Primary and secondary care integration in delivery of value-based health-care systems

ABSTRACT

The Five Year Forward View (NHS England, 2014) endorses outcomes-based approaches and integrated care systems. This article looks at the role and functions of hospitals in value-based health-care systems, following Porter's value-based health-care framework. Changes will be required not only in the way health care is organized within a hospital in the form of so-called integrated practice units, but more importantly primary and secondary care will have to work together to realize value for patients across the health-care pathway and system. It will be necessary to build an enabling IT platform that facilitates an integrated dataset across primary and secondary care to measure outcomes and costs across patient pathways. Finally, new payment models will be required to remove current barriers and allow clinicians to do the right things for their patients without organizations being penalized. The final section describes current maturity of the system, opportunities and challenges in the UK.

This article sets out to understand how Michael Porter's value-based health-care agenda (Porter and Teisberg, 2006) can be applied to the NHS and give an outline of what this approach may mean for UK hospitals.

In the value-based health-care agenda, value is simply defined as outcomes divided by costs, so to increase value one must improve outcomes and/or lower cost:

$$\text{Value} = \frac{\text{Health outcomes}}{\text{Costs of delivering the outcomes}}$$

Outcomes are the full set of patient health outcomes and costs are the total costs of resources used to care for a patient's condition, both over the entire care cycle. In primary care, this can be defined as total costs over a period of time. Porter and Lee (2013) set out six components necessary to move towards a high-value health-care delivery system:

1. Reorganize care around patient conditions, into so-called integrated practice units. For primary and preventive care, integrated practice units serve distinct patient segments
2. Measure outcomes and costs for every patient
3. Move to value-based reimbursement models, and ultimately bundled payments for conditions
4. Integrate multi-site care delivery systems
5. Expand or affiliate across geography to drive excellence
6. Build an enabling information technology platform.

This article examines some of these components in more detail.

Value along the whole cycle of care: integrated practice units and multi-site delivery systems

Porter's value-based health-care framework, based in secondary care, underlines the importance of looking at the whole cycle of care – from prevention, diagnosis, intervention, recovery and monitoring. This is emphasized in his view on the structure of health-care delivery, which should be based on integrated practice units, around diseases or groups of diseases with a similar need. This requires a re-think of the departmental organization of hospitals, from specialty divisions that are built around the health-care professional to a needs-based organization that is built around patients, for example, cardiac surgeons, perioperative cardiac anaesthetists, cardiologists and radiologists co-located to cover the whole of cardiac disease, not simply their own procedure. Thus, the whole cycle of care, from diagnosis, investigation, treatment and rehabilitation, is assumed by a single 'unit' or team. Outcomes should then be measured according to what is meaningful to the patient and thereby capture the whole cycle of care. For example, a meaningful outcome to a patient, following knee surgery, might be time to return to work, not simply the degree of movement of the knee. This challenges hospitals to work with primary care providers and move beyond their proceduralist silos.

When transitioning to a service that extends across a cycle of care, a common pitfall or risk is to include only a segment of the full cycle of care. This would re-introduce the risk of cost-shifting between care settings. Cost-shifting does not create value for the patient, nor the care system, because it allows an organization to overcharge or underpay for a segment of care without accountability to achieve the goal, namely to improve health outcomes.

One example of a multi-site delivery system is the Spanish health-care provider Ribera Salud. Ribera started off with a care model based on hospitals, but on integrating with primary care, they managed to deliver better care at lower costs, thus increasing value (NHS European Office, 2011). Integration of primary care and secondary care creates a challenge for hospitals to work with primary care, i.e. GP networks and community providers in a UK context. Contracting for outcomes means that a part of the commissioning function is taken over by the provider. This

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gives providers greater freedom to determine how they can best achieve outcomes rather than being micromanaged by commissioners with detailed service specifications.

Outcomes and cost measurement: the need for an enabling IT system

Integration across the patient pathway enables the health-care economy to look at patient outcomes in addition to processes and outputs. Care processes have been incentivized in programmes like the Quality and Outcomes Framework, a pay for performance scheme used in general practice. Often, these seemingly good process measures can hide inadequate population outcomes. For example, looking at Quality and Outcomes Framework achievement of diabetes care processes tells only a part of the story when some people with diabetes have not been diagnosed or identified and do not benefit from the care processes.

This example illustrates the need for an integrated IT platform to measure outcomes across primary and secondary care. Integrating data across IT systems and providers poses a real, but surmountable challenge. An example is the whole systems integrated care dashboard in north west London (http://integration.healthiernorthwestlondon.nhs.uk/). The dashboard links provider data from across eight clinical commissioning groups, four acute, two mental health, two community trusts, 380 GP practices and social care data from across eight boroughs. This enables a population health approach for the proactive identification of patients, using updated information across multiple health and social care settings, for tracking and measurement of patient activity and outcomes. The platform provides a means to continuously improve service delivery and has the potential to view patient-level costings across a patient pathway (DHL admin, 2016).

Looking at cost across the care pathway discourages the currently widespread practice of shifting costs from one part of the system to another. Current cost data are often inaccurate and records prices rather than true cost. Some hospitals have been starting to introduce time-driven activity-based costing. There is a pressing need for availability of high quality and up to date data on outcomes and costs to support the continued improvement of the care model itself. This will require a collective responsibility by all providers within the integrated care model to both collect and use the data accordingly. Underpinning this will be the development of local business intelligence systems to support such approaches. Important in the discussion about data and outcomes is that this is not only a point about infrastructure and metrics, but needs to go with a change in organizational culture. A shift of focus from data to intelligence that enables continual learning will be required.

Aneurin Bevan University Health Board are using the integrated health board structure in Wales, aiming to achieve outcomes that matter to patients and become good stewards of the finite resources available across the system. Their story sets out what can be achieved with vision and strong leadership. During an initial trial in the care of one condition, Parkinson's disease, the team developed the in-house technology to capture outcomes data, with success both from the patient perspective and in terms of service re-design.

Subsequently a wider strategy was developed with the implementation of a major change programme, to develop the informatics and financial infrastructure to support a value-based system, including systematically capturing clinical and patient-reported outcomes alongside costing of the whole patient journey.

Aneurin Bevan University Health Board has successfully achieved these initial aims and is now working across NHS Wales to understand how and what it will take for this to become a Welsh value-based system expanding to cover a number of other clinical areas (Arora et al, 2017).

Currently used value-based reimbursement models

Removing current barriers caused by competing financial interests of providers as part of a patient's care cycle and alignment of incentives to support the delivery of coordinated care for the patient is crucial for the value-based health-care agenda. Current payment models in the NHS are not set up to support such a system, for example activity-based payment models emphasize increased volume of activity as opposed to incentivizing prevention or delivery of better outcomes. Block contracts provide a consolidated fixed payment, with little to no incentive to deliver services beyond those specified in the contract.

To deliver true whole population integrated care, new payment mechanisms are needed. Incentives need to be aligned, with the development of an outcome-based contract, with an element of risk and gain share. Currently, there are two favourable payment mechanisms: bundles and capitation.

Bundles

Bundled payments, e.g. setting a price for a full cycle of care, is the preferred payment mechanism according to Michael Porter, as it reduces waste along the care pathway and incentivizes providers to compete on the cost of their bundles (Porter and Kaplan, 2016). The payments should be linked to pre-agreed outcomes with risk adjustment but not include unrelated follow-up care. Bundled payments have been used successfully to improve outcomes, reducing variation and saving costs, mostly in orthopaedics – Sweden being a prominent example (Porter et al, 2015). However, critics argue that this still is a volume-based payment which incentivizes overtreatment.

Capitation

Another payment mechanism in line with the value-based health-care agenda is capitation (James and Poulsen, 2016). Capitation allows commissioners to pay the provider or network of providers a regular lump sum per person in the target group. Ideally, this capitated payment is risk-adjusted, as some patients in the groups will require more, or more costly, services than others. Risk adjustment is

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easier to do for a whole population than for individuals (Monitor and NHS England, 2014). Capitation should incentivize against overtreatment, so prevent waste better than bundled payments. Critics argue that capitation creates a monopoly and reduces patient choice and pressure for providers to innovate. Capitation can, however, be linked to outcomes to achieve accountability.

Risk share

Integrated care partnerships are increasingly seen as a mechanism to deliver value-based health care. Accountability also involves sharing risks, such as sharing of gains or losses depending on the contract. Learning from a European example, the public–private partnership Ribera Salud delivers health care for a population of 1 000 000 people or 20% of the Valencia region (NHS European Office, 2011). The organization is paid on a capitated basis for the population served. It is able to keep any savings until these reach an agreed percentage at which point the region receives part of the savings. Overspend needs to be covered by Ribera Salud (McClellan and Tarazona Ginés, 2015).

An observation is that different payment schemes can be appropriate for different services. Capitation may be preferred for a primary care-based service or intervention, while bundled payments may be preferred by secondary or acute care episodes. In the Ribera Salud example, outcomes are published by the government of Valencia for all health-care providers. Capitation was the payment mechanism of choice, so if a Ribera patient chooses to go to a different hospital, Ribera needs to pay – thus it has an incentive to provide better care than other providers in the region.

Table 1. Terminology of value-based health care in the UK and definitions
Value-based health care is a framework to reorganize health-care systems with the overarching goal of increasing value for patients as opposed to access, cost containment, convenience or customer service (Porter, 2010)
Outcomes-based commissioning: summarized in five steps 1. Use of outcomes 2. A population approach 3. Use of metrics and learning 4. Payments and incentives 5. Coordinated delivery (The Health Foundation, 2015)
Integrated care systems have evolved from sustainability and transformation partnerships and take the lead in planning and commissioning care for their populations and providing system leadership. They bring together NHS providers and commissioners and local authorities to work in partnership in improving health and care in their area (Ham, 2018)
Integrated care partnerships are alliances of NHS providers that work together to deliver care by agreeing to collaborate rather than compete. These providers include hospitals, community services, mental health services and GPs. Social care and independent and third sector providers may also be involved (Ham, 2018)
Accountable care organizations are established when commissioners award a long-term contract to a single organization to provide a range of health and care services to a defined population following a competitive procurement. This organization may subcontract with other providers to deliver the contract (Ham, 2018)
Multispecialty community providers are a type of vanguard integrating GPs, community nursing, mental health and social care, moving specialist care out of hospitals (NHS England, 2016)
Primary and acute care systems are a type of vanguard which joins up GP, hospital, community and mental health services (NHS England, 2016)

Recognizing the entrepreneurial gap

A capitated budget can promote investment in productivity and innovative local solutions across the health system. It allows for flexibility in spending because it is not based on reimbursements for activity in care. This represents an opportunity to seize the 'entrepreneurial gap' (Simons, 2013), describing situations where individuals or organizations are accountable for measures wider than the assets they control, encouraging them to work with others to figure out how to turn challenges into opportunities. Taking responsibility for the health of the population, both outside and inside 'the hospital doors', gives opportunities to tackle the upstream preventative issues that lead to the need for treatment.

This work will require good system leadership, with the necessary skillsets in collaborative working and vision setting across both health and social care boundaries. The health and care system is often thought of as the principal place to achieve wellbeing and health, but given the wider determinants of health, it is estimated that as little as 10% of a population's health and wellbeing is linked to access to health care. To really move the needle on improving the health of the population, local government involvement is imperative to take action on the wider determinants of health, for example employment, education, housing, diet and substance misuse (McGovern et al, 2014).

National policy in England and next steps

The publication of the NHS Five Year Forward View in 2014 (NHS England, 2014) set out a strategic vision for health care and outlined delivery mechanisms including the so-called 'new models of care' vanguards: multispecialty community providers and integrated primary and acute care systems, which support a value-based payment model. The next steps on the Five Year Forward View outlined that sustainability and transformation partnerships will evolve into integrated care systems (NHS England, 2017a). Simon Stevens named eight sustainability and transformation partnership areas that are likely to evolve into integrated care systems (Brennan, 2017).

Further detail was published by NHS England in 2017 setting out practical steps towards focussing on long-term population health and system outcomes. This sets out a structure for commissioners to use when procuring integrated care to deliver care for their population. Additional guidance exists around whole population budgets, a version of capitation-based payments, as an approach to facilitate delivery of integrated care models (NHS England, 2017b). These whole population budgets cover the relevant service scope for the whole population but remove the direct relationship between activity and payment.

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The guidance recognizes three elements to the payment approach:

1. Establishes the required population budget for delivering services
2. Designs an improvement payment scheme for accountable care organization providers that will operate as a topslice from the whole population budget
3. Develops gain and loss sharing to build and align financial incentives across local areas and to manage the transfer of utilization risk from commissioner to provider that is associated with implementing a whole population budget.

In a move toward full risk share, geographies start either at primary or secondary care. Multispecialty community providers and primary and acute care systems models increasingly overlap as they integrate between providers. For some geographical areas considering implementation of these contractual reforms, the NHS England guidance has yet to be translated into reality as a result of ongoing judicial reviews.

KEY POINTS

- To create value for patients, care must be organized around the patients' needs, not the demands of specialists.
- Integration across the whole patient pathway will require participation from primary and secondary care.
- An integrated dataset of primary and secondary care is needed to measure health outcomes across the pathway.
- Measurement of outcomes (in addition to inputs or processes) with the addition of cost of providing care enables health systems to learn and increase value.
- Payment mechanisms like bundled payments and capitation can help align incentives across all health-care providers involved in a patient's care, enabling care focused on health.
- Making providers accountable for whole populations rather than only for patients attending their practice or hospital gives opportunities to realize the entrepreneurial gap.
- Recent policy guidance from NHS England strongly supports a value-based approach to health-care delivery.

Conclusions

This article has outlined what the value-based health-care agenda means for NHS hospitals, specifically in England. It has looked at the concept of value as outcomes per cost, then at the concept of an integrated practice unit and the necessity of integrating primary and secondary care across the whole patient pathway to deliver value. This allows the measurement of outcomes as opposed to structures, processes and inputs, which in turn can enable organizations to learn from meaningful data. It has also outlined payment mechanisms that support value and flagged recent developments in the English health policy landscape.

Although no single health system has yet to realize all aspects of the value agenda, it remains to be seen how principles applied successfully abroad will impact the NHS. BJHM

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