INTRODUCTION
Following the global economic recession, health care systems have experienced intense political pressure to contain costs without compromising quality. One response is to focus on improving the continuity and coordination of care which is seen as beneficial for both patients and providers. However, cultural and structural barriers have proved difficult to overcome in the quest to provide integrated care for entire populations. By holding groups of providers responsible for the health outcomes of a designated population, in the United States, Accountable Care Organisations (ACOs) are regarded as having unique potential to foster collaboration across the continuum of care. ACOs could have similar potential in England’s National Health Service (NHS). However, it is important to consider the difference in context before implementing similar models in the NHS. The ACO model can be adapted to suit the NHS’ strengths. Working together, General Practice (GP) federations and the Academic Health Science Centres (AHSCs) could form the basis of accountable care in England.

THE NEED FOR RAPID EVOLUTIONARY CHANGE
With a projected funding deficit of over £30 billion by 2020 and £2 billion next year alone, policymakers are faced with the challenge of a growing ageing population with more complex conditions and the rising costs of paying for that care, but little or no additional resources.(1) Patients with complex multi-morbidities often require treatment that traverses traditional service boundaries. As a result, they typically receive disjointed care, inappropriate to their needs. The conflicting interests of different providers entrench organisational siloes providing episodic and hence fragmented care. Miscommunication during care transitions and duplication of services due to the lack of coordination lead to poorer clinical outcomes and wasted resources.(2) Consequently, patients receive care in expensive and overburdened hospitals when they could be better served in the community.
The NHS has featured prominently on the political agenda. All three main political parties in England are committed to greater ‘integration’ in order to make better use of increasingly scarce resources. The Labour Party has established an independent commission led by Sir John Oldham, emphasising the ‘needs of one person to be addressed by people acting as one team, from organisations behaving as one system.’(3) Furthermore, the current Conservative-Liberal Democrat coalition government have supported integrated care initiatives with the £3.8 billion Better Care Fund operative from April 2015.(4)

The appointment of Simon Stevens as new NHS CEO and his recently published *Five year forward view* also throws decisive weight behind new care delivery options to enable the English NHS to continue to provide a reasonable standard of care.(5) The majority of the models proposed are forms of integrated care organisation including the following which will be discussed further:

- **Multispecialty Community Providers (MCP)** – large group practices that could employ or partner with specialists alongside a wide range of nursing and therapy staff to provide outpatient, out of hours, diagnostic and other services;
- **Primary and Acute Care Systems (PACS)** – single, vertically integrated organisations permitted to provide NHS list-based GP and hospital services, together with mental health and community care services, led either by the acute hospital or multi-specialty community provider

Simon Stevens’ report seems to deliberately avoid providing a universal blueprint for the future, and instead acknowledges the importance of local leadership and innovation. Like similar high-profile policy documents, the Forward View has been widely praised yet it risks not being able to transform its vision to reality. This paper outlines the potential role of ACOs in the future NHS landscape and what must be considered to successfully achieve integration.

**WHAT ARE ACCOUNTABLE CARE ORGANISATIONS?**

Borne out of the US 2010 Affordable Care Act, ACOs can be defined as ‘a group of providers (e.g. hospital, community health service, primary care practice) that
work together to coordinate care for an assigned population of patients to deliver seamless care whilst improving quality and lowering costs.'(6) The defining feature of an ACO is that providers are collectively held accountable for achieving pre-defined quality outcomes within a given budget for their patient population over a period of time.(7) By fundamentally altering the payment model, it is expected that participating providers have aligned incentives to improve clinical outcomes whilst reducing unnecessary expenditure. The adaptable nature of the scheme offers different approaches to rewarding or penalising providers depending on the level of risk they are accountable for.

There are five core components of an ACO. Firstly, the patient population must be clearly defined from the outset by either stratifying people into disease groups or characteristics such as age and geographical location. Secondly, outcomes that are valued by patients, as opposed to targets based on activity or outcomes that are purely clinically defined, must be identified and prioritised as areas for improvement. Thirdly, performance must be monitored by quality metrics that can measure patient outcomes transparently and shared preferably in real-time using advanced health information technology. Fourthly, it is important ACOs adopt a bundled or capitation-based payment model to ensure providers are held accountable for the costs and financially incentivised to achieve better outcomes. Finally, integration can only be achieved at an organisational level when driven by effective leadership and a collaborative culture.
Figure 1: Table to show characteristics of successful population-based accountable care systems (8)

<table>
<thead>
<tr>
<th>POPULATION</th>
<th>OUTCOMES</th>
<th>METRICS AND LEARNING</th>
<th>PAYMENTS AND INCENTIVES</th>
<th>CO-ORDINATED DELIVERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prospectively defined</td>
<td>Outcomes that matter to people and clinicians</td>
<td>Metrics proven as leading indicators for outcomes</td>
<td>Payments capitated (year of life)</td>
<td>Formal agreements amongst providers</td>
</tr>
<tr>
<td>Capturing all people who meet the criteria</td>
<td>Balanced across prevention and cure</td>
<td>Monitoring is validated, real-time and transparent</td>
<td>Payers and providers share risk and savings</td>
<td>Facilitated by data sharing and access</td>
</tr>
<tr>
<td>Intersections and co-morbidities recognised</td>
<td>Comparable with other provider networks</td>
<td>Monitoring integrated into clinical work flow</td>
<td>Differential payments based on outcomes</td>
<td>Clinicians empowered to adjust interventions</td>
</tr>
<tr>
<td>Populations prioritised on potential value</td>
<td>Aligned with global best practice</td>
<td>Results made public to allow comparisons</td>
<td>Incentives at all levels for success</td>
<td>Ensuring full use of all team members</td>
</tr>
<tr>
<td>Based on a holistic view of spend across providers</td>
<td>Differentiated on the basis of patient risk and co-morbidities</td>
<td>Closed learning loop based on variations and feedback</td>
<td>Complemented by professional rivalry on outcomes</td>
<td>Focus on prevention, community, and self-care</td>
</tr>
</tbody>
</table>

The level of success in containing costs is reliant on a range of capabilities and experience. Larger integrated delivery systems such as Kaiser Permanente have been more successful owing to their scale with lower start-up costs and ability to pool resources more effectively. They are also well established with a long existing shared culture that will require time and leadership if it is to be replicated across NHS providers. However, the first public performance report of the original 32 Pioneer ACOs in the US produced mixed results with nearly half generating losses and two being forced to withdraw from the programme altogether. (7) Recent results have show more promise with almost $400 million of savings across the 750 ACOs that are now estimated to cover over 20 million people. (7)

ACOs have shown significant improvements in quality and patients’ experiences of care particularly in relation to the management of chronic conditions. Led by
the insurer Blue Cross Blue Shield, the Alternative Quality Contract (AQC) in Massachusetts comprises a global budget with pay-for-performance incentives combining quality and cost targets. AQC providers have shown annual incremental quality and cost improvements, demonstrating their long-term sustainability. Careful selection of the number and type of metrics matched with suitable incentives can be a powerful tool for promoting collaboration between different providers. By introducing downside risk, providers must make necessary arrangements between themselves to ensure resources are adequately distributed. Risk management is a differentiating factor for ACO success in the US, highlighting the need to take this into consideration when proposing any similar model in England.

**WHAT IS REQUIRED FOR AN ACO TO BE EFFECTIVE IN ENGLAND’S NHS?**

A number of the requirements for effective ACOs, English-style, already exist, but have not been brought together in a concerted fashion. These are now discussed.

1. **Align the incentives of multiple providers to achieve cost-effective outcomes for populations using a single, capitated outcomes-based contract.**

   In order to develop the long-term capabilities for providers to manage risk and coordinate care, payment mechanisms must shift from incentivising activity, such as PbR, to capitation with an emphasis on better outcomes. Pooled budgets would facilitate greater integration between health and social care, which could potentially be governed by health and wellbeing boards. Although capitated ACOs assume more risk, they are able to improve population health by reducing incentives to supplier-induced demand, greater standardisation of care and, greater flexibility between providers. Focusing on outcomes allows the development of new standards, sharing best practice and reduction in variation, subsequently leading to lower overall costs and increased productivity.

2. **Apply predictive modelling to identify high-risk patients in the population and coordinate their care more effectively using case managers.**
Early identification and active case management of high-risk patients has the potential to improve care whilst reducing costs in the long run. This is particularly pertinent in the management of elderly people with long-term conditions who disproportionately contribute to the number of avoidable hospital admissions.\(^{(9)}\) Information from GP registries can be collated for entire populations rather than those who have been previously admitted to hospital. NHS England’s recent ‘care.data’ initiative to link primary and secondary care data can serve as a possible means of scaling this tool up nationally. Once these high-risk populations have been identified, case managers can be used to improve the continuity of care. By adopting a population-based approach, the NHS can empower the newly formed Health and Wellbeing Boards to analyse the needs of entire communities through patient-centred joint strategic needs assessments (JSNAs) to co-produce a comprehensive care plan managed by clinicians.

3. Develop inter-operable local electronic health records (EHRs) and encourage data sharing for comparable provider performance.

To facilitate integration across different sectors, it is essential that data systems enable multiple providers to report and share patient information. Successful system-wide EHRs such as Kaiser Permanente’s can be accessed and updated by all providers, enabling greater transparency and ability to coordinate care more effectively.\(^{(7)}\) However, implementing large-scale technological changes is expensive and fraught with difficulties, causing significant disruptions during the transition period. Plans for a national EHR in England were halted as the NHS ‘Connecting for Health’ programme was disbanded after more than £12 billion of expenditure over 8 years.\(^{(10)}\) Consequently, the focus has shifted towards regional EHRs to make the NHS ‘paperless’ by 2018.\(^{(10)}\) Electronic data sharing can also be used as a powerful tool for analysing and comparing provider performance. Sharing information can facilitate the development of standardised quality metrics that allow providers to compare their performance against one another. It can also help produce a range of measures to monitor progress within an ACO more accurately.\(^{(11)}\)
WHO SHOULD LEAD THE WAY?

The NHS *Five year forward view* suggests accelerating the development of new ways of delivering care through a small number of ‘test bed’ sites. Academic Health Science Networks and Centres (AHSCs) could serve as a potential starting point with relatively superior resources and political clout. Using the three AHSCs in London as an example, regional ACOs could develop new forms of integrated care organisation closest to the PACS model in the *Five year forward view*. Bound by a capitated outcomes-based contractual agreement, all of the local primary and social care providers in each of the three areas could join an AHSC-ACO. Virtual, as opposed to real, integration would also avoid the complex cultural and logistical issues associated with mergers, which has led to the failure of several ACOs in the US.

While the *Five year forward view* says relatively little about Clinical Commissioning Groups (CCGs), in areas where there are well performing PACS-style ACOs with responsibility for a wide range of services, CCGs might gradually lose their commissioning function, replaced by the AHSCs which could assume the role of commissioner and provider. However, this would require close regulation by Monitor to avoid monopolies from emerging. Similar to the Alzira model in Spain, if a patient opts to seek care from a different provider outside the area, the local ACO would remain accountable for that individual’s care and bears all the costs. In addition, the ACO or other provider that receives this out-of-network patient would be remunerated depending on the level of success.

The reduced role of CCGs as commissioners could free groups of general practices to combine and achieve the necessary scale required to operate MCPs. Led by primary care providers, this alternative ACO-style model would form ‘federations’ or ‘networks’ with community, social care and specialist services for a specified population. Greater collaboration between primary and social care can improve the coverage and quality of out-of-hours services to reduce the need for patients to seek care from hospitals and instead receive treatment in the community. Furthermore, existing GP patient registers provides MCP with a unique opportunity to understand the health of local populations and stratify
patients by their level of risk using predictive modelling techniques. MCPs would be able to utilise a variety of services best suited to their community’s needs by commissioning from other providers and delivering their own services directly.

**PROMISE NOT PANACEA**

Achieving low cost, high quality care at a population level remains a pressing challenge for health systems worldwide, offering the opportunity for international collaboration. The existing divide between purchasers and providers, and conflicting interests of GPs and hospital providers must be addressed in order to achieve more integrated care in England. Structural reforms under successive governments have proved a major distraction and ACOs mitigate the need for this as distinct provider organisations can still remain bound together through risk-sharing contracts. Nevertheless, any effort to transform the diverse structures and embedded cultures that currently exist in the NHS will require the collective willpower and commitment of all relevant parties. There is neither a ‘one-size-fits-all’ approach to ACOs nor are ACOs the only solution, yet they provide a viable means to realising the principal aims of the *Five year forward view.*

We declare no conflict of interests.

**REFERENCES**


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