

**YCFM Event #2 2010/11: “Doing more for less: lessons for the NHS from industry”
6th December 2010
The Royal College of Physicians**

This is the information pack for the second event in the YCFM series this year on 6th December at the Royal College of Physicians. We are providing you with an overview of the issues at hand, along with some suggestions for further reading and discussion.

Introduction

Most doctors see providing high quality care as not only a professional responsibility but also as their *raison d'être*; delivering quality *is* their work. Quite reasonably, their focus is usually on the patient in front of them, sometimes on populations, and they tend to concentrate on clinical effectiveness and safety. They are trained as scientists and regard the randomized controlled trial as the gold standard of evidence.

However, an increasing number of people are recognising that wider dimensions of quality, such as *how* services are designed and care is provided, also have a significant part to play in the ability of any given individual to deliver quality care. To this end, there is significant discussion of what the NHS, and healthcare organisations more generally, might learn from industry.

This is particularly pertinent given the significant productivity challenge the NHS now faces. With just 0.1% per annum increases in funding over the coming parliament, to maintain standards of care (in face of rising demand for treatment) the King's Fund health think-tank estimate the NHS will need to drive productivity in the order of 4% per annum: i.e. after the NHS has achieved 4% more output per unit of input in the first year, it must do the same the second year with inputs that are already 4% leaner – and so on. Yet, in the past decade, NHS productivity has fallen.

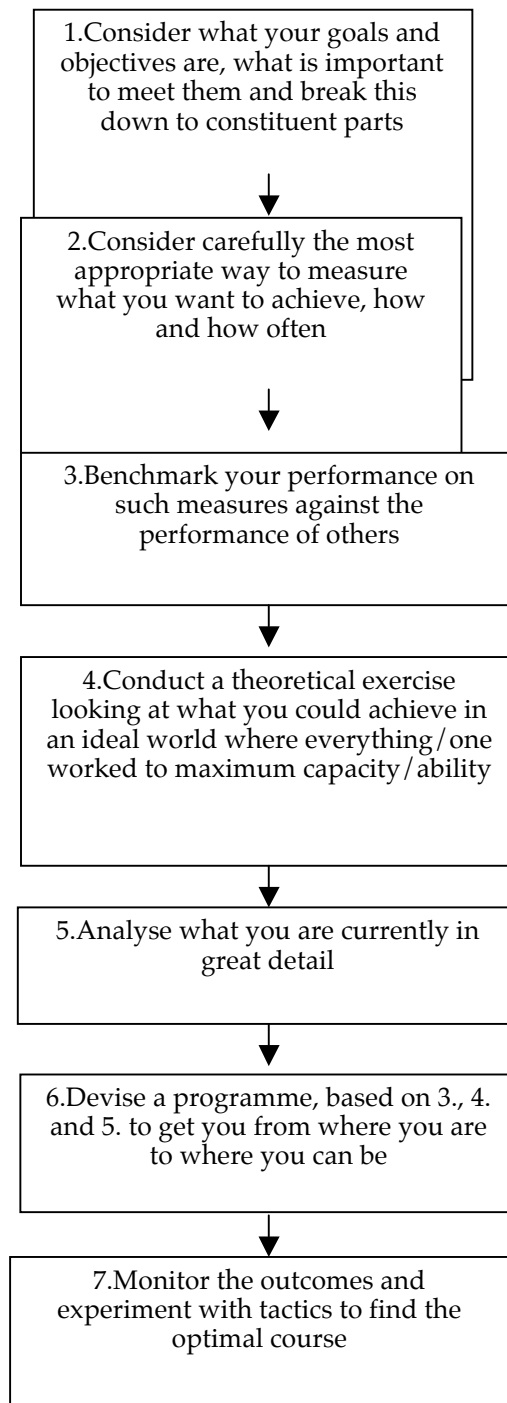
A few potential lessons are discussed below.

Management theory

There are many management theories derived from the practice of industry, with volumes of literature on the subject. Broadly, management theory is concerned with how an organisation's goals and objectives can be achieved efficiently and effectively.

Theories tend to be variants of the decision-making process outlined in Fig. 1:

Fig. 1 – Modern management techniques



More specific management theories often talked about in the health care setting are Lean and Six Sigma.

Lean is an improvement approach to improve flow and eliminate waste that was developed by Toyota. Lean is basically about getting the right things to the right place, at the right time, in the right quantities, while minimising waste and being flexible and open to change. Key concepts include:

Value—Products should be designed for customers and should suit the purpose. These would be the services the NHS provides.

Value stream—Each step in production must produce “value” for the customer, eliminating all sources of waste.

Flow—The system must flow efficiently, ideally without intermediate storage.

Pull—The process must be flexible and be geared to individual demands—producing what customers need when they need it.

Perfection—The aim is perfection. Lean thinking creates an environment of constant review. This is vital as it allows review of all systems constantly and identifies problems quickly which are then managed.

The NHS Institute for Innovation and Improvement have documented the potential effectiveness of Lean in the NHS through their Productive Ward programme.

Six Sigma, developed by Motorola in the late 1970s, is a Lean technique that focuses on trying to improve the quality of outputs/outcomes by identifying and removing the causes of error and minimising variability in practice. To do this, it uses a powerful framework (DMAIC)¹ and statistical tools to uncover root causes, supported by strong organisational commitment to continuous quality improvement. In the NHS, this technique helped to champion computer generated prescriptions, typically eight times more accurate than hand written prescriptions, leading to a permanent change from the handwritten prescription to the computer generated.

The use of Lean and Six Sigma is not without controversy in health care, however. For one, they assume the existence of processes which have characteristics that can be measured, analysed, improved and controlled. Yet, in medicine, particularly where evidence-base is uncertain, some variation is accepted, and may even be desirable. The NHS is also fundamentally different to most industry due to the autonomy that its workers enjoy, limiting the influence of management.

¹ **Define** the problem, the voice of the customer, and the project goals, specifically.

Measure key aspects of the current process and collect relevant data.

Analyze the data to investigate and verify cause-and-effect relationships. Determine what the relationships are, and attempt to ensure that all factors have been considered. Seek out root cause of the defect under investigation.

Improve or optimize the current process based upon data analysis to create a new, future state process.

Control the future state process to ensure that any deviations from target are corrected before they result in defects

Patient Safety

There is no shortage of evidence describing deficiencies in patient safety in the NHS and in health care generally: one in 10 patients admitted to hospital experiences iatrogenic harm and wide variations in quality of care exist across the country.

Back in 2000, the then Chief Medical Officer for England, Sir Liam Donaldson, drew heavily on the airline industry in his seminal report on patient safety “An Organisation with a Memory.” Since then, aviation has become the case study of choice when translating lessons on safety from the commercial arena to healthcare – although there is also great potential too to learn from other industries, and the military.

One example of learning from the aviation industry is the WHO Surgical Checklist, introduced into the NHS last year. The checklist involves stopping all work at three points in an operation, where the staff present confirm they have the right patient, equipment is working, they are about to do the correct surgery, and all needles and swabs are counted before and after to ensure none have been left in the wound. A study published in the New England Journal of Medicine showed that major complications reduced from 11 per cent to seven per cent – a reduction of one third – and deaths dropped from 1.5 per cent to 0.8 per cent – a 40 per cent reduction. More widely, there are moves to learn from the confidential reporting of safety violations in the aviation industry (to the NPSA in the NHS) and develop open cultures based on teamwork and shared responsibility.

Another example of this is After Action Review, pioneered by the US Army. This is a structured review or de-brief process for analysing *what* happened, *why* it happened, and *how* it can be done better, by the participants and those responsible for the project or even. It is being used by some NHS hospitals as a learning tool following patient safety incidents.

Employee ownership

There are significant moves within the NHS to create spin-off social enterprises and employee-owned organisations to run services. This applies particularly to community services that used to be run by Primary Care Trusts. To aid this process, the government has announced a new £10m fund aimed at enabling public sector workers to create mutuals that will take over the running of services they provide.

This draws on the perceived success of certain employee-owned ‘partnerships’ operating in the private sector, such as John Lewis. A recent report by the Nuffield Trust highlighted how such organisations typically have a high degree of customer trust and loyalty. They highlight a link between this and the fact employee owned companies allow staff to participate in making decisions on how the workplace is run, which, in turn, may deliver a range of benefits, such as better productivity and performance, less staff turnover and sickness absence, greater innovation, and higher levels of motivation and commitment among staff.

Circle, a new private sector partnership offering services to the NHS, is an example of how this might be effective in health care, achieving 20% productivity gains on NHS performance after taking on the running of an elective treatment centre in Nottingham.

Procurement

In the last YCfM event we talked a lot about ‘commissioning’: how the NHS buys services. Here, there is much the NHS can learn from other industry, in terms of a commissioner’s approach to providers. Crudely, such relationships can be managed in one of two ways: adversarial or collaborative (see Fig.2).

Fig. 2 – Approaches to contracting and tendering

Adversarial	Collaborative (‘Japanese’)
Approach	Approach
<ul style="list-style-type: none"> • Lack of trust • ‘Squeeze suppliers bloodless’ • Go for the best deal on cost • No loyalty given or expected • Mistakes of suppliers instantaneously punished • Inflexible, bureaucratic and prescriptive contracting 	<ul style="list-style-type: none"> • Collaboration with suppliers • Building long-term relationships • Encourage innovation; suppliers expected to invest in continuous improvement • Loyalty valued. Suppliers rarely changed, although horizon constantly scanned for other solutions • Mistakes sorted out collaboratively • Flexible and informal contracting
Consequences	Consequences
<ul style="list-style-type: none"> • Suppliers in constant fear of losing contracts, therefore not prepared to invest in future • Long, complex, inflexible supply agreements • Tendering process expensive and time consuming 	<ul style="list-style-type: none"> • Security from good performance encourages innovation • Suppliers value reputation • Better deals result • Contracts are flexible and short in length covering the basics • Costs of tendering are dramatically reduced
<i>Approach no longer widely used in industry, with big improvements the result.</i>	<i>Approach continues today.</i>

Over the past decades – and while suppliers are very aware they remain in a competitive environment where those ‘commissioning’ have the right to look around for better deals – industry has typically moved away from an adversarial to a collaborative approach. Typically, the NHS has not. The problem with an adversarial approach is that while it may score short-term gains, it may not be successful in the long-run because uncertainty is not managed well and there are weakened incentives on the part of the suppliers to innovate.

Competition

Perhaps the biggest import from industry in recent times to the NHS has been the use of competition to drive standards. The experience of other industries is that competition – i.e. the threat of losing business – *in the appropriate regulatory framework*, has tended to: place downward pressure on costs; force firms to focus more on meeting customer needs; lead to more efficient allocations of resources between firms; and act as a spur to innovation and quality improvement.

Governments also have been influenced by the impact of introducing competition into industries traditionally dominated by public sector providers. For example, regulatory reforms that introduced competition into UK water, gas and electricity markets, for example, led to ‘phenomenal rates’ of productivity increase in the 1990s of over 10% p.a.

However, there is a lively debate as to whether such benefits can be attained in health care due to its complexity, uncertainty and costs of entry and exit.

Discussion

Before the discussion on 6th December, it would be great if you could think about what you consider the advantages and disadvantages of such industry approaches to be; and the extent to which you think they are applicable to health care in general, and the NHS in particular. Is health care 'different', or is there much we can learn from elsewhere?

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