PHO includes some financial risk and gain sharing (NZ Doctor, 2013). The agreement stipulates that savings generated from reduced costs in emergency departments in one of the hospitals of CMH will be redistributed to the PHOs. On the other hand, PHOs will be penalised if a patient visit to an emergency department could have been served in a PHO.

The Netherlands has piloted efforts to move in the direction of population-based payments. In 2013, nine care groups² were piloting different initiatives in population health management ranging from better co-operation between primary care and

secondary care to projects fostering more cost-effective prescribing and improved care for mental health. A number of projects were also geared towards the elderly population with an enhanced discharge management after hospitalisation, screening for dementia, loneliness and polypharmacy and proactive engagement of geriatric nurses to identify particularly vulnerable patients (RIVM, 2014). Patient involvement in the development of these population management initiatives is high. They are represented via patient advocacy groups in eight of the nine pioneer sites. So far, the pilot projects have been funded by different payers such as health insurers or via research grants from public organisations. There are plans to implement the population health management initiatives in purchaser-provider contracts with shared savings similar to the type of Alternative Quality Contract (AQC) as seen in the private sector in the United States. However, there are ongoing discussions to what extent the Dutch health system is flexible enough to incorporate this new payment approach or whether there are some legal or regulatory obstacles impeding this development.

In *Portugal*, the creation of Local Health Units in 1999 (ULS – *Unidade Local de Saúde*), a group of NHS providers, was a move towards vertical integration between primary care and hospital services within the same geographical area. ULS have centralised management and have co-ordinated services between both hospitals services and primary health centres. This model of care intends to improve multi-disciplinary co-operation between different levels of care to achieve efficiency gain and provide more patient-centered care. Since 2010, ULS are predominantly financed through risk-adjusted capitation adjusted to reflect population characteristics which gives the ULS greater financial and operational freedom to experiment with innovative care delivery models. In 2014, there were eight ULS in Portugal (OECD, 2015a). Recent evaluations show cost savings in maternity care and primary care diagnostics and some evidence of lower volume of hospital activity. The ULS model has not reached maturity yet as it has scope to further improve co-ordination of care in more areas of service delivery and to further innovate (OECD, 2015b).

Besides the new payment models targeted at ACOs presented in this chapter, there exist a number of fully integrated health systems, such as Kaiser Permanente that also share some similarities with ACOs. The main difference between these integrated systems and an ACO is that the former frequently combine the function of insurance and health provision. Moreover, policy holders with Kaiser Permanente health care coverage typically have to stay within their network of providers for treatment. Payments to or within these integrated systems is outside the scope of this chapter.

Framework to compare the impact of payment reform and conditions for implementation

Table 4.1 gives an overview of early assessments of the impact of reforms that promote population-based payments in the United States, Germany and Spain and describes the conditions for their implementation in more detail. The United States have a huge variety of ACO models – three types of Medicare ACO models and various ACO models from the private sector. Findings for the United States draw from the evaluation of the Medicare models, the AQC model rolled out by a private insurer in Massachusetts and a Sacramento ACO contracted by one private insurer. For Germany, results are drawn from one ACO (the joint venture GK), the findings from Spain are based on several ACOs in the same region which are operated by the same management company (Ribera Salud), frequently referred to as the Alzira model.

Table 4.1. Assessment and implementation conditions for population-based payment in three countries

	United States	United States	United States	Germany	Spain
Type and name of payment reform	Medicare ACO	AQC Massachusetts	ACO Sacramento	Population-based bundling (GK)	Population-based bundling (Alzira)
Assessment of policy impact					
Achievement in terms of policy objective :					
Quality	+/-	+	+/-	+	+
Savings	+/-	+/-	+	+	+
Other					
Unintended consequences	Best performing ACO can lose revenues		Increase in emergency department visits		Contract renegotiation
Conditions for implementation					
Payment reform embedded in larger policy reform	+			+	+
Stakeholder participation in policy development (e.g. actively consulted in establishment of law/scheme)					
Payer participation	Mandatory for Medicare	Voluntary	Voluntary	Voluntary for SHI funds	Mandatory for public payer in some regions
Provider participation	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary
Administrative Burden	+				+
Data collection and use	New and existing data			New and existing data	
How are tariffs set?	FFS embedded in benchmark based on past spending and adjusted annually for total Medicare spending trend	FFS embedded in negotiated benchmark	FFS embedded in negotiated benchmark	FFS embedded in benchmark based on SHI funds reimbursement from risk-structure equalisation	Negotiated capitated amount, adjusted annually with total regional health budget increase
Independent evaluation of reform	+	+	+	+	-

Source: Authors' compilation.

4.3. Assessment of payment reforms

In many cases in the United States as well as for GK in Germany, the introduction of population-based payment to ACOs was pursuing the *Triple Aim* (Berwick et al., 2008) of:

- improving population health,
- improving health care quality and patient experience, and
- reducing health care costs.

To achieve these aims, ACOs have to rethink and redesign the pathway of care delivery focussing on patient needs and improve co-operation between providers. They need to identify areas where savings can be generated, for example, by reducing double examinations and by providing care more efficiently in a less costly setting. Quality and outcomes can be enhanced if care pathways are streamlined and follow best practice or evidence-based guidelines and if variation in practice can be reduced.

The implementation of population-based payment is relatively recent. Evaluations of possible improvement in health outcome, quality of care and reductions in spending draw on data available over a few years at best and need to be considered preliminary at this stage. Moreover, any effect of the introduction of population-based payments typically cannot be isolated as it closely connected to a change in the organisation of care and the process of care delivery that accompanies the establishment of an ACO. Restructuring care processes across providers takes time to bear fruit. Thus, a more robust assessment of the potential success of this payment innovation will require a longer time horizon.

Many ACO achieve quality improvements with regards to process, only few for outcome

There are some indications that quality of care is increasing when provided by ACOs in the United States. Within the Medicare programme, all 32 Pioneer ACO could successfully report the required 33 quality measures in their first year and overall these ACOs were reporting a higher level of performance than for benchmark Medicare beneficiaries for 15 available clinical indicators. Around three-quarters of them reported lower readmission rates when compared to the Medicare beneficiaries' benchmark. In their second year, the Pioneer ACOs were able to improve their performance in 28 of the 33 quality measures, for example for controlling high blood pressure, screening for future fall risk and screening for tobacco use and cessation. The greatest improvements could be observed for the at-risk population which suggests that Pioneer ACOs are making some progress in co-ordinating care for patients with chronic conditions (Kocot et al., 2014). Similar results are found for the much larger MSSP ACO programme within Medicare. An evaluation showed that patient experience was positive and care co-ordination for patients with chronic conditions for patients in the MSSP ACO programme had improved (McWilliams et al., 2014). Patients could access doctors more quickly, had better access to visit notes, and were better informed by their primary care physician about specialty care.

More time-robust findings exist for some longer-standing private ACOs. Over four years, improvements in quality were faster for those patients enrolled in ACOs contracted by BCBS for the AQC in Massachusetts than for a control group. This refers to a better performance in process measures for ambulatory care in the area of chronic disease management, adult preventive care and paediatric care as well as to intermediate outcome

measures, such as blood pressure control (Song et al., 2014). For the private ACO in Sacramento, hospital readmissions within 30 days decreased by 15% in the first year (Markovich 2012). Over the same period though, emergency department utilisation increased.

Although no quality targets are set as part of the ACO contract in Germany, evaluations found reduced mortality rates for those persons participating in the ACO model, higher two-year survival rates for chronic heart disease patients, while a programme for the elderly showed improvement in nutrition behaviour but no improvement in physical activity and no changes in health-related quality of life. Patients treated by participating physicians had lower hospitalisation rates, and were more likely to be prescribed medicines according to evidence-based guidelines. Patients and providers appear to be satisfied with the programme (Hildebrandt et al., 2012; Mnich et al., 2013; Busse and Stahl, 2014).

Internal evaluations of the hospitals attached to Ribera Salud in the Spanish region of Valencia showed significantly better results compared to other hospitals in the same region. Waiting times for emergency visits and external consultations are half that of the regional average. Readmission rates and average length of stay are also substantially below average rates in the region. Patient satisfaction for patients treated by ACO-affiliated hospitals is very high and significantly above satisfaction rates in other hospitals (NHS European Office, 2011). But there are also reports about skimping of care for patients with chronic conditions such as HIV (Acerete et al., 2011).

ACOs contributed to slowing spending growth on an aggregate level but not all ACOs at the individual level reduced spending

On an aggregate level, ACOs in the United States have slowed Medicare health spending growth in recent years. But not all ACOs were able to generate savings, and among those that did, not all realised the minimum savings required to be eligible to keep part of the savings (CMS, 2013; CMS, 2014). Concerning the Pioneer ACOs, Medicare could generate net savings in both evaluated performance years. Spending growth per beneficiary assigned to Pioneer ACOs was below spending growth of similar Medicare beneficiaries in both years: 0.3% vs. 0.8% in 2012 and 1.4% vs. 1.85% in 2013. But in both years, less than half of participating ACOs generated enough savings to share the gains with Medicare (12 out of 32 in 2012, and 11 out of 23 in 2013). Some ACOs had to share “losses” with Medicare and for the rest of the Pioneer ACOs, actual costs were not significantly different from benchmark figures. As a result of the difficulties encountered in effectively managing financial risk, nine Pioneer ACOs dropped out of the programme after the first year. Results from the much larger MSSP ACO model showed that more than 50% of all ACOs reduced health spending growth in the first year (118 out of 220), but only a quarter (52) were entitled to keep and distribute part of the savings to their members. In total, they were allowed to keep USD 315 million in 2012. For Medicare, the total net savings from MSSP ACOs amounted to USD 383 million. Payment innovations within the Medicare system – including population-based payments to ACOs – have been identified as a contributing factor to the recent slowdown in US health spending growth rates (White House, 2014).

Evaluations from private sector ACOs contracted by the AQC model of BCBS in Massachusetts covering a longer time period show that saving on claims compared to the control groups were realised in each of the four years. However, BCBS did not generate savings in the first three years as the savings on claims were below the top-up payments (e.g. shared savings, quality bonuses, infrastructural support) integrated in the model. Net

savings for the payer could only be recorded in the fourth year and are due to reduced prices and reduced utilisation on outpatient care, imaging and tests (Song et al., 2014). The private ACO in Sacramento was able to reduce cost in its first year against projected spending based on past trends but also in absolute terms compared to the previous year. Spending went down by 1.6% while spending in the control group increased by 9.9%. Over two years, the annual spending growth rate per member in the ACO was around 3% which was significantly below the spending growth that the insurer (Blue Shields of California) experienced elsewhere in the state. Thus, one of the main aims of the Sacramento ACO – the slowdown of insurance premium increase for the California Public Employees' Retirement System (CalPERS), a major client of insurer and the provider groups – was achieved. Over three years, the accumulated savings in insurance premium payment by CalPERS beneficiaries stood at USD 59 million or USD 480 per member per year (Markovich, 2012; The Commonwealth Fund, 2014).

In 2012, the German GK had a virtual budget of EUR 68.6 million with the health insurer AOK and realised savings of around EUR 4.6 million which meant that actual costs were 6.6% below the benchmark budget (Gesundes Kinzigtal, 2014). On a per capita basis, AOK received EUR 141 more from the Central Health Fund than it actually spent for the patients in the region. Comparing billing data of GPs participating in the ACO model with those that do not, it was found that cost increase per patient was significantly lower for participating GPs (+7%) than for non-participating GPs (+19%) over the period 2006 to 2010 (Hildebrandt et al., 2012).

In Spain, internal evaluations of Ribera Salud publish very large savings for the ACO in the health area of Alzira, with costs 25% lower than the average cost per inhabitant in Valencia (EUR 607 vs. EUR 825 in 2010) but no external validation are available to confirm these figures (NHS European Office 2011). However, the success story of this ACO model is questioned in other reports which claim that savings are overestimated as the capitated payment received by the Ribera Salud excludes a number of cost items included in the regional benchmark figure (Acerete et al., 2011).

A number of unintended consequences observed for some ACOs

In a number of instances, the establishment of ACOs around population-based payments brought about some unintended consequences. In Spain, the first population-based contract in the Valencia region signed in 1999 which only related to secondary care was financially not viable for the contractor Ribera Salud. It was modified in 2003 by the regional ministry to include primary care resulting in an increase in the capitation rate. This contractual change was interpreted by some as a bail-out by the regional government for an unsustainable business model (Acerete et al., 2011). Renegotiating contracts is not an uncommon issue with public-private partnerships and public payers are often in a delicate position to give in to demands to private contractors if they do not want to compromise the provision of vital public services. There are also reports about staff dissatisfaction with working conditions in hospitals managed by Ribera Salud in Spain which may be due to reduced wages and deteriorating working conditions and skimping of care for some groups of chronic patients (Acerete et al., 2011).

In the context of the Medicare ACOs, Toussaint et al. (2013) report that even well-performing ACOs can be confronted with reduced total revenues despite gaining savings from Medicare. The best performing Pioneer ACO in the first year (Bellin ThedaCare Health Partners ACO serving an area in Wisconsin) recorded a reduction in total revenues in their first year. This was due to the fact that only 18% of their patients were covered under the ACO Medicare payment model with the remaining 82% being covered under

traditional FFS schemes from private insurers and Medicaid. However, the improved care processes they implemented as part of the ACO Model also benefitted patients covered under other schemes whose payment contracts did not foresee a possibility to earn savings. Consequently, an avoided hospital admission for a traditional FFS patient translated into less revenue for the ACO. Hence, Medicare encourages Pioneer ACOs to implement additional shared savings contracts with other payers to counterbalance any possible revenue reduction. There are also some unintended consequences with regards to quality: the Sacramento ACO was successful in reducing hospital admissions and readmission in their first year but at the expense of increased use of emergency departments.

4.4. Conditions for implementing payment reform

Population-based payment innovation part of wider policy reform and piloted before larger roll-out

Implementation of population-based payments has gained traction in all countries because the payment reform was frequently part of a wider health policy reform. In the United States, the creation of Medicare ACOs was included in the ACA of 2010. ACOs are considered as one important tool to move away from a strict FFS scheme towards a payment system that rewards quality and value for Medicare beneficiaries. Other alternative modes of value-based payments – such as bundled payments or pay-for-value programmes for hospitals and physicians are also tested.

In Germany, the establishment of the joint venture GK as an ACO and its payment via a shared-savings contract was an example of an “Integrated Care Contract”. Integrated care contracts between individual insurers and individual providers were made legally possible in the early 2000s. They permit selective contracting between individual health insurance funds and individual or groups of providers promoting care integration across health sectors. Modes of payment and models of care can be negotiated between the contracting parties (Milstein and Blankart, 2016). In Spain, the implementation of the ACO model followed a change in national law to allow for a PPP in the health sector in the late 1990s.

Roll out of the new model of payment and care provision started gradually in the United States. The different types of Medicare ACOs were phased in slowly in 2012 starting initially with a low number of ACOs. But many of their features were already tested before in earlier programmes such as the Physician Group Practice Demonstrations (PGP). The PGP was a Medicare programme carried out between 2005 and 2010 for ten practice groups bringing together 5 000 physicians providing care for 220 000 Medicare beneficiaries. The positive experiences of this programme facilitated the implementation of Medicare ACO concept. For Germany, the GK can be considered as a pilot and the management company co-owning GK is currently planning to establish similar arrangements in other regions. The Alzira Model in Spain has meanwhile been scaled up and by 2011 the Ribera Salud Group had implemented six population-based contracts in different areas of the region of Valencia.

The history of the private sector ACOs in the United States was sometimes less driven by a broader policy change. The Sacramento ACO was created by an insurer (Blue Shields of California), an independent practice association (Hill Physicians) and a hospital system (Dignity Health) in Northern California for predominantly economic reasons, as a tool to keep costs down in a competitive environment. The three parties agreed to collaborate in an ACO out of concerns of Blue Shields of California that one of their biggest clients – the California Public Employees’ Retirement System (CalPERS) might switch their health coverage to Kaiser Permanente. As Kaiser Permanente is a fully integrated health system,

this move would also have affected Hill Physicians and Dignity Health because these providers would have no longer been able to serve patients with a Kaiser Permanente health plan.

Voluntary participation for provider and patients in ACO can encourage take-up

In all countries, participation in the new payment model is voluntary for providers. In the United States, different health providers can freely decide to form an ACO and apply to Medicare for inclusion in the ACO programme. In the private sector, providers need to agree with commercial insurers on ACO contracts. In the German example, the contract is negotiated between insurers and a joint venture comprised of health providers and a management company. In Spain, contract negotiations take place between private contractors and regional health ministries. For payers, engagement in these types of payment models is also voluntary with the exception of the United States where Medicare is mandated to offer several legally defined payment models to ACOs but they select the participating ACOs. Patients have some choice as well. Medicare patients can choose freely among doctors that accept Medicare payments. However, patients themselves do not decide whether they participate in the ACO or not. They are “assigned” to an ACO by Medicare if their doctor participates. Same can be true for private sector ACOs in the United States. Within the German ACO framework, patients have to be actively registered but they can end their participation at any time. In Spain, patients are automatically assigned to a primary health centre run by the ACO but they are free to choose specialist care in hospitals not managed by Ribera Salud.

Investments in IT infrastructure vital for ACO

The existence of a sophisticated IT infrastructure seems to be a crucial factor in the eventual success of an ACO. In particular, bringing health care costs down requires good case management and the stratification of patients to identify those who benefit most from early interventions. The extent to which IT is used in the management of an ACO will depend on several factors, most importantly the level of service integration. Analysing a variety of examples, McClellan et al. (2013) find that the most successful arrangements use integrated IT systems that allow real-time monitoring of metrics. This requires inter-operational IT systems with universal patient records being accessible by various providers collaborating in an ACO. These IT systems can also include decision support mechanisms and direct interaction within the clinical work flow. They appear to be particularly effective when connected to registries and public reporting systems. On a less advanced level, electronic management of appointment and referrals may help reduce waiting times and improve case management. IT support is also required for the collection and submission of data to calculate quality indicators which are required in different ACO programmes in the United States as well as in Spain. Finally, stratification of patients to identify those who benefit most from early interventions also requires constant monitoring of a number of patient-specific parameters at a central level. In the case of the Spain, the ACOs are the frontrunners in the use of IT: the hospitals associated with Ribera Salud in Valencia were reported to be the first public hospitals with a fully integrated electronic medical history system including medical notes, test results and imaging (NHS European Office, 2011).

But setting up the appropriate IT infrastructure is expensive. This is why in some cases either the payer (Medicare in the case of the advanced ACO model) or the ACO itself (e.g. the German GK) supports participating health providers financially with the acquisition and installation of the required IT infrastructure.

Considerable administrative burden for some ACOs

The management of shared savings contracts can come with considerable administrative burden for participating providers. This can be due to contract managing, the measurement and reporting of cost and quality indicators which are drawn from existing or new data or intensified case management. The level of administrative burden ultimately depends on the environment an ACO operates in and the care strategy adopted by an ACO. These issues seem to be most pronounced in the United States. ACOs or the participating providers are frequently engaged in more than one risk-sharing contract. ACOs that are contracted by Medicare in the Pioneer ACO programme are actually encouraged to engage in similar contracts with other payers such as Medicaid or private insurers. The independent practice association Hill Physicians – which is one contracting party in the Sacramento ACO – is currently involved in three additional ACOs. For each payer, important elements of the ACO contracts can differ, be it the risk-sharing models, the minimum saving requirements, the benchmarking budget or the quality indicators which make contracting management a complex endeavour. Addicott and Shortell (2014) report that one health provider network engaged in four different ACO arrangements was required to report on 219 different performance measures. Consequently, the need for different payers to agree on a common set of quality of cost measures has been identified as one of the key issues to dominate the discussion on the future of ACOs in the United States (Shortell et al., 2015). In Spain, the establishment of a public private partnership contract in the health sector and its eventual re-negotiation appears to have been a rather complex endeavour. But unlike in the United States, the ACOs in Spain are only contracted by a single payer. In addition to the administrative burden imposed by contracting payers, the internal management of the ACO may also entail some administrative activities, such as facilitating the communication between all participating providers.

Past spending important element in defining benchmark values

Providers continue to be paid for the provision of services in the traditional way in all population-based payment models, which is mainly FFS in the case of US Medicare ACO programme and private ACOs as well as in Germany. The Spanish contractors receive capitation payments to provide primary and secondary care. Whether providers can get any additional financial reward generally depends on their ability to keep the costs below a benchmark budget. There is some variety in the way these benchmarks are set in the different models and a number of important technical features need to be considered when defining these benchmarks.

Total health costs of the ACO are mapped against these target values to determine whether the ACO has generated savings or losses. In the Medicare model and in Germany, these values are based on administrative data and rules with no additional negotiations. For Medicare ACOs, the benchmark values are calculated individually based on the weighted average expenditure per ACO beneficiary over the past three years, adjusted for beneficiary characteristics. It is inflated with annual average Medicare cost growth rate for future years. In Germany, the benchmark is defined annually by the Central Health Fund via the Risk-Structure-Compensation mechanism³ automatically. The benchmark for GK corresponds to the amount of money the two contracted health insurers receive from the Central Health Fund.

Moving to the private sector in the United States, the benchmark values as well as their annual increases for ACOs with AQC from BCBSMA were the result of individual negotiations. The starting point was typically historic spending levels as the intention was

to control future cost increases rather than reduce the initial budgets of ACOs. Consequently, provider groups with higher initial spending were granted lower annual increases than ACOs with lower costs. As of 2011, annual spending increases were tied to regional spending benchmarks (Song et al., 2014). In the Sacramento ACO, benchmark values and annual changes were agreed upon by all contracting parties with the overall aim to keep Blue Shields premiums for CalPERS policy holders low. In Spain, the first capitation fees (including only hospital care) were negotiated between Ribera Salud and the regional ministry of health. Initially, annual increases were linked to the consumer price index. After reshaping the model which resulted in higher negotiated capitation (including also primary care), the annual growth was tied to the yearly increase in the regional health budget.

Population-based payments initiatives are frequently accompanied by independent evaluation

An independent evaluation of the impact of reforms in payment mechanisms or service delivery is generally considered conducive to the overall acceptance by providers and patients. Moreover, it should provide policy makers with unbiased information on the success of a reform. The Medicare ACO programmes are regularly evaluated by independent researchers and results publically available. An independent consultant also analysed the early impact of the Sacramento ACO. In Germany, evaluations are co-ordinated by an institute attached to the medical department of a university. In Spain, however, the impact of the ACO model on costs and quality of care has not been evaluated by an independent authority.

4.5. Population-based payment and ACO models differ in important technical aspects

After summarising the general impact of population-based payment on the quality and costs of care and some issues around their implementation, a more technical discussion related to the composition of ACOs and the financial arrangements is useful to better understand how they work in practice. Table 4.2 displays the most important contractual features of the five population-based payment models and ACO types analysed in this chapter.

Table 4.2. Technical characteristics of some population-based payments to ACOs

ACO criteria	ACO examples				
	United States			Germany	Spain
	Medicare*	AQC*	Sacramento	GK	Alzira
Population size	>5 000	>5 000	41 000	9 400	245 000
Lead provider	Main types: hospital-lead, physician-led, joint hospital-physicians	Main types: hospital-lead, physician-led, joint hospital-physicians	Joint hospital group and independent practice association	Network of primary care physicians, outpatient specialists and management company	Hospital (managed by private contractor)
Payment	Most: FFS with benchmark budget; few Pioneer ACO: capitation	Most: FFS with benchmark budget	FFS with benchmark budget	FFS with benchmark budget	Capitation with benchmark budget
Contract type	Shared savings and risk, some only shared saving	Shared saving and risk (between 50-100%)	Shared saving and risk	Shared saving	Shared saving and risk
Contract duration	3 years	5 years	Not specified	10 years	15 years
Setting of benchmark	Based on past ACO spending, adjusted annually for total Medicare spending trend	Negotiated individually, taking into account each ACOs baseline spending	Negotiated global budget based on per member-per month allowable costs across seven cost categories	Virtual budget: defined by SHI risk-structure equalisation scheme	Capitation: initial negotiation, adjusted annually with budget increases
Assignment of population	Retrospectively	Prospectively	Prospectively	Not relevant	Prospectively
Financial accountability	All Medicare Part A and B spend for assigned population	All health care for HMO and POS patients with some exceptions	Total health care costs	All SHI cost for population living in the area	Total spending of regional MoH with some exceptions
Risk contract	Shared savings beyond threshold; higher rate of saving if two-sided contract	Unpublished	Different risk sharing profiles for hospital group, practice group and insurer for different cost categories	Unpublished; roughly 50-50 between payer and ACO for every EUR	Savings beyond 7.5% back to MoH
Incorporation of quality	Shared savings can only be gained if quality requirements are met; earned savings function of performance	In 2010 and 2011: additional payments based on quality indicators; since 2012 shared savings only if quality requirements are met	No explicit quality requirements, but quality monitored by contracting parties	No explicit quality requirements, but quality monitored by contracting parties, and incorporated through competition with standard care	Quality indicators must be met as part of contract

* The ACOs Medicare and AQC are programmes open to different individual ACO models which differ in some of their characteristics.

Population size and provider composition differ between and within countries

The size of the population that is prospectively or retrospectively assigned to an ACO varies widely between countries reflecting differences in multi-payer and single-payer health systems as well as the size of the pool of providers involved and differences in care organisation and delivery process. In the United States, the population size of ACOs generally ranges between 5 000 and 50 000. In Spain, 245 000 inhabitants of the health area Alzira are automatically assigned to the ACO. It is not clear whether there is an optimal population size of an ACO to be successful, but it needs to be high enough for the care organisation to pool patient risk. In the context of the Medicare programme, analysing early results of the MSSP ACO after the first year showed that small, predominantly physician-led ACOs with fewer than 8 000 patients generated savings for Medicare which may indicate that smaller ACOs can implement changes in the delivery of care more quickly (McClellan et al., 2015). In case important investments in new care delivery methods are made, bigger populations may be required to create economies of scale. Analysing the whole landscape of ACOs in the United States, Shortell et al. (2015) conclude that a minimum size of 25 000 to 50 000 enrollees would be needed to refinance needed investments.

There is also some variety with regards to the composition of providers organised within an ACO. The provider composition of an ACO will strongly influence the care

strategy the ACO will implement to reduce spending and improve care quality. In Germany, the ACO is composed of a network of primary care physicians and outpatient specialists, and a management company. Other providers such as in secondary care are part of a wider network and have contractual agreements with GK. In Spain, Ribera Salud organises its ACO model around a hospital in the Alzira area. In the United States, a great variety exists, both in the public and private sector. Analysing a first survey of existing ACOs around eight key characteristics including size, scope of health services provided, and degree of integration, Shortell et al. (2014b) clustered ACOs into three categories:

- Large systems with a high degree of integration delivering a wide range of services frequently including one or more post-acute facilities,
- Smaller physician-led practices, which are centered around primary care, delivering a much narrower range of services,
- Medium-sized, joint hospital-physician and coalition-led groups that offer a moderately broad scope of services with some involvement of post-acute facilities.

ACOs prefer shared saving with some risk sharing embedded in traditional payment system

One aim of population-based payment is to incentivise groups of providers to reduce total growth of health care costs. In practice, this is done by defining a benchmark value as a target budget incorporating total health care costs – or the cost for the vast majority of health services – for the defined population assigned to the ACO. In case patient costs remain below this benchmark value, the ACO and payer share the savings. In some models, ACOs have to reimburse part of their payment to the payer in case the costs are above the benchmark. The actual mode of payment frequently remains FFS and total costs will be compared and reconciled with the target budget at the end of the year. Thus, financial risk of care provision is partially shifted from payers to providers in these payment models. In general, three main contract types can be distinguished:

- Shared savings contract (one-sided risk contract) embedded in FFS payment regime,
- Shared saving and risk contracts (two-sided risk contract) embedded in FFS payment regime,
- Capitation payment (with full risk or risk-sharing contract).

The majority of the Medicare MSSP ACOs and the German GK have one-sided risk contracts protecting them from possible negative financial consequences if they overspend. However, the management of the German GK is financed exclusively out of savings, so the profitability of the model is vital. Only few Medicare MSSP ACOs but all Pioneer ACO have two-sided risk contracts. This is also true for the AQC contracts of Massachusetts and the Sacramento ACO in the private sector. In Spain, Ribera Salud receives a capitation payment but it needs to share any savings if profits exceed 7.5% of turnover. For Medicare, moving from paying individual providers by FFS to monthly capitation for the ACOs is also a strategic aim for the most advanced Pioneer ACOs.

The shared savings and risk contracts usually have duration of multiple years which give all contracting parties some planning security. Developing innovative care strategies and re-shaping patient management and care pathways to bring costs down might also take some years to bear fruit. In some instances, ACO have important up-front investment for IT infrastructure or equipment to support innovative care models. In these cases, allowing

ACOs to recuperate their investment by accumulating gained savings over a longer time period appears to be necessary. Within the Medicare programme, ACOs commit for three years. The Alzira contract in Spain has the longest duration with 15 years as the private contractor was required to finance the construction of a hospital which is the lead provider of this ACO model.

ACOs are accountable for different populations and different services

The monetary benchmark value for ACOs with shared savings contracts is defined by the *size of the population* and the *range of health services* they are accountable for. With regards to the *population*, their financial responsibility in most cases corresponds to the population assigned to the ACO. For Medicare, the population is assigned *retrospectively* depending on whether a Medicare patient received the vast part of their primary care services from a provider working within an ACO in that year. In the private sector in the United States, patients are assigned *prospectively* based on their insurance policy. This means that ACOs know in advance the population they are financially responsible for. The same is true in Spain where Ribera Salud receives capitation payments for the automatically assigned population. The situation is different in Germany. There, GK is not only financially accountable for the population that is actively enrolled in the ACO model but the *entire* population of the two contracted insurers in the region. Currently, only around one third of them are enrolled.

The different ACO models also vary in the *range of health care services* they are financially responsible for. In the Medicare model, the benchmarks reflect Medicare Part A and B health care costs, which essentially reflect inpatient hospital care, some skilled nursing care, hospice and home health services as well as outpatient care and doctor's services. In private ACOs, financial responsibility typically reflects all costs for services they are contractually obliged to provide. In Massachusetts' AQC, costs for mental health and substance abuse treatment are outside the benchmark budget. In Spain, the capitation payment reflects costs for primary care and secondary care. The budget does not include costs for outpatient pharmacy, oxygen therapy, prosthetics and transport (Acerete et al., 2011). In Germany, the benchmark cost reflects nearly all services borne by the Statutory Health Insurance, including primary care, hospital care, post-acute care but also dental care and pharmaceuticals. Long-term care is not included. In some population-based payment models, adjustments are made in the calculation of total costs to exclude outlier costs for exceptionally expensive patients. In many cases, ACOs are financially accountable for a wider range of services than directly delivered by the provider group forming an ACO.

Hence, the benchmark budgets the ACOs are held accountable for are defined by the size and characteristics of the population and by a range of services which vary between the different ACO models. These factors will have an influence on provider group's strategies to reduce total spending growth.

Providers and payers both seek benefits from reduced spending growth

Population-based payment contracts between payers and ACOs are a tool used to control health spending growth by letting payers and provider groups share the savings generated by innovative care models. In some contracts, the contracting parties also share potential losses. Beyond these very broad characteristics, shared savings/loss contracts have to define a number of important details when implemented. Analysing the design and application of a sample of ACOs in the United States, Weissman et al. (2012) identify some basic properties with regards to measurement and distribution of savings to be included in a risk contract, mainly to limit the risk of payers. These are:

- Inclusion of a risk threshold or minimum savings rate,⁴
- Starting point of shared savings,⁵
- Distribution cap or maximum pay-out,
- Distribution of savings *between ACO and payer*,
- Distribution of savings *between individual providers* forming an ACO.

For Medicare patients, the savings contracts differ whether the ACO participates in a one-sided or two-sided risk contract (CMS, 2015b). In the one-sided model, ACOs are eligible to share savings up to 50% (depending on quality performance) above the minimum savings rate – set between 2% and 3.9% of the benchmark costs based on the size of the assigned population. Total savings are capped at 10% of the benchmark costs.

In the two-sided model Medicare model, ACOs are eligible to share savings up to 60% (depending on quality performance) above the minimum savings rate – set at 2% of the benchmark costs. Total savings are capped at 15% of the benchmark costs. Losses only have to be repaid when costs exceed the benchmark value by 2%. The share of losses ACO have to carry is calculated as 1 minus the shared savings rate but cannot exceeding 60%. Losses are capped at 5% of benchmark value in the first year, at 7.5% in the second year and 10% in the third year.

Less detailed information is available for other ACO contracts. For the private sector, Weissman et al. (2012) conclude that in those cases where shared savings contracts include risk thresholds, these lie between 2 to 5% of the benchmark value. Providers are typically allowed to keep between 20 to 80% of the savings. The contract for the ACO in Sacramento is more detailed. It stipulates different risk distributions for specific health care components between all contracting partners based on the extent to which insurer and providers can influence the costs (Table 4.3).

In Germany, savings are shared roughly 50/50 between GK and insurers without a minimum savings rate. In Spain, there exists a pay-out cap of 7.5%. All profits generated by Ribera Salud beyond this threshold have to be returned to the regional government.

Table 4.3. Allocation of risk for the three partners in the Sacramento ACO

Cost category	Share of risk if costs are above/below target value per cost category		
	Hospital group	Physician group	Insurer
Partner hospital	50%	25%	25%
Out-of-area non-partner hospital	25%	25%	50%
Other non-partner hospital	30%	30%	40%
Professional	30%	35%	35%
Mental health	0%	0%	100%
Pharmacy	33.3%	33.3%	33.3%
Ancillary	25%	25%	50%

Source: Adapted from Markovich (2012).

Little seems to be published on how the savings are distributed among providers forming an ACO. CMS does not stipulate how Medicare ACOs as legal entities have to distribute any savings among their members. Analysing some survey information on early

Medicare ACOs, Dupree et al. (2014) find there is variation between ACOs on how savings are distributed depending on the provider composition. In some cases, part of the gained savings will be retained at the ACO level to foster investment in infrastructure. When distributed to providers it seems that the biggest proportion will go to primary care physicians followed by specialists and other stakeholders. The distribution can also depend on performance and quality metrics. The distribution can also be decided on the basis of different costs categories, as is the case for the ACO in Sacramento (Table 4.2). In the German ACO model, around half of the net savings – after programme costs were retained by GK and used to finance further investments and the rest distributed among partners and the two owners of the joint venture (Die Zeit, 2015).

Quality a decisive factor in risk-sharing contract

Improving population health and quality of health care are two of the major goals of population-based payments. ACOs in the Medicare programme are required to meet a number of predefined quality standards to be eligible to share potential savings with CMS. Additionally, quality performance has an impact on the absolute amount of earned savings as it is included in the formula to calculate the shared savings ratio. In total, there are 33 quality measures which cover patient/care giver experience, care co-ordination/patient safety, preventive health and for some populations at risk such as for diabetes, hypertension, and ischaemic vascular disease, heart failure and coronary artery disease (see Table 4.4).

Whereas only the reporting of these indicators was sufficient to meet minimum quality requirements in the first year, the relative performance of an ACO with regards to these measures is taken into account from the second year on. For each indicator, a benchmark performance is calculated based on claims and quality data for FFS Medicare beneficiaries or Medicare Advantage plans. Points are awarded on a sliding scale. Minimum attainment level is set at 30% percentile of benchmark. The maximum score is awarded at the 90% percentile level (CMS, 2015c).

The AQC initiative in Massachusetts foresaw additional quality-related payments based on 64 indicators with half of them relating to care in hospitals and the other half to outpatient care in the first two years. The indicators were process measures, intermediary outcomes and patient experience and were combined in one metric with intermediary outcome measures having more weight. Quality incentive payments were outside the budget and providers could earn up to 10% of additional income. As of 2011, quality measurements are included in the shared savings contract with improved quality translating into a larger share of savings that can be retained by the ACOs.

Part of the ACO agreements in Spain is that hospitals meet a number of quality targets defined by the regional governments covering process indicators (e.g. waiting times), clinical outcomes (e.g. immunisation and morality rates) and patient experience (NHS European Office, 2011).

Table 4.4. Quality indicators used in the Medicare MSSP ACO programme

Domain	Measure	Description
Patient/Caregiver experience	ACO-1	Getting timely care, appointments and information
Patient/Caregiver experience	ACO-2	How well your doctors communicate
Patient/Caregiver experience	ACO-3	Patients' rating of doctor
Patient/Caregiver experience	ACO-4	Access to specialists
Patient/Caregiver experience	ACO-5	Health promotion and education
Patient/Caregiver experience	ACO-6	Shared decision making
Patient/Caregiver experience	ACO-7	Health status/Functional status
Care co-ordination/Patient safety	ACO-8	Risk standardised, all condition readmissions
Care co-ordination/Patient safety	ACO-9	Ambulatory sensitive conditions admissions: COPD or asthma in older adults
Care co-ordination/Patient safety	ACO-10	Ambulatory sensitive conditions admission: heart failure
Care co-ordination/Patient safety	ACO-11	Percent of PCPs who qualified for EHR incentive payment
Care co-ordination/Patient safety	ACO-12	Medication reconciliation
Care co-ordination/Patient safety	ACO-13	Falls: Screening for fall risk
Preventive health	ACO-14	Influenza immunisation
Preventive health	ACO-15	Pneumococcal vaccination
Preventive health	ACO-16	Adult weight screening and follow-up
Preventive health	ACO-17	Tobacco use assessment and cessation intervention
Preventive health	ACO-18	Depression screening
Preventive health	ACO-19	Colorectal cancer screening
Preventive health	ACO-20	Mammography screening
Preventive health	ACO-21	Proportion of adults who had blood pressure screened in past two years
At-risk population diabetes	Diabetes composite	ACO-22: Hemoglobin A1c Control (HbA1c) (<8%)
		ACO-23: Low density lipoprotein (LDL) (<100 mg/dL)
		ACO-24: Blood pressure (BP) < 140/90
		ACO-25: Tobacco non use
		ACO-26: Aspirin use
At-risk population diabetes	ACO-27	Percent of beneficiaries with diabetes whose HbA1c in poor control (>9%)
At-risk population hypertension	ACO-28	Percent of beneficiaries with hypertension whose BP < 140/90
At-risk population ischemic vascular disease	ACO-29	Percent of beneficiaries with IVD with complete lipid profile and LDL control < 100mg/dl
At-risk population ischemic vascular disease	ACO-30	Percent of beneficiaries with IVD who use aspirin or other antithrombotic
At-risk population heart failure	ACO-31	Beta-blocker therapy for LVSD
At-risk population coronary artery disease	CAD composite ACO-32-33	ACO-32: Drug therapy for lowering LDL cholesterol
		ACO-33: ACE inhibitor or ARB therapy for patients with CAD and diabetes and/or LVSD

Source: Adapted from CMS (2015d).

Population-based payments incentivise ACOs to develop a wide range of strategies to keep health care costs down

In all countries, ACOs that succeeded in reducing costs while improving or maintaining quality of care developed a care strategy. This strategy heavily depends on the country-specific context, the composition of the providers forming an ACO as well as on the nature of the payer but also on the composition of the patients the ACOs are financially accountable for.

Most health care costs arise from the need of only few patients. Using data from the Medical Expenditure Panel Survey (MEPS) in the United States, Stanton and Rutherford (2005) estimate that 80% of the total health care costs stem from only 20% of the population and multi-morbid patients cost up to seven times as much as patients with a single chronic condition. For Medicare, the most expensive 10% of patients are responsible for 52% of total spending (De Nardi et al., 2015). The most promising strategy to generate savings for an ACO therefore lies in a stratification of patients and identifying patients at risk. For those, specific prevention programmes can be developed or case management intensified.

When developing its care strategy, the private sector ACO in Sacramento reviewed data of the 5 000 chronically ill patients that accounted for 75% of its costs. Based on this analysis it identified five key priorities: improving information exchange, the co-ordination

of processes such as discharge planning, the elimination of unnecessary care, limiting variation of practice and reducing costs for pharmaceuticals (Markovich, 2012).

In successful ACOs, care models were rethought and pathways redesigned to make them more patient-centered with less fragmentation between the providers. Frequently, patients were included more in the decision process and empowered to play a more active role in the self-management of diseases. Case management of patients was strengthened and programmes to manage diseases adopted to reduce duplication of work and variation in treatment. Data exchange between providers improved with the establishment of electronic health records and tools enabling real-time data exchange.

Analysing a survey on the first wave of ACOs in the United States, Colla et al. (2014) found that over 50% of ACOs are physician-led with a further third being jointly led between physicians and hospitals. The survey also showed that physician-led ACOs are less likely to provide emergency, post-acute services and other services involving different providers as compared to ACOs under joint or other leadership. This could make it harder for physician-led ACOs to effectively manage the transition of patients between settings. On the other hand, physician-led ACOs are more likely to have comprehensive care management programmes in place and are more actively engaged in pre-visit planning, medication management and preventive care reminders (Colla et al., 2014; Shortell et al., 2015). In an analysis to assess to what extent surgeons are involved in the first wave of Medicare ACOs, Dupree et al. (2014) found that most ACOs focussed on improving care co-ordination for patients with chronic conditions and reducing hospitals readmission and emergency department visits. While ACOs which include hospitals tried to reduce hospital readmission to avoid financial penalties from Medicare, ACOs exclusively comprised of physicians focussed on reducing hospital admission and emergency department visits. Reducing unnecessary surgery does not appear to be a priority in the early years but could potentially be important in the future.

One example of how providers have actually reshaped care processes is that of the provider ThedaCare (Pioneer ACO) (McClelland et al., 2013). ThedaCare focussed on redesigning inpatient care. They set up interdisciplinary teams composed of nurses, physicians, care manager and pharmacists which meet with a patient right after admission. These teams create a uniquely tailored care plan with the nurse being responsible for monitoring progress and strict adherence to protocol. In addition, social workers meet with every patient to assess the need for home-based support. As a result, average length of stay has been cut by 17% and duplication of work reduced substantially. At the same time, patient satisfaction substantially increased.

Data for the private sector AQC model in Massachusetts show that savings in the outpatient sector were most significant (Song et al., 2014). Costs for procedures, imaging and test could be reduced and savings could be explained by a mix of lower prices and reduced utilisation. This could serve as an indication that ACOs contracted for the AQC model put their focus on the reduction of double examination and more targeted referrals.

The ACO in Sacramento developed a very clear strategy to achieve the substantial cost savings that they agreed upon already in the first year of existence. First, the strategy focussed on overutilisation by limiting the number of costly operations such as hysterectomies and elective knee surgeries in developing alternative therapy and treatment. A second route to cut costs was to focus on preventable readmissions by improving case management and discharge planning. Finally, services use of providers outside of the ACO network by patients was to be limited to the greatest extent possible (Blue Shield of California, 2012).

In Germany, the ACO has a strong focus on preventive activities and has developed around 20 preventive and health promotion programmes aimed at patients with specific conditions. It also implemented a series of care management programmes and other measures such as a more rational pharmacotherapy (Hildebrandt et al., 2012). These initiatives appear to have contributed to a reduction in costs. For example, patients treated at participating physicians have lower hospitalisation rates and are more likely to be treated with pharmaceuticals recommended by evidence-based guidelines in the case of heart conditions (Hildebrandt et al., 2012). Data from one of the participating insurers show that two-thirds of the savings among its insured population were realised by lower spending for pharmaceuticals and hospitalisations.

In Spain, remarkable savings have been reported as a result of the application of a new integrated approach to health care delivery focussing on the needs of the patient. Innovations include the attachment of a consultant physician to each health centre as a link to GPs facilitating the implementation of clinical guidelines and effectively reducing the number of inappropriate hospital referrals. Moreover, scope of practice in health centres was enlarged to include onsite X-ray services and accident and emergency departments, and medical care pathways streamlined. Additionally, longer opening hours for outpatient services and elective surgery were established (NHS European Office, 2011). But there are also reports that hospitals managed by Ribera Salud are more selective in their choice of procedures carried out and limit care for patients with chronic conditions, such as for HIV patients (Acerete et al., 2011).

4.6. Conclusion

Recent examples of population-based payments systems show that in some instances provider groups are initially successful in slowing down health spending while maintaining or even improving quality of care and health outcomes. They achieve this by employing resources more efficiently in cutting waste such as double examination and shifting treatment to the most appropriate provider setting. It appears that these innovative modes of payment have at least the potential to enable effective care integration by overcoming care fragmentation. Population-based payments bring together different groups of providers to jointly take responsibility for value-based care centered around the needs of the patient. Making payment dependent on quality is crucial to avoid skimping of care. A welcome side effect of the obligation to report quality measures is that it makes care delivery and performance more transparent. It also is huge step forward towards a more comprehensive and structured data collection on quality with an increased focus on parameters that matter to the patient, such as patient satisfaction and experience as well as outcomes. It remains to be seen whether the positive results can be sustained over a longer time period.

Lessons from ACOs are not easily transferable between health systems

Although health policy objectives that lead to the adoption of population-based payments and ACOs tend to be similar, their actual implementation needs to be analysed in their country-specific context. Health systems differ substantially between OECD countries and it appears that a number of characteristics of a country's health system impact the viability of the different models of the ACOs presented in this chapter.

First, it seems to make a difference whether an ACO is implemented in a country with single or multiple payers. In a regional NHS system like in Spain, care contracts of one health area can only be concluded with regional ministries whereas in the United States, an ACO can have accountable care contracts with Medicare, Medicaid and a number of private

insurers whose contents may differ in many aspects (Song and Chokshi, 2015). In the United States, private sector contracts with ACOs generally involve more risk than current Medicare ACO contracts. Moreover, private ACOs have more levers for cost control than Medicare ACOs. They can influence the prices through the negotiation of price discounts whereas prices in the Medicare environment are fixed. Perhaps most importantly, there are significant differences in the population characteristics between private ACOs and Medicare ACOs. Whereas Medicare ACOs are basically limited to the above 65 year old, beneficiaries in private ACOs tend to be younger. This can have important consequences for the care strategy of an ACO as a younger population might be able to benefit more from a wider range of preventive activities aimed at behaviour changes at earlier phases in life. Secondly, there are differences in the legal systems. The ACO model in Germany could not have been implemented if legislation had not been changed to specifically permit public health insurance funds to commission selected health care providers. There are also legal issues related to the question whether payers are able to change the mode of payment to include one- or two-sided risk contracts and whether the emergence of ACOs can be of antitrust concern. In the context of the United States, the question whether the market power of some ACOs can potentially reduce competition and raise prices is under discussion (Shortell et al., 2015). Thirdly, the range of services contracted by ACOs differs between the countries depending on the role of the payer. For example, costs for outpatient pharmaceuticals are not included in benchmark costs for Medicare ACOs and the Alzira model. Long-term care costs are not part of the virtual budget for the German GK. Primary care services were not covered in the first – unsuccessful – Alzira model. The different components included in the benchmark spending will have an impact on the strategy pursued by the ACOs in different countries to reduce total spending.

Can this model be financially sustainable?

The key factor that will decide whether this payment model can gain foothold in a greater number of OECD countries seems to be whether it can be financial sustainable. Although reduced revenues for providers or spending increases for payers might be acceptable in the early years of transition, in the long run, the model needs to be beneficial for all players involved: provider groups, individual providers, payers and patients. Moreover, lessons from the failure of managed care need to be learned. Like some ACOs, Managed Care Organisations also had some initial success in reducing health care spending as they succeeded in negotiating lower prices with health providers who were concerned to lose patients to competitors (Frakt and Mayes, 2012). But after some years of consolidation, health providers were capable of negotiation under more favourable terms pushing health costs back up again.

Payers will continue to support this new population-based payment model if they see reductions in health spending growth and improved quality of care for their insured population and in general get “better value for money”. Patients will be in favour if they experience better health care and their financial contributions to the health systems or their health premiums do not increase substantially. The situation for provider groups and individual providers appears to be the most delicate one. For health providers in general, a slowdown in health spending equates with a reduction or limited increase of average revenue. With the possibility of gained savings, provider groups can still financially benefit from this new payment regime. However, this might become complicated in reality if provider groups have shared savings contracts only with a small number of payers (Toussaint et al., 2013). Hence, Medicare encourages ACOs participating in the Pioneer programme to implement shared savings contract with other payers, too. Expanding the

ACO business model is also the aim of the Sacramento ACO which plans to spread into other geographical regions.

While in a number of cases ACOs have succeeded in generating savings in the short run, it is less clear to what the extent this will be feasible in the long run, once the most obvious inefficiencies in an ACO have been addressed. The ability to keep actual costs below the benchmark will largely depend on how savings are defined. In the case where savings are calculated against the benchmark costs of providers outside the ACO programme, a perpetual realisation of annual gains might be a relatively simple task. In the case where costs are benchmarked against projections of the ACO's own historic spending levels, this endeavour might become increasingly difficult with time without compromising quality of care.

ACO managers in the United States believe that the number of patients covered by ACO contracts will grow in the future. Nearly two-third of the leaders of physician-led ACOs believe that they have great potential to improve quality but they are more sceptical about their potential to reduce costs where less than half think ACO contracts can achieve this (Shortell et al., 2015).

Even if the ACO as whole is successful in generating savings and increases its total aggregated revenue, this does not necessarily imply that each individual provider participating in the ACO is benefiting from the payment model. The terms under which savings are used by the ACO and shared among individual providers need to be clear and transparent for all ACO members in order to warrant their full commitment. DeCamp et al. (2014) outline a number of dimensions of fairness to be considered when distributing savings among ACO participants in a “fair and equitable” manner and find that the definition of a unique plan fulfilling this criteria most likely does not exist. It is important to take into account the needs of the individual clinicians as well as organisational and infrastructural needs of the ACO as a whole.

Notes

1. The accountable care contracts in Germany and Spain stipulating population-based payments can be made with legal entities that are non-health providers but may be owned by them. These contractors will also be referred to as ACOs in the remainder of this chapter albeit differences to the Medicare model exist.
2. As discussed in Chapter 3 care groups are contracting partners for health insurers for the implementation of bundled payments for chronic diseases.
3. A risk compensation mechanism exists in the German Statutory Health Insurance Scheme taking into account different distributions of age and diseases of the insured among the 140 public health insurers.
4. This defines the minimum of savings that need to be achieved by an ACO to be eligible to share any savings. Purpose of the risk threshold is to exclude any gains in savings due to random cost variation which cannot be associated to improved efficiency.
5. This defines in monetary terms the value below which savings are shared. This can coincide with the value defined by the minimum savings rate but does not have to.

References

- Acerete, B., A. Stafford and P. Stapleton (2011), “Spanish Healthcare Public Private Partnerships: The ‘Alzira Model’”, *Critical Perspectives on Accounting*, Vol. 22, pp. 533-549.
- Addicott, R. and S.M. Shortell (2014), “How Accountable Are Accountable Care Organizations?”, *Health Care Management Review*, Vol. 39, No. 4, pp. 270-278.
- Alderwick, H., C. Ham and D. Buck (2015), *Population Health Systems. Going Beyond Integrated Care*, The King’s Fund, London.
- Barnes, A.J. et al. (2014), “Accountable Care Organizations in the USA: Types, Developments and Challenges”, *Health Policy*, Vol. 118, pp. 1-7.
- Berwick, D.M., T.W. Nolan and J. Whittington (2008), “The Triple Aim: Care, Health and Cost”, *Health Affairs*, Vol. 27, No. 3, pp. 759-769.
- Blue Shield of California (2012), “Fact Sheet: Blue Shield of California and Accountable Care Organizations (ACOs)”, https://www.blueshieldca.com/bsca/documents/about-blue-shield/health-reform/ACO_Blue_Shield_Fact_Sheet_082812.pdf.
- Burwell, S.M. (2015), “Setting Value-based Payment Goals – HHS Efforts to improve U.S. Health Care”, *New England Journal of Medicine*, Vol. 372, No. 10, pp. 897-899.
- Busse, R. and J. Stahl (2014), “Integrated Care Experiences and Outcomes in Germany, the Netherlands, and England”, *Health Affairs*, Vol. 33, No. 9, pp. 1549-1558.
- Chernew, M.E. et al. (2011), “Private-Payer Innovation in Massachusetts: The ‘Alternative Quality Contract’”, *Health Affairs*, Vol. 30, No. 1, pp. 51-61.
- CMS – Centers for Medicare & Medicaid Services (2015a), “Accountable Care Organisations”, <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ACO/index.html?redirect=/aco/>, accessed 30 Sept. 2015.
- CMS (2015b), “Medicare Shared Savings Program Shared Savings and Losses and Assignment Methodology”, <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharesavingsprogram/Downloads/Shared-Savings-Losses-Assignment-Spec-v2.pdf>.
- CMS (2015c), “Guide to Quality Performance Scoring Methods for Accountable Care Organizations”, <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharesavingsprogram/Downloads/2012-11-ACO-quality-scoring-supplement.pdf>.
- CMS (2015d), “33 ACO Quality Measures”, accessed 30 Sept. 2015, <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharesavingsprogram/Downloads/ACO-Shared-Savings-Program-Quality-Measures.pdf>.

- CMS (2014), “Medicare ACOs Continue to Succeed in Improving Care, Lowering Cost Growth”, Press release 16 Sept. 2014, [http://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets-items/2014-09-16.html](http://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2014-Fact-sheets-items/2014-09-16.html).
- CMS (2013), “Pioneer Accountable Care Organizations Succeed in Improving Care, Lowering Costs”, Press release 16 July 2014, <http://www.cms.gov/newsroom/mediareleasedatabase/press-releases/2013-press-releases-items/2013-07-16.html>.
- Colla, C.H. et al. (2014), “First National Survey of ACOs Finds that Physicians Are Playing Strong Leadership and Ownership Roles”, *Health Affairs*, Vol. 33, No. 6, pp. 964-971.
- Commonwealth Fund (2014), “Hill Physicians Medical Group: A Market-Driven Approach to Accountable Care for Commercially Insured Patients. Case Studies of Accountable Care Systems”, *The Commonwealth Fund 1770*, Vol. 23.
- DeCamp, M., J. Sugarman and S. Berkowitz (2014), “Shared Savings in Accountable Care Organisations: How to Determine Fair Distributions”, *Journal of the American Medical Association*, Vol. 311, No. 10, pp. 1011-1012.
- De Nardi, M. et al. (2015), “Medical Spending of the U.S. Elderly”, *NBER Working Paper No. 21270*, Cambridge, United States.
- Die Zeit (2015), „Alter schützt vor Fitness nicht“, <http://www.zeit.de/2015/05/kinzigtal-schwarzwald-gesundheit>.
- Dupree, J.M. et al. (2014), “Attention to Surgeons and Surgical Care Is Largely Missing from Early Medicare Accountable Care Organizations”, *Health Affairs*, Vol. 33, No. 6, pp. 972-979.
- Frakt, A.B. and R. Mayes (2012), “Beyond Capitation: How New Payment Experiments Seek to Find the ‘Sweet Spot’ in Amount of Risk Providers and Payers Bear”, *Health Affairs*, Vol. 31, No. 9, pp. 1951-1958.
- Gaál, P. et al. (2011), “Hungary: Health System Review”, *Health Systems in Transition*, Vol. 13, No. 5, pp. 1-266.
- Gesundes Kinzigtal (2014), “Jahresbericht 2013”, http://www.gesundes-kinzigtal.de/media/documents/Presse_2014/JB2013_GesundesKinzigtal_Mailversion.pdf.
- Hildebrandt, H., T. Schulte and B. Stunder (2012), “Triple Aim in Kinzigtal, Germany”, *Journal of Integrated Care*, Vol. 20, No. 4, pp. 205-222.
- Kocot, S.L. et al. (2014), “A More Complete Picture of Pioneer ACO Result”, Brookings Institute, http://www.brookings.edu/blogs/up-front/posts/2014/10/09-pioneer-aco-results-mcclellan#recent_rr/, accessed 30 Sept. 2015.
- Llano, R. (2013), “The Gesundes Kinzigtal Integrated Care Initiative in Germany”, *Eurohealth Observer*, Vol. 19, No. 2, pp. 7-8.
- Markovich, P. (2012), “A Global Budget Pilot Project among Provider Partners and Blue Shield of California Led to Savings in First Two Years”, *Health Affairs*, Vol. 31, No. 9, pp. 1969-1976.

- McClellan, M.B., S.L. Kocot and R. White (2015), “Early Evidence on Medicare ACOs and Next Steps for the Medicare ACO Program (Updated)”, *Health Affairs Blog*, 22 January 2015, <http://healthaffairs.org/blog/2015/01/22/early-evidence-on-medicare-acos-and-next-steps-for-the-medicare-aco-program/>.
- McClellan, M. et al. (2014), “Accountable Care around the World: A Framework to Guide Reform Strategies”, *Health Affairs*, Vol. 33, No. 9, pp. 1507-1515.
- McClellan, M. et al. (2013), “Focusing Accountability on the Outcomes that Matter”, Report of the Accountable Care Working Group 2013, World Innovation Summit for Health. Doha.
- McWilliams, J.M. et al. (2014), “Changes in Patients’ Experiences in Medicare Accountable Care Organizations”, *New England Journal of Medicine*, Vol. 371, No. 18, pp. 1715-1724.
- Milstein, R. and R. Blankart (2016), “German Case Example”, submitted for the OECD Project on Payment Systems, <http://www.oecd.org/health/paying-providers.htm>.
- Mnich, E. et al. (2013), “Outcome Evaluation of a Health Promotion among the Elderly”, *Gesundheitswesen*, Vol. 75, No. 02, pp. e05-e10.
- NHS European Office (2011), “The Search for Low-cost Integrated Health Care: The Alzira Model – From the Region of Valencia”, The NHS Confederation.
- NZ Doctor (2013), “Counties DHB and PHOs Charter New Territory with Alliance Agreement”, <http://www.nzdoctor.co.nz/news/2013/june-2013/28/counties-dhb-and-phos--charter-new-territory--with-alliance-agreement.aspx>.
- OECD (2015a), *OECD Reviews of Health Care Quality: Portugal 2015: Raising Standards*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264225985-en>.
- OECD (2015b), “WBG Flagship Study of the Chinese Health System, Delivering person-centred integrated care, Three case studies from OECD Health systems”, Paris, OECD, Paris.
- RIVM – National Institute for Public Health and the Environment (2014), “Pioneer Sites Move towards Triple Aim”, Interim Report, National Population Health Management Monitoring Scheme, RIVM, Bilthoven, December.
- Shortell, S.M. et al. (2015), “Accountable Care Organizations: The National Landscape”, *Journal of Health Politics, Policy and Law*, Vol. 40, No. 4, pp. 647-668.
- Shortell, S.M. et al. (2014a), *Accountable Care Organisations in the United States and England: Testing, Evaluation and Learning What Works*, The King’s Fund. London.
- Shortell, S.M. et al. (2014b), “A Taxonomy of Accountable Care Organisations for Policy and Practice”, *Health Service Research*, Vol. 49, No. 6, pp. 1883-1899.
- Song, Z. and D.A. Chokshi (2015), “The Role of Private Payers in Payment Reform”, *Journal of the American Medical Association*, Vol. 313, No. 1, pp. 25-26.
- Song, Z. et al. (2014), “Changes in Health Spending and Quality 4 Years into Global Payment”, *New England Journal of Medicine*, Vol. 371, No. 18, pp. 1704-1714.
- Stanton, M.W. and M.K. Rutherford (2005), “The High Concentration of U.S. Health Care Expenditures”, *Research in Action No. 19*, Agency for Healthcare Research and Quality, Rockville, United States.

- Toussaint, J., A. Milstein and S.M. Shortell (2013), “How the Pioneer ACO Model Needs to Change: Lessons from Its Best-performing ACO”, *Journal of the American Medical Association*, Vol. 310, No. 13, pp. 1341-1342.
- Weissman, J.S. et al. (2012), “The Design and Application of Shared Savings Programs: Lessons from Early Adopters”, *Health Affairs*, Vol. 31, No. 9, pp. 1959-1968.
- White House (2014), “Historically Slow Growth in Health Spending Continued in 2013, and Data Show Underlying Slow Cost Growth Is Continuing”, <http://www.whitehouse.gov/blog/2014/12/03/historically-slow-growth-health-spending-continued-2013-and-data-show-underlying-slo>.



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